HM Government

East Inshore and East Offshore Marine Plans

Executive Summary

April 2014

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Published by the

Department for Environment, Food and Rural Affairs
Nobel House, 17 Smith Square
London SW1P 3JR

Publication date: April 2014

Any enquiries regarding this document/publication should be sent to the Marine Management Organisation at **planning@marinemanagement.org.uk**

This document is also available on the Marine Management Organisation website: [web link]. http://www.marinemanagement.org.uk/marineplanning/areas/east_plans.htm

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Foreword

The seas surrounding the United Kingdom are vitally important to our nation. Our marine economy is currently worth more than £49 billion a year and has the potential to grow significantly. The marine environment is also home to over 8000 species, including some of the world's most important seabird populations, which we must protect for future generations.

Over the years United Kingdom seas have become increasingly busy, with industries such as oil and gas, wind farms, shipping, aggregates and fishing competing for space with each other and with nature, while the coast is a popular destination for leisure and tourism. In response the Marine and Coastal Access Act 2009 introduced marine planning to ensure a sustainable future for our seas.

The first step was the adoption of the United Kingdom-wide Marine Policy Statement, which provides the framework for United Kingdom marine plans and for decisions likely to affect the marine area. Marine plans will inform and guide decisions by regulators managing the development of industry in marine and coastal areas, while conserving and enhancing the environment. Alongside the work in England, plans are also being developed in Northern Ireland, Scotland and Wales.

Marine plans will provide certainty and clarity for developers by indicating areas to consider or avoid – saving time and money. Developers will also be able to use the plans to guide their applications, which will help investments become operational more quickly, so that they contribute to the economy earlier. The boundary between land and sea is the focus of many activities and marine planning will help facilitate an integrated and holistic approach to the planning and management of coastal areas; contributing to the economic regeneration and development of local communities.

The adoption of England's first two marine plans, for the East Inshore and East Offshore marine areas, is a significant milestone and the culmination of years of work by Government, industry, voluntary organisations and individuals. These plans, however, are only the beginning. The Government is committed to developing eleven marine plans, covering all of England's seas by 2021.

We have learned many lessons from preparing these first plans and will learn more as we implement them. They will guide the preparation of future plans, which we

expect will provide more locally specific and detailed guidance than has been possible to date.

With the publication of the East Inshore and Offshore Marine Plans, England is one of the first countries in the world to introduce such a comprehensive and integrated approach to the management of its marine area, and it is a credit to all involved that we are leading the way in this field.

George Eustice MP
Parliamentary under Secretary of State for Farming, Food and Marine Environment

Executive Summary

Background

1. These two plans, East Inshore and East Offshore, are the first two marine plans to be produced for English seas. The East Inshore Marine Plan area includes the coastline stretching from Flamborough Head to Felixstowe, extending from mean high water out to 12 nautical miles, including inland areas such as the Broads and other waters subject to tidal influence, and covers an area of 6,000 square kilometres. The East Offshore Marine Plan area covers the marine area from 12 nautical miles out to the maritime borders with the Netherlands, Belgium and France, a total of approximately 49,000 square kilometres of sea. Producing these first marine plans has therefore been the equivalent of developing a terrestrial Local Plan for around 40% of England's land area. Since both marine areas are very busy and contain much of the planned new activity in English seas this has required detailed consultations with stakeholders and numerous issues to be considered.

2. The Marine and Coastal Access Act, 2009 introduced a number of measures to deliver the United Kingdom Government's vision of "clean, healthy, safe, productive and biologically diverse oceans and seas". These included the introduction of a marine planning system, comprising the United Kingdom Marine Policy Statement (adopted by the Government and the Devolved Administrations in March 2011) and marine plans. The Secretary of State for Environment, Food and Rural Affairs is the marine plan authority and has delegated most of the functions in respect of marine plans to the Marine Management Organisation. In 2011 the Department for Environment and Rural Affairs recommended eleven marine plan 'areas' for the English Inshore and Offshore Marine regions. The Marine Management Organisation are currently producing two plans at a time, starting with these current plans.

3. The aim of marine plans is to help ensure the sustainable development[1] of the marine area. Marine plans will contribute to economic growth in a way that benefits society whilst respecting the needs of local communities and protecting

[1] As defined in United Kingdom Sustainable Development Strategy, see http://sd.Defra.gov.uk/documents/mainstreaming-sustainable-development.pdf

the marine ecosystem. They will help to reduce the net regulatory burden on applicants and users by acting as an enabling mechanism for those seeking to undertake activities or development in the future and providing more certainty about where activities could best take place. As a result, the East Inshore and Offshore Marine Plans should provide developers with greater certainty on where to invest their capital, ensuring that marine projects benefit from the right information at the right time, so they can move from 'concept to consent' more quickly. Analysis suggests that there will be an economic benefit from the East Inshore and Offshore Marine Plans, building on a calculated current economic activity of £10bn in the East marine plan areas.[2]

4. The principal means through which the marine plans are applied will be through the decisions made by public authorities (see 'The effect of marine plans' below). This will be delivered through existing regulatory and other decision-making mechanisms.

5. In this instance both plans have been prepared in one integrated process as most of the activities in each plan area require a coordinated approach across both areas. This includes offshore wind farms, fishing, shipping, cabling, and other interests common to both areas, including certain habitats and species. To provide a consistent and simple approach a single document has been produced with policies relevant to either the East Inshore or East Offshore Marine Plan Area or to both. The document includes a 20-year vision for the plan areas.

Vision for East Marine Plan Areas in 2034

By 2034 sustainable, effective and efficient use of the East Inshore and East Offshore Marine Plan Areas has been achieved, leading to economic development while protecting and enhancing the marine and coastal environment, offering local communities new jobs, improved health and well-being. As a result of an integrated approach that respects other sectors and interests, the East marine plan areas are providing a significant contribution, particularly through offshore wind, to the energy generated in the United Kingdom and to targets on climate change.

How will this look in 2034 if the vision is achieved?

6. By 2034, new infrastructure developments and the improved coordination of existing activities in the East plan areas are providing increased economic and social benefits, to both local communities along the East coast and those in adjacent areas. The approach enables sustainable commercial fishing, shipping, aquaculture, aggregate extraction and other activities to continue or grow, while allowing the development of new business opportunities, ensuring safety at sea and protecting the environment. Essential infrastructure for the onward transportation of goods or energy is in place along the coast.

7. As a result of effective planning across both land and sea, and an appreciation of the unique features of the East marine plan areas, key elements of the coastal

[2] Marine Management Organisation (2014) Analysis of the East Inshore and East Offshore Marine Plans

landscape, adjoining seascape and heritage, including the character created by traditional activities such as fishing, have been conserved and enhanced. As a result, tourism and recreation continue to make a significant contribution to prosperity and well-being.

8. Both the East Inshore and Offshore Marine Plan Areas are in Good Environmental Status (in accordance with the Marine Strategy Framework Directive), relevant habitats and species are in 'favourable conservation status' (as required under the Habitats and Wild Birds Directives), partly as the result of a well-managed and ecologically coherent network of Marine Protected Areas which includes individual sites in 'favourable condition'. New activities, developments and uses will have been implemented and managed to ensure, alongside environmental protection, that sustainability has been achieved. Offshore wind farms in the plan areas will be making a significant contribution to meeting the United Kingdom's target under the European Union Renewable Energy Directive[3] and the Climate Change Act 2008. The offshore wind industry has been developed in a sustainable way that does not compromise the importance of national, European and international shipping links and connectivity with other countries while maintaining the essential requirements of navigational safety.

9. The best use is made of new technologies in the plan areas, contributing to sustainable/low carbon energy production from wave and tidal energy and climate change mitigation, and through the transport and storage of carbon dioxide emitted from fossil fuel use. Gas production continues to be an important activity and new technologies will have improved the ability to maximise production of hydrocarbons from reserves in the marine plan areas while continuing to ensure minimal environmental impact.

National Policy Context

10. These marine plans conform with the Marine Policy Statement and other national policy including the National Planning Policy Framework and National Policy Statements. The Localism Act also places a duty to cooperate on the Marine Management Organisation and other public authorities. It requires local authorities and other public bodies to work together on planning issues: "to reflect genuine shared interests and opportunities to make common cause"[4].

11. The plans give an area-specific expression of the Marine Policy Statement (and other national policy). As such, the marine plans' policies do not establish new requirements but rather apply or clarify the intent of national policy to the East Inshore and Offshore Plan Areas, taking into account the specific characteristics of the plan areas including the available evidence, the resources, activities and issues, and the perspective of stakeholders.

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[3] European Union (2009). Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009, The promotion of the use of energy from renewable sources and amending and subsequently

[4] A Plain English Guide to the Localism Act

Scope of the East Inshore and East Offshore Marine Plans

12. Due to the size and complexity of the area under consideration, the marine planning process focussed on those issues likely to drive, or be subject to, significant change in the plan areas and which can be partly addressed by marine planning. Gaps in the evidence base and stakeholder views, however, have resulted in a mix of more strategic policies as well as those that provide more control or influence over the nature or location of activities. For similar reasons, even where policies have been expressed spatially, many of these are indicative, providing a 'signal' towards what is required or to be avoided, rather than being prescriptive; enabling a degree of flexibility.

13. The marine plans' vision and objectives cannot be delivered solely through the marine plan policies but are dependent on a range of measures. To avoid replicating existing plans and measures these are 'signposted' where they include relevant information and policies. Signposting to relevant plans and policies also helps to illustrate the importance of integration between terrestrial and marine plans. Such signposting has been kept to a minimum but sometimes it is necessary to explain why particular policies or measures have been highlighted in this way. To meet the requirements for compatibility set out in the Marine and Coastal Access Act and contribute to integrated coastal zone management, specific attention has been given to assessing the policies in Local Development Frameworks and related plans.

14. Any decisions made in the marine plan areas must still be compliant with relevant legislation and regulations; the marine plans complement rather than replace such requirements.

East Inshore and East Offshore Objectives

15. Plan objectives describe the aim of the marine plans that need to be met in order to deliver the vision. The objectives are a package, with each complementary to the others. That does not mean that every objective will be met in every situation and in every location but rather that, taking the marine plan area as a whole, all of the objectives should be delivered in an integrated way. For example, economic, environmental and social objectives must be considered alongside one another.

16. The objectives partly reflect the outcomes in the High-Level Marine Objectives set out in the Marine Policy Statement. Specific objectives are included on offshore wind energy production and on climate change as they are both of particular importance in the East plan areas. Taking account of the Marine Policy Statement and that the fact that these are the first marine plans, it was considered important to include objectives on governance and on evidence.

17. The objectives in the table below apply to both the Inshore and Offshore Marine Plan Areas.

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Figure 1: East Inshore and Offshore Marine Plan areas and bordering nations

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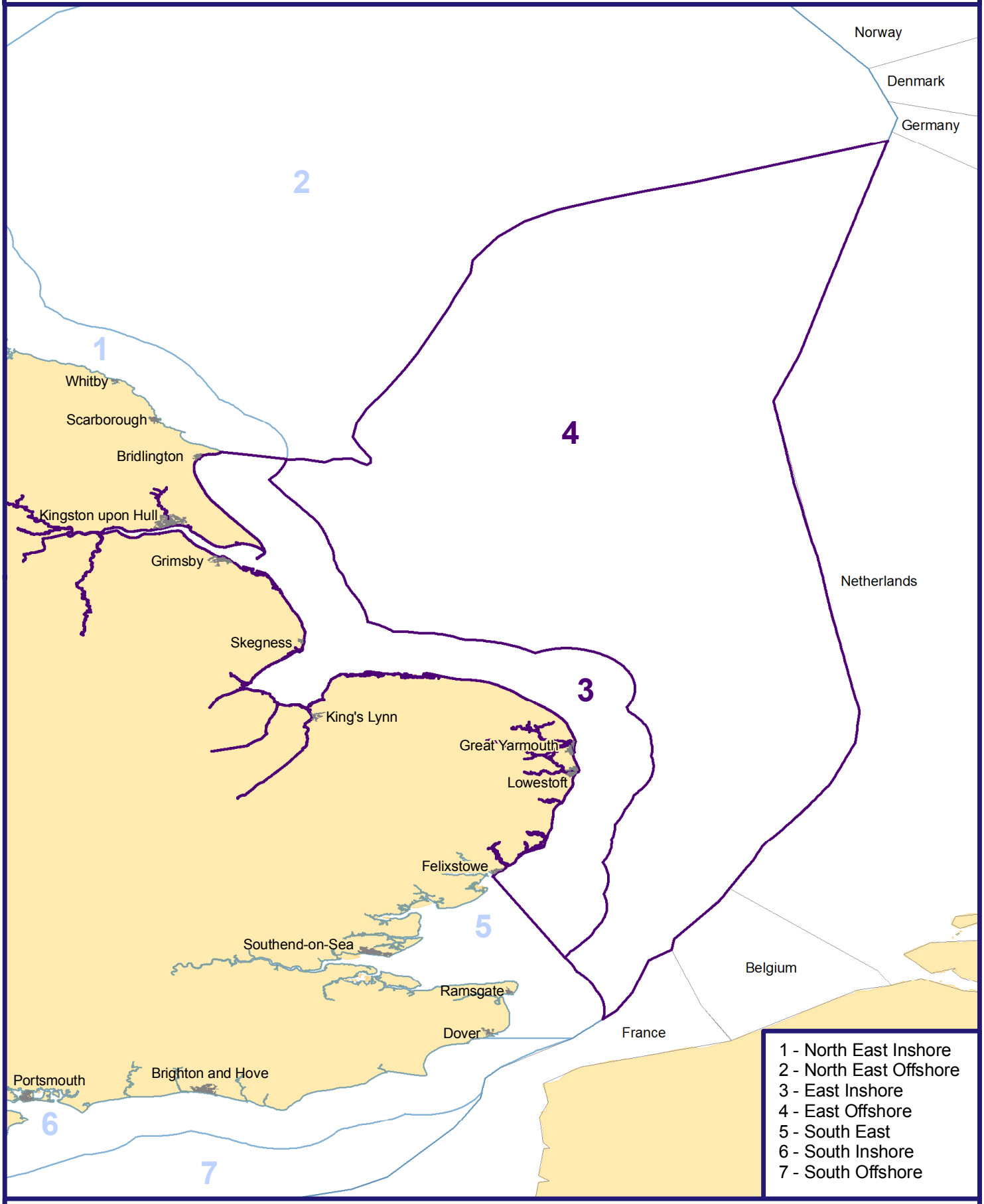

Objective 1 To promote the sustainable development of economically productive activities, taking account of spatial requirements of other activities of importance to the East marine plan areas.
Objective 2 To support activities that create employment at all skill levels, taking account of the spatial and other requirements of activities in the East marine plan areas.
Objective 3 To realise sustainably the potential of renewable energy, particularly offshore wind farms, which is likely to be the most significant transformational economic activity over the next 20 years in the East marine plan areas, helping to achieve the United Kingdom's energy security and carbon reduction objectives.
Objective 4 To reduce deprivation and support vibrant, sustainable communities through improving health and social well-being.
Objective 5 To conserve heritage assets, nationally protected landscapes and ensure that decisions consider the seascape of the local area.
Objective 6 To have a healthy, resilient and adaptable marine ecosystem in the East marine plan areas.
Objective 7 To protect, conserve and, where appropriate, recover biodiversity that is in or dependent upon the East marine plan areas.
Objective 8 To support the objectives of Marine Protected Areas (and other designated sites around the coast that overlap, or are adjacent to the East marine plan areas), individually and as part of an ecologically coherent network.
Objective 9 To facilitate action on climate change adaptation and mitigation in the East marine plan areas.
Objective 10 To ensure integration with other plans, and in the regulation and management of key activities and issues, in the East marine plans, and adjacent areas.
Objective 11 To continue to develop the marine evidence base to support implementation, monitoring and review of the East marine plans

Table 1: Plans Objectives

East Inshore and East Offshore Plan Policies

18. The purpose of the policies is to provide direction or guidance on how decisions should be made to ensure the plan objectives are met. Plan policies are central to the role of marine plans and, in many cases, apply to new, rather than existing, developments, uses and management measures.

19. There are 38 separate marine plan policies. Where possible, plan policies are expressed spatially or locally by reference to maps and other information. Those that support a particular objective are included first, with some brief context as a link between the objective and policies; followed by those on individual sectors to avoid duplicating similar policies under several objectives. Few of the plan policies can be applied in isolation. Instead, it is likely that several plan policies will be pertinent to any decision, or situation. In many cases, policies set out for one sector will apply to other sectors.

20. The detail for each policy is contained in the main chapter of the draft plans. The structure and content for each policy section includes some or all of: context to provide brief background; signposting to existing policies and measures; the policy in text boxes; indication of which plan areas they apply to; justification and explanation in support of the policy; and relevant maps.

The effect of the marine plans – application to decisions

21. The Marine and Coastal Access Act requires that all public authorities taking authorisation or enforcement decisions, must to do so in accordance with marine policy documents (marine plans and the Marine Policy Statement) unless relevant considerations indicate otherwise. Where a relevant decision is not taken in accordance with the appropriate marine policy documents, the public authority must state its reasons. Applications for development consent for nationally significant infrastructure projects under the Planning Act 2008 must be determined, by the relevant Secretary of State, in accordance with the relevant National Policy Statement, subject to certain exceptions, and having regard to the Marine Policy Statement and marine plans.

22. Public authorities taking decisions which are not concerned with authorisation or enforcement but which relate to the exercise of any function capable of affecting the whole or any part of the marine area, for example decisions about what representations they should make as a consultee or in the preparation of terrestrial plans, must also have regard to the marine plan and the Marine Policy Statement.

23. Individual applications for marine developments will continue to require case specific assessments that consider the proposed activity and the location where it will occur. However, the East marine plans set the planning context for case specific assessments, providing a broad picture to inform the assessment of the likely impacts, positive or negative, of proposals and giving an indication of the locations where particular activities or developments may be supported.

Supporting documents and information

24. The plans have been subject to an independent statutory Sustainability Appraisal to ensure that the plan, as a whole, will lead to sustainable development. A Habitats Regulations Assessment was also undertaken to meet the requirements of the Habitats Regulations. An 'Analysis of the East Inshore and East Offshore Marine Plans' provides a largely qualitative discussion of potential economic impacts. The delivery of the plans is supported by Implementation and Monitoring documents.

25. A series of reports produced during different stages in the planning process provide more detail and technical information, including on stakeholder participation, the evidence base, and the development of various aspects of the plans.

Implementation, monitoring and review

26. Marine plans will be principally delivered through the decisions made by public authorities, including but not restricted to the Marine Management Organisation. These decisions should align with the better regulation principles[5] and lead to action that is proportionate, consistent and targeted; delivered through a transparent and accountable process. In implementing the plans, the relevant public authorities, will need to apply precaution within an overall risk-based approach in accordance with the sustainable development policies of the United Kingdom's Administrations

27. The process of monitoring and periodical reporting on the implementation of the marine plans and any need for review is a requirement under Section 61 of the Marine and Coastal Access Act. The Marine Management Organisation has a duty to review and report on the effectiveness of the plans at intervals of not more than three years after each marine plan is adopted. After each report, the marine planning authority will decide whether or not the marine plan needs to be amended or replaced. In addition, at intervals not more than six years after the passing of the Marine and Coastal Access Act the Marine Management Organisation will report to Government on any marine plans it has prepared and adopted, its intentions for their amendment, and for the preparation and adoption of further marine plans.

28. The Marine Management Organisation has developed an approach to monitoring taking account of a range of considerations including the Government's Magenta Book, the Marine Policy Statement, and recommendations from the Sustainability Appraisal, Habitats Regulations Assessment and 'Analysis Inshore and East Offshore Marine Plans'.

29. The Implementation and Monitoring Plan provides guidance to public authorities and stakeholders in a clear and transparent way on how and when the marine plan policies and objectives should be applied and on how the effectiveness of Plans will be monitored.

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5 HM Treasury (2005) Reducing Administrative Burdens: Effective Inspection and Enforcement. Hampton, P.

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The first step was the adoption of the United Kingdom-wide Marine Policy Statement, which provides the framework for United Kingdom marine plans and for decisions likely to affect the marine area. Marine plans will inform and guide decisions by regulators managing the development of industry in marine and coastal areas, while conserving and enhancing the environment. Alongside the work in England, plans are also being developed in Northern Ireland, Scotland and Wales.

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The adoption of England's first two marine plans, for the East Inshore and East Offshore marine areas, is a significant milestone and the culmination of years of work by Government, industry, voluntary organisations and individuals. These plans, however, are only the beginning. The Government is committed to developing eleven marine plans, covering all of England's seas by 2021.

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George Eustice MP
Parliamentary under Secretary of State for Farming, Food and Marine Environment

Chapter 1
Background and Overview

Introduction

1. Through the Marine and Coastal Access Act 2009,[1] the United Kingdom Government introduced a number of measures to deliver its vision of 'clean, healthy, safe, productive and biologically diverse oceans and seas'. These measures included providing for the introduction of a marine planning system, establishing the Secretary of State as the marine planning authority for the English Inshore and English Offshore marine planning regions with the power to delegate certain marine planning functions. The Secretary of State delegated these functions to the Marine Management Organisation in April 2010.

2. Marine plans, together with the Marine Policy Statement, underpin this new planning system for England's seas. In 2011 the Department for Environment, Food and Rural Affairs recommended a series of marine plan areas for the English Inshore and Offshore marine regions to the Marine Management Organisation. The boundaries for these areas were identified following stakeholder and other expert input throughout the progress of the Marine Bill, (now the Marine and Coastal Access Act) and were also subject to a specific consultation in 2010.[2]

3. These first two marine plans, of a proposed eleven, provide a clear approach to managing the East Inshore and East Offshore areas, their resources, and the activities and interactions that take place within them. They will help ensure the sustainable development of the marine area.[3] Sustainable development for marine planning is defined using the United Kingdom

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[1] Marine and Coastal Access Act 2009 (Marine and Coastal Access Act) http://www.legislation.gov.uk/ukpga/2009/23/pdfs/ukpga_20090023_en.pdf

[2] Department for Environment, Food and Rural Affairs (2010) Consultation on marine plan areas within the English Inshore and English Offshore Marine Regions http://webarchive.nationalarchives.gov.uk/20101109165532/http://www.Defra.gov.uk/corporate/consult/marine-plan/index.htm

[3] Marine Policy Statement (2011), 1.1.and 2.1.1 www.gov.uk/government/publications/uk-marine-policy-statement

Sustainable Development Strategy which sets out five 'guiding principles' of sustainable development.

4. A total of 11 plans will cover the seas around England, giving an area specific expression within the framework of the Marine Policy Statement (and other national policy). The marine plans do not establish new requirements, but apply or clarify the intent of national policy in the East Inshore and Offshore areas, taking into account the specific characteristics of the plan areas. They will help to reduce the overall regulatory burden on applicants and users, by acting as an enabling mechanism for those seeking to undertake activities or development in the future, and providing more certainty about where activities could best take place. The East Inshore and Offshore Marine Plans should provide developers with greater certainty on where to invest their capital, ensuring that marine projects benefit from the right information at the right time, so they can move as quickly as possible from 'concept to consent'.

5. The Marine Policy Statement (1.3.5), marine plans and the planning process will contribute to an integrated and holistic approach to the management of marine and coastal areas in line with the principles of Integrated Coastal Zone Management. The Marine Management Organisation has taken all reasonable steps, as required by the Marine and Coastal Access Act, to ensure that the East Inshore Marine Plan is compatible with any related relevant development plans[4] (or their equivalent). The Marine Management Organisation is also working with public and local authorities responsible for other plans affecting the East Inshore Marine Plan Area[5]. The Coastal Concordat[6], an agreement between the Department for Environment, Food and Rural Affairs, the Department for Communities and Local Government, the Department for Transport, the Marine Management Organisation, the Environment Agency, Natural England and the Local Government Association's Coastal Special Interest Group, sets out how regulatory and advisory bodies propose to work with local planning authorities to enable sustainable growth in the coastal zone in support of streamlined consenting and decision-making.

The effect of the East Inshore and Offshore Marine Plans

6. As described above, these marine plans will inform and guide regulation, management, use and protection of the marine plan areas.[7] The principal means by which the marine plans are applied will be through the decisions made by public authorities.[8] The Marine and Coastal Access Act (S58 (1)) requires that all public authorities taking authorisation or enforcement decisions[9] must do so in accordance with the appropriate marine policy documents (marine plans and the Marine Policy Statement) unless relevant

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[4] Marine and Coastal Access Act Sc 6 3(2)

[5] Marine and Coastal Access Act Sc 6 9(2)(h)

[6] A Coastal Concordat for England (2013) https://www.gov.uk/government/publications/a-coastal-concordat-for-england

[7] Marine and Coastal Access Act S 58(1)

[8] 'Public Authority' and related terms are defined in section 322(1) of the Marine and Coastal Access Act.

[9] Marine and Coastal Access Act S 58(4)(a)

considerations indicate otherwise. Where an authorisation or enforcement decision is not taken in accordance with the appropriate marine policy documents, the public authority must state its reasons.[10]

7. Applications for development consent for nationally significant infrastructure projects, including offshore renewable energy installations over 100 Megawatts and larger port developments, must be determined in accordance with the Planning Act 2008. Where a relevant National Policy Statement has been designated, nationally significant infrastructure project applications must be determined in accordance with the National Policy Statement, subject to certain exceptions, and have regard to the Marine Policy Statement and relevant marine plans.[11]

8. Public authorities taking decisions other than on authorisation or enforcement matters but which relate to any function capable of affecting the whole or any part of the marine area, (for example representations made as a consultee or in the preparation of terrestrial plans), must have regard to the Marine Policy Statement and marine plans.[12]

9. The marine plan policies will be implemented by public authorities through existing regulatory and decision-making mechanisms; there are no new burdens in the form of additional mechanisms. The plan-led decision-making framework encourages early dialogue between the authorities and potential applicants, to help remove uncertainty and reduce the resources required. The plan policies should not be read in isolation as more than one policy could apply to any proposal (see paragraph 88).

10. These marine plans came into effect when they were adopted by the Secretary of State and subsequently published. In marine plan areas which do not have adopted marine plans in place, the appropriate marine policy document is the Marine Policy Statement.

National policy context

11. The Marine Policy Statement was adopted by all United Kingdom Administrations and published in March 2011. It built upon the shared United Kingdom-wide High Level Marine Objectives published in 2009,[13] and provides the policy framework for the preparation of marine plans, establishing how decisions affecting the marine area should be made in order to enable sustainable development (see Box 1). The Marine Policy Statement sets out a high level approach to developing marine plans. The process should be participative, based on an ecosystem approach, and apply precaution within an overall risk based-approach. The Marine Policy Statement also lists high level principles for decision-making, including that it should be consistent with existing legislation, streamlined where possible, and seek to avoid or mitigate

[10] Marine and Coastal Access Act S 58(2)

[11] Marine and Coastal Access Act S 58(3) and (4) 'Appropriate marine plan documents' is defined in accordance with Marine and Coastal Access Act S59

[12] Marine and Coastal Access Act S 58(3)

[13] Objectives in Our seas – a shared resource: High Level Marine Objectives http://archive.Defra.gov.uk/environment/marine/documents/ourseas-2009update.pdf

negative impacts where possible in a proportionate manner and use sound science responsibly.[14]

12. All marine plans must conform with the Marine Policy Statement unless relevant considerations indicate otherwise.[15] The Marine Policy Statement also provides an overview and summary of national policy relevant to marine planning and decision-making in the marine plan areas, set within the context of European and international policy and commitments. The plans take account of the Marine Policy Statement, and also other United Kingdom national policy including the Planning Act 2008, National Planning Policy Framework,[16] National Policy Statements such as those for Ports, sources of energy, eg Nuclear Power Generation, and the procedures for nationally significant infrastructure project consents.[17] Relevant provisions in the National Planning Policy Framework and National Policy Statement were identified and incorporated into the marine plans as appropriate.

Box 1 Sustainable development and marine planning

The Marine Policy Statement defines sustainable development in line with the United Kingdom Sustainable Development Strategy 'Securing the Future' (reiterated in the government's refreshed vision),[18] which sets out five guiding principles of sustainable development:

- Living within the planet's environmental limits
- Ensuring a strong, healthy and just society
- Achieving a sustainable economy
- Promoting good governance
- Using sound science responsibly

The National Planning Policy Framework, which has a presumption in favour of sustainable development, reiterates these principles. It also reinforces the government's view of sustainable development and that the planning system in England needs to perform an economic, social and environmental role.[19]

13. The Planning and Compulsory Purchase Act 2004 (as amended by the Localism Act 2011) places a duty to co-operate on the Marine Management Organisation and other public authorities in the preparation of marine plans

[14] Department for Communities and Local Government (2012) National Planning Policy Framework, p.2

[15] Marine and Coastal Access Act S 51(6)

[16] National Planning Policy Framework https://www.gov.uk/government/publications/national-planning-policy-framework--2

[17] Planning Act 2008, S 14

[18] Refreshed vision from coalition government: https://www.gov.uk/government/publications/securing-the-future-delivering-uk-sustainable-development-strategy

[19] National Planning Policy Framework (2012), p2 (7)

and local development plans.[20] It requires local authorities and other public bodies[21] to engage constructively, actively and on an ongoing basis.[22] That duty applies to the marine plans, to their implementation and any subsequent revisions.

14. These requirements, together with the options for communities to formulate their own Neighbourhood Plans, bring new opportunities for an integrated planning system for land and sea.

Scope of the East Inshore and East Offshore Marine Plans

15. Proposals for development or activities are currently considered on an individual basis by the Marine Management Organisation or other public authority, taking into account views that are raised as part of the consultation process and in accordance with the Marine Policy Statement. Marine planning provides a forward-looking holistic approach to the management of human activities and the use of marine resources, enabling the Marine Management Organisation and others to move away from case-by-case decision-making. Marine plans can also add valuable context when 'imperative reasons of overriding public interest' are being considered for specific projects,[23] such as the need for nationally significant infrastructure.

16. The East Inshore and East Offshore Marine Plans seek to support and complement existing plans wherever appropriate. Signposting is used in these marine plans to point towards relevant information and policies held in other existing plans. This avoids replication of policies and ensures new plan policies and supporting information focus on issues where they can add value. Examples of other plans of relevance include Local Plans and their equivalents such as Local Development Frameworks/Core Strategies, River Basin Management Plans, Shoreline Management Plans, Estuary Management Plans, European Marine Site management schemes, Area of Outstanding Natural Beauty management plans, and the Broads Authority plan. To enable integrated coastal planning, specific attention has been given to assessing the policies in local development frameworks and other plans thereby informing the production of these marine plans.[24]

17. Gaps in the evidence base (see Objective 11 and paragraph 38 onwards on use of evidence in the marine plans)[25] mean that these first marine plans do not include specific spatial or resource allocations for some policies. Instead of

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[20] Planning and Compulsory Purchase Act 2004, S 33A

[21] ie a body or person prescribed under S 33A(1)(c) Planning and Compulsory Purchase Act 2004. Prescribed bodies are currently set out in Regulation 4 of the Town & Country Planning (Local Planning) (England) Regulations 2012 (SI 2012/767).

[22] A Plain English Guide to the Localism Act

[23] Further information on imperative reasons of overriding public interest can be found at http://www.defra.gov.uk/consult/2012/08/07/habitats-directive-iropi/

[24] Annex 6 of the Evidence and Issues report for the East Marine Plan areas explains how local plans and policies were used to inform the significant issues. A summary of this work is included in the Plan Annex. http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

[25] Changes resulting from abolition of the mineral policy statement and the introduction of the National Planning Policy Framework

being prescriptive, such plan policies act as a guide for public authorities to ensure that all relevant considerations are taken into account, no matter what space they occupy.

The East Inshore and East Offshore Marine Plan Areas

18. The East Inshore and East Offshore Marine Plan Areas were announced as the first areas for the preparation of marine plans, with the process commencing in April 2011.

19. The East Inshore Marine Plan Area includes the area of sea stretching from Flamborough Head to Felixstowe, and extends out to the seaward limit of the territorial sea (approximately 12 nautical miles). It also includes

- any area submerged at mean high water spring tide
- the waters of any estuary, river or channel, so far as the tide flows at mean high water spring tide and
- waters in any area which is closed (permanently or intermittently) by a lock or other artificial means against the regular action of the tide, but into and from which seawater is caused or permitted to flow (continuously or from time to time)

In some areas there are existing plans or measures already in place that marine planning may complement or support. In practice for some areas, eg in inland tidal waterways, existing plans and measures will be such that marine planning will have little or nothing to add to that established by other existing plans.

20. The East Offshore Marine Plan Area extends from the seaward limit of the territorial sea out to the boundary of the Exclusive Economic Zone.[26] This includes maritime borders with the Netherlands, Belgium and France.

21. It should be noted that particular attention was also paid to the plan areas adjacent to the East, the North East and South East marine plan areas, referred to as reporting areas. The reporting areas consist of the wider areas of analysis required for the plan, which includes the broader area outside of the plan area boundaries. A reporting area does not have a defined geographical boundary; rather the area differs depending on the issues being considered.

22. The two East marine plan areas (figure 1) have many features and activities in common. For example, some habitats occur in both areas, certain species use or occur in both the inshore and offshore areas or are dependent on both, (eg seabirds that reside on the coast but forage in offshore areas), and some Marine Protected Areas straddle the boundary between the inshore and offshore. Many activities rely on or take place in both areas, eg the movement of shipping through the offshore area to reach ports along the East coast. Both areas are very busy and contain the majority of planned new activity in the

[26] The Exclusive Economic Zone is expected to be declared by the United Nations Convention on the Law of the Sea in spring 2014.

English marine area as a whole. Most of these activities, including offshore wind farms, fishing, carbon capture and storage, cabling and others, require a coordinated approach between the East Inshore and Offshore Marine Plan Areas.

The East Inshore Marine Plan Area

23. The inshore marine plan area[27] covers an area of 6,000 square kilometres and its coastline includes exposed sandy beaches, soft glacial till cliffs and seafront towns; such as Bridlington, Great Yarmouth, Hunstanton, Cleethorpes and Skegness, busy with tourism, recreational activities and fisheries. Shallow waters and sandbanks provide important wildlife habitats and spawning grounds for many species and the area is rich in wildlife with many internationally designated sites.

24. The Humber estuary, located in the north of the East Inshore Marine Plan area, hosts the United Kingdom's busiest port cluster, (in 2011[28]), Grimsby and Immingham, handling 12% of the United Kingdom's traffic, with up to 40,000 ship movements per year. There is a complex mix of industrial, commercial, agricultural and residential uses. The Humber receives large inputs of suspended sediment from the North Sea, the Holderness Coast and from the rivers flowing into the estuary. This material is critical to many of the designated habitats within the estuary such as mudflats and saltmarsh.

25. The port of Felixstowe in Suffolk adjacent to the marine plan areas' southern boundary is the largest container port in the United Kingdom handling through traffic of 1.98 million containers per year.[29] The Suffolk Coast is also host to the Sizewell nuclear power plant where a third facility has been proposed for development adjacent to the existing site, aiming to supply low carbon energy for up to 5 million homes,[30] with potential to bring social and economic benefits to the area. Development considerations will be taken in line with the National Policy Statement for Nuclear Power Generation (EN-6).

26. The Wash is England's largest tidal embayment fed by multiple tidal rivers. The landscape is extremely low lying, containing areas of intertidal sand bank, mudflat and saltmarsh which are internationally important for wildlife habitats, migrating waterfowl and shellfish breeding grounds.

27. There are also extensive areas of undeveloped coastline along the East which add to the character of the area such as saltmarsh and lowland heath. A

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[27] This section describes some characteristics of the plan areas, from the Seascape character assessment see: Natural England (2011) Seascape Characterisation around the English Coast (Marine Plan Areas 3 and 4 and Part of Area 6 Pilot Study) see http://publications.naturalengland.org.uk/publication/2736726?category=10006

[28] Department for Transport Port Freight Statistics: Provisional Annual 2011 http://webarchive.nationalarchives.gov.uk/20120926002851/http://www.dft.gov.uk/statistics/releases/port-freight-statistics-2011-annual-provisional//

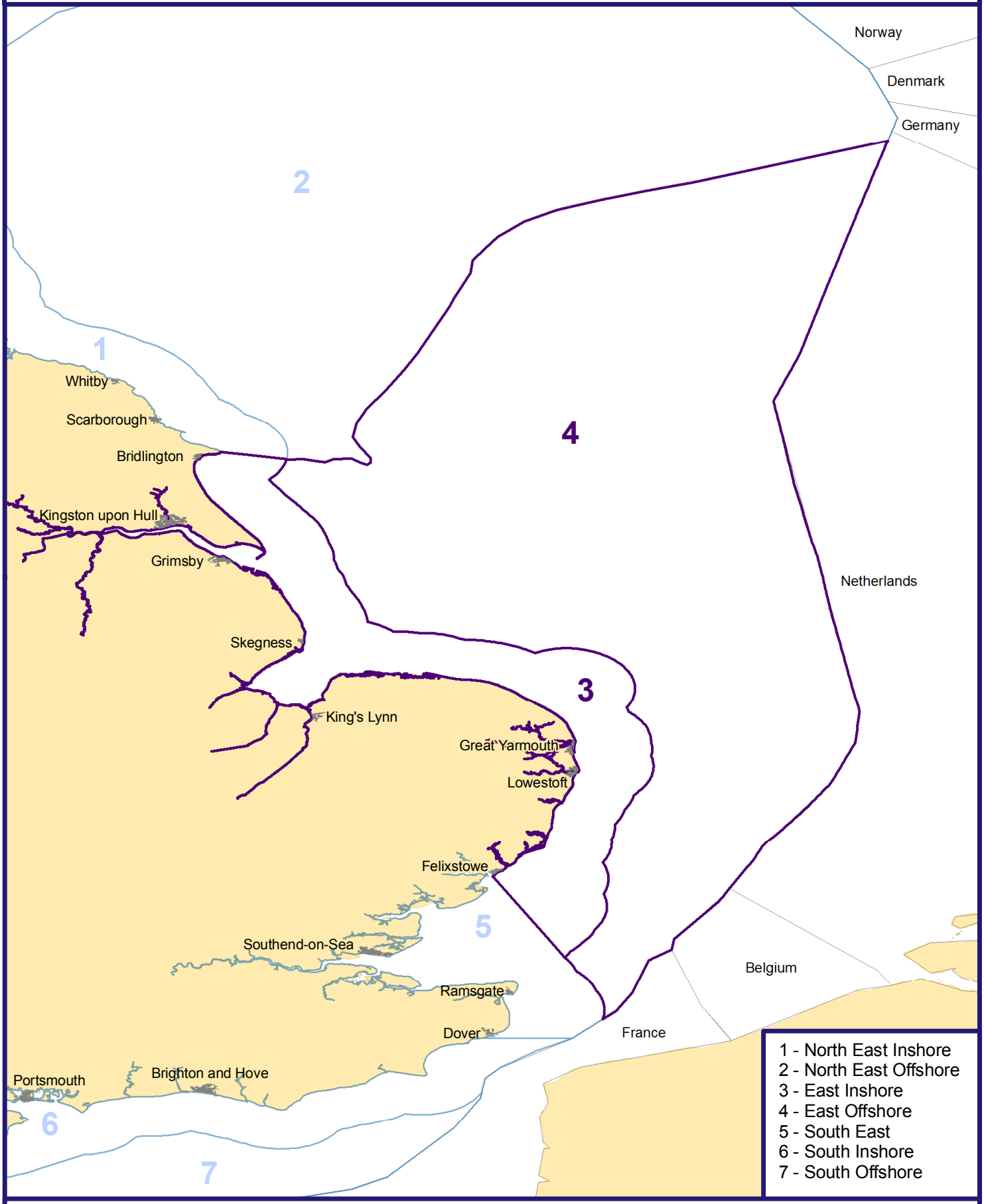
[29] Department for Transport (2012) Port Freight Annual Statistics 2011

[30] EDF Energy - http://www.edfenergy.com/media-centre/press-news/Sizewell-C-Public-Consultation-Launch.shtml

HM Government

Figure 1: East Inshore and Offshore Marine Plan areas and bordering nations

February 2014



wealth of historic landscapes also add to the character of the area. These include listed structures, scheduled monuments and registered historic parks.

28. All of these characteristics and features contribute to the quality of life, culture and economy of communities along the coast and estuaries.

29. In summary the East Inshore Marine Plan Area:[31]

- has 22% of ports (by number) in England, including the Humber's busiest port complex of Grimsby and Immingham, and the large port of Felixstowe, adjacent to the plan area
- accounts for 40% of the area licensed for aggregate extraction in English waters
- includes 11% by area of England's Special Areas of Conservation, and 29% of Special Protection Areas
- has 10% of its area designated as Sites of Special Scientific Interest
- has important Ramsar sites in the Humber estuary and The Wash
- includes shell-fishing activity targeting primarily crabs and lobster, occurring all along the coastline, with specialist inshore fisheries for cockles and other molluscs occurring in the Wash
- Bridlington has the largest shellfish landings of any port in England
- is the most productive area for aquaculture in England
- includes leisure boating which is the most popular sector of the marine water sports industry, with many marinas and Royal Yachting Association training and racing areas. These areas are clustered around the Broads in Norfolk and Suffolk coastlines and estuaries and to a lesser extent the estuaries in the Wash and Humber. The inshore area is also used for other recreational activities, such as sea angling
- has 16 beaches with blue flag status, which can be attributed to high water quality and good management
- includes a range of communities, both urban and rural, which vary in wealth and opportunities for employment including tourism opportunities in resorts such as Cleethorpes and Great Yarmouth
- includes some declining traditional industries such as ship building, but also new emerging industries, such as offshore wind energy, offering job opportunities for new and existing businesses that are in a position to diversify
- has many onshore locations at risk of coastal erosion and flood risk particularly because of the prevailing low lying topography[32] [33]

[31] Further information on the above can be found in the Evidence and Issues Report http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm figures correct as of 2011/12

- has three onshore gas terminals at Easington, Theddlethorpe and Bacton, carrying approximately 48% of gas flowing into the United Kingdom from the United Kingdom Continental shelf
- hosts existing nuclear generating plant near Sizewell, with proposals for a new facility, Sizewell C
- Sizewell C aims to offer 900 jobs linked directly to the completed site, whilst a significant number of other jobs will be generated as a result of companies in the area supporting the development,[34] during and post construction
- Has coastal natural protected landscapes onshore, such as the Norfolk Coast Area of Outstanding Natural Beauty, Norfolk and Suffolk Broads and Suffolk Coast and Heaths Areas of Outstanding Natural Beauty

The East Offshore Marine Plan Area

30. The East Offshore Marine Plan Area[35] encompasses the marine area from 12 nautical miles out to the Exclusive Economic Zone (the maritime borders with the Netherlands, Belgium and France); a total of approximately 49,000 square kilometres of sea.

31. The area is predominantly open, expansive, shallow water supporting oil and gas platforms and commercial activities such as shipping, aggregate extraction and fishing. Designated shipping routes, cables infrastructure and oil and gas pipelines cross the offshore area linking the United Kingdom mainland with Europe.

32. The area also contains a wealth of archaeological sites and heritage assets. In locations such as the Dogger Bank, the potential exists to discover evidence of prehistoric activity in areas that were once on land. In other locations across the offshore area discoveries of early human remains have been prevalent.

33. The East Offshore Marine Plan Area:[36]

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[32] Environment Agency Mapping, Risk of Flooding from Rivers and Sea (http://maps.environment-agency.gov.uk/wiyby/wiybyController?x=531500.0&y=181500.0&topic=floodmap&ep=map&scale=3&location=London,%20City%20of%20London&lang=_e&layerGroups=default&textonly=off)

[33] Environment Agency Mapping, Risk of Flooding from Rivers and Sea (http://maps.environment-agency.gov.uk/wiyby/wiybyController?x=531500.0&y=181500.0&topic=floodmap&ep=map&scale=3&location=London,%20City%20of%20London&lang=_e&layerGroups=default&textonly=off)

[34] EDF Energy - http://sizewell.edfenergyconsultation.info/proposal/

[35] This section describes some characteristics of the plan areas, from the Seascape character assessment see: Natural England (2011) Seascape Characterisation around the English Coast (Marine Plan Areas 3 and 4 and Part of Area 6 Pilot Study) see http://publications.naturalengland.org.uk/publication/2736726?category=10006 footnote 19

[36] Further information on the bullets can be found in the Evidence and Issues Report http://www.marinemanagement.org.uk/marineplanning/areas/east_key.htm and the Strategic Scoping Report: http://www.marinemanagement.org.uk/marineplanning/key/ssr.htm figures correct as of 2011/12

- contains 39% of the oil and gas license blocks in England, which are anticipated to continue into the foreseeable future, together with exploration for new oil and gas reserves
- contains 37% or 1.7 Gigawatts of offshore wind energy capacity currently operational or under construction in English waters
- accounts for 27% of the area licensed for aggregate extraction in English waters
- contains 35% of the marine plan area designated as Special Areas of Conservation, including a large Site of Community Importance on the Dogger Bank. One per cent of the marine plan area is designated as Special Protection Area
- includes 56% of the marine plan area defined as a high intensity spawning area for plaice with over 33% high intensity spawning areas for sandeels and whiting, and over 11% high intensity nursery ground for cod (mainly offshore but with some high intensity cod, sole and plaice spawning grounds continuing inshore).[37] It is therefore an important area to support fish stocks and sustainable commercial fisheries
- represents the greatest opportunity for Carbon Capture and Storage development across England. This is as a result of the concentration of the majority of the Bunter Sandstone formation aquifers and the existing oil and gas infrastructure, also opportunities for storage in the East Offshore Marine Plan Area (with some in the inshore area)
- has almost 20% of the submarine cables in English waters (second only to the South West areas in volume) with a high traffic value and anticipated further growth
- has some nomadic fishing activity, targeting shellfish within the East Inshore area, the plan area used by local, national and international fishers
- has high levels of shipping traffic passing through the offshore area but also coming into busy ports on the Humber, Felixstowe and other smaller ports

Two marine plans, one plan document

34. The Marine and Coastal Access Act (S 51(1)) sets out the requirement to produce a marine plan for each marine plan area. To provide a consistent and simple approach to the East Inshore and Offshore Marine Plans, a single document has been produced with distinctions made as to which policies are relevant to the inshore and/or offshore areas.

Developing the marine plans

35. There have been a number of stages in the preparation of these marine plans which have been supported by workshops, meetings and public drop-in sessions. This section summarises our approach and the steps taken to develop the marine plans.

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[37] http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

36. These stages include:[38]

- development of a stakeholder participation strategy – Statement of Public Participation
- evidence collation and analysis (data, information, national and sub-national policies)
- identification of significant issues
- development of a draft 20-year vision for the marine plan areas
- development of draft plan objectives
- generation of plan options and options analysis
- production of plan policies and the draft plan document
- Sustainability Appraisal
- Habitats Regulation Assessment
- Analysis of the marine plans

37. Running alongside the plan making process are the Sustainability Appraisal, and the Habitats Regulations Assessment. The Habitats Regulations Assessment ensures the requirements of the Habitats Directive and the Birds Directive are not impeded. The Sustainability Appraisal delivers the requirements of the Strategic Environmental Assessment Directive. The Sustainability Appraisal appraises the social, economic and environmental impacts of the marine plans to ensure that sustainable development is at the heart of the plan-making process.

Use of evidence in the marine plans

38. The Marine Management Organisation has been working closely with many partners and stakeholders since the start of the planning process to better understand the activities, resources and ecosystem in the East marine plan areas. The evidence was summarised in the Evidence and Issues Report, which sets out the range of evidence used for marine plan preparation including spatial data, national/sub-national policy, third party research reports/guidance documents, together with specifically commissioned research supporting marine planning.

39. All evidence used in marine plan decision-making has been subject to internal quality assurance processes[39] to assess validity, accuracy, timeliness, reliability, relevance and completeness.[40] Data used for marine planning was also accompanied by Marine Environmental Data and Information Network standard metadata where possible, to ensure its lineage, collection method and limitations were known. By undertaking these processes, the Marine

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[38] All the relevant documents associated with the stages below can be accessed at: http://www.marinemanagement.org.uk/marineplanning/areas/east_key.htm

[39] Where appropriate, ie excluding statutory policy documents and plans

[40] http://www.marinemanagement.org.uk/marineplanning/evidence/qa.htm

Management Organisation can be confident that it is using the best available evidence for marine planning and that any limitations are known and recorded. In order to share the evidence used in developing the East marine plans, the Marine Management Organisation has made available a register of datasets used, and evidence can also be viewed interactively on the marine planning portal.

40. In accordance with the Marine and Coastal Access Act, the draft East marine plans have regard to a wide range of sources of information including existing plans. To contribute to integration between land and sea, there is a duty to ensure all steps have been taken so marine plans are compatible with terrestrial plans developed by local planning authorities. For certain activities such as marine aggregates, this compatibility and influence may extend to terrestrial plans and authorities outside of the marine plan area. By involving planning authorities and other key stakeholders, the Marine Management Organisation has developed a process for assessing sub-national plans, such as Shoreline Management Plans, for any policies with marine relevance that should be considered in the development of the East marine plans. Table 2 below (in section 3.6) provides a summary of findings.

41. The Marine Policy Statement (2.3.1.2) states that 'marine plans will be based on a sound evidence base, as far as possible' with the Marine and Coastal Access Act (S 6 (2)) directing specific attention to land based plans. A wide range of plans, including local plans and shoreline management plans were assessed for their relevance to marine planning, local planning authorities and other relevant stakeholders then helped develop a priority list for further consideration. A number of plans and designations however were not considered in detail as part of this process, including those that:

- are better addressed via the marine planning portal, such as sites of Special Scientific Interest or National Nature Reserves (NNRs)
- were accounted for via other designations and/or would be examined via the sustainability appraisal, such as Ramsar sites within Special Areas of Conservation and Special Protection Areas
- are national or supranational in coverage and which were examined in the relevant sector policy analysis
- were not at that point in time part of the planning regime, such as Water Protection Zones
- were not considered relevant to the marine area, such as historic gardens
- are outside the plan area, such as burial at sea sites

42. Chapter 2 of the Marine Management's Organisation Evidence and Issues Report describes what analysis was carried out and how policies in other plans were addressed. These additional plans included Local Transport Plans, Area Action Plans, River Basin Management Plans, Shoreline Management Plans, and Estuary Management Plans. Chapter 2.6 describes in detail the results of River Basin Management Plans and Shoreline Management Plan analysis. Section 2.5 and Annex 6 of the Evidence and Issues Report provide

further detail on the assessment of sub-national plans and policy. Spatial information related to sub-national plans can also be found on the marine planning portal.

43. The Marine Management Organisation has collated the best available evidence base to support the development of marine plans, and the process has also highlighted some clear gaps in knowledge, such as the identification of opportunities for co-location of structures and activities. Significant evidence gaps are being addressed through the identification of eight priority research areas in the Strategic Evidence Plan and these can be viewed on the Marine Management's Organisation website as reports are published.[41] The inclusion of Plan Objective 11 'to continue to develop the marine evidence base to support development, monitoring and review of marine planning in the East marine plan areas', highlights that this process will continue throughout the life of the marine plans. As additional evidence evolves it will be incorporated into the implementation, monitoring and review of the East marine plans and the development of future marine plans.

44. The Marine Management Organisation has used best available evidence in the development of marine plans. Where quality assurance processes have highlighted weaknesses in evidence quality, the Marine Management Organisation, informed by stakeholder views, has steered away from prescriptive plan policies. Where evidence is insufficient, inconclusive or uncertain, public authorities will need to apply precaution within an overall risk-based approach,[42] in accordance with the sustainable development policies of the United Kingdom Administration.[43] This will apply equally to the protection of the natural marine environment, impacts on society and on economic prosperity. Decisions made should accord with the better regulation principles[44] and lead to action that is proportionate, consistent and targeted, delivered through a transparent and accountable process.[45] A proportionate level of strategic and detailed assessment should be considered in decision-making determined by the complexity, scale and sensitivity of the project or activity.

Overview of structure and supporting documents for the marine plans

45. This document is the main marine plan document also known as the strategy document. It is supported by a number of statutory and non-statutory documents, including:

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41 http://www.marinemanagement.org.uk/evidence/index.htm

42 This means that if the risks from an activity are uncertain preventative measures may be required if there is concern that human activities may harm human health, living resources and marine ecosystems or interfere with other legitimate uses of the sea or have other social and economic impacts. This would need to be considered based on risk.

43 Marine Policy Statement 2.3.1.2

44 HM Treasury (2005) Reducing Administrative Burdens: Effective Inspection and Enforcement. Hampton, P.

45 For further information please refer to Chapter 4.

Statutory	Non-statutory
The East Inshore and East Offshore Marine Plans	Analysis of the East marine plans
Statement of Public Participation	Implementation and Monitoring Plan
Sustainability Appraisal and Habitats Regulation Assessment	

Table 1: Statutory and non-statutory documents in support of the marine plans

46. The delivery of the plans is supported by the implementation and monitoring plan. The implementation and monitoring plan sets out how the marine plan policies should be implemented, who contributes to the implementation, what measures or indicators should be used to measure the effectiveness of the policies, and when monitoring will take place.

Using the plans

47. This section provides some suggestions that should help users understand and apply the plans and navigate through the policies, although ultimately it is the responsibility of the user to determine whether and to what extent any particular marine plan policy is relevant to any particular proposal and how accordingly they take account of the marine plans in relation to that proposal. Figure 2 sets out the framework that the marine plans will create. This consists of four parts:

- the vision and objectives of the marine plans
- the general decision-making framework that the marine plans set out for public authorities – consisting of policies that apply across all sectors and proposals, encouraging public authorities to consider the marine plan policies in their decision-making
- the spatially defined policies that the marine plans set out – these are the policies that are specific to the marine plan areas and provide sector related direction on considerations for public authorities
- the requirements set out by the marine plans on how certain activities should be carried out, and in what way, regardless of where they are taking place

48. It is important to note that figure 2 is not a comprehensive guide to all decision-making processes, as such detail is provided independently by the relevant public authority. It aims to aid the reader by quickly signposting those parts of the marine plans that may be directly relevant to their interest.

49. The plan should be read as a whole together with the plan policies rather than each in isolation. It is unlikely that a particular decision will involve a single policy or all policies. Instead it is likely that several plan policies will be pertinent to a decision. It will be for public authorities, working with proponents and others as necessary, to determine which plan policies (and associated maps) apply to a particular decision.

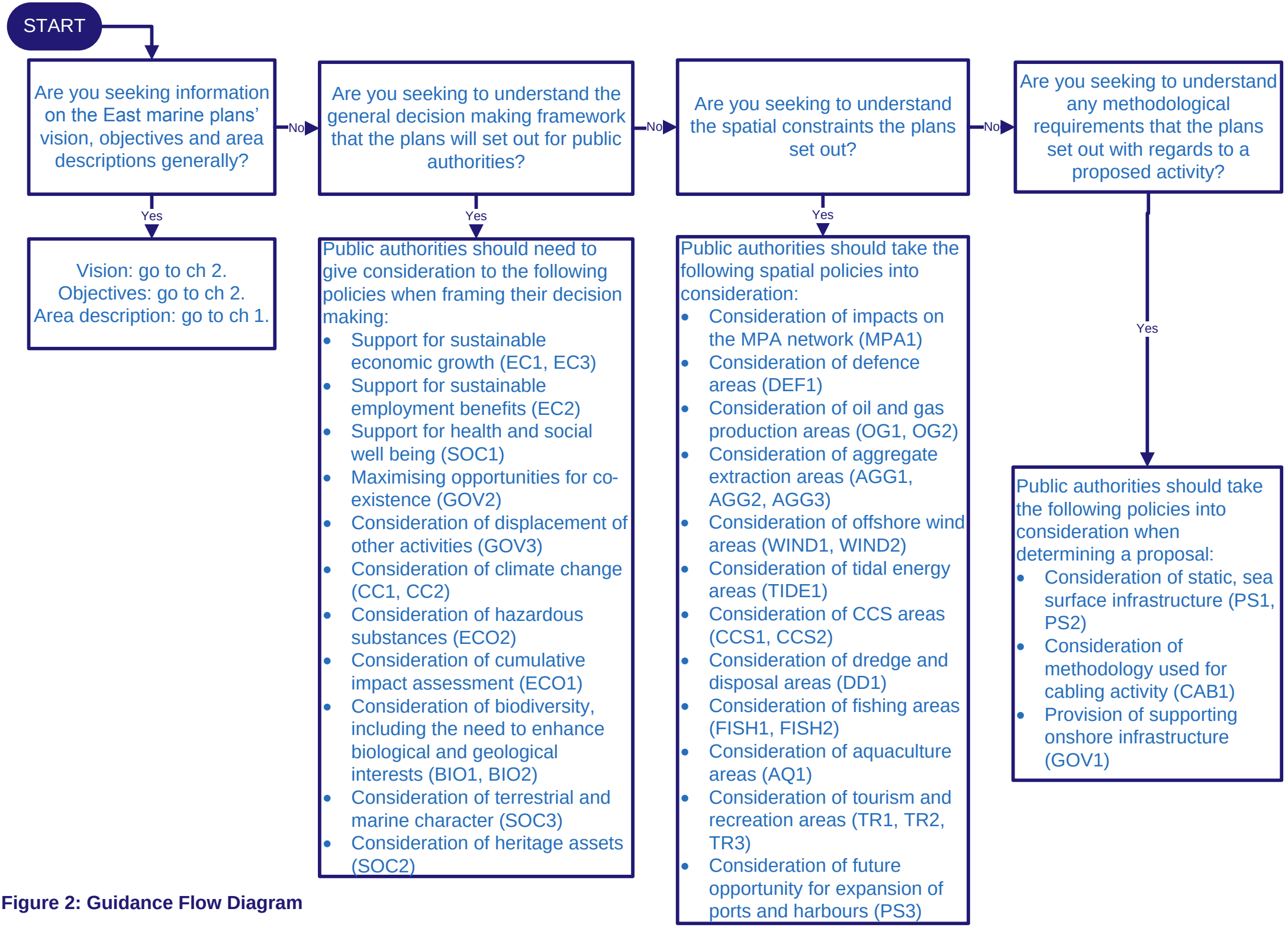

Figure 2: Guidance Flow Diagram

Chapter 2
Vision and Objectives

50. As stated in the Marine Policy Statement , the United Kingdom Government's vision for the marine area is for 'clean, healthy, safe, productive and biologically diverse oceans and seas'. The East Inshore and Offshore Marine Plan Areas will play their part in delivering this high level United Kingdom vision, but marine planning is not the only mechanism for doing so. The vision for the plan areas, covers many of the significant issues while taking into account their distinctive characteristics.

The vision for the East marine plan areas in 2034

By 2034, sustainable, effective and efficient use of the East Inshore and East Offshore Marine Plan Areas has been achieved, leading to economic development while protecting and enhancing the marine and coastal environment, offering local communities new jobs, improved health and well-being. As a result of an integrated approach that respects other sectors and interests, the East marine plan areas are providing a significant contribution, particularly through offshore wind energy projects, to the energy generated in the United Kingdom and to targets on climate change.

How will this look in 2034 if the vision is achieved?

51. By 2034, new infrastructure developments and the improved coordination of existing activities in the East plan areas are providing increased economic and social benefits, to both local communities along the East coast and those in adjacent areas. The approach enables sustainable commercial fishing, shipping, aquaculture, aggregate extraction and other activities to continue or grow, while allowing the development of new business opportunities, ensuring safety at sea and protecting the environment. Essential infrastructure for the onward transportation of goods or energy is in place in along the coast.

52. As a result of effective planning across both land and sea, and an appreciation of the unique features of the East marine plan areas, key elements of the coastal landscape, adjoining seascape and heritage, including the character created by traditional activities such as fishing, have been conserved and enhanced. As a result, tourism and recreation continue to make a significant contribution to prosperity and well-being.

53. Both the East Inshore and Offshore Marine Plan Areas are in Good Environmental Status (in accordance with the Marine Strategy Framework Directive), relevant habitats and species are in 'favourable conservation status' (as required under the Habitats and Wild Birds Directives), partly as the result of a well-managed and ecologically coherent network of Marine Protected Areas which includes individual sites in 'favourable condition'. New activities, developments and uses will have been implemented and managed to ensure, alongside environmental protection, that sustainability has been achieved. Offshore wind farms in the plan areas will be making a significant contribution to meeting the United Kingdom's target under the European Union Renewable Energy Directive and the Climate Change Act 2008. The offshore wind industry has been developed in a sustainable way that does not compromise the importance of national, European and international shipping links and connectivity with other countries while maintaining the essential requirements of navigational safety.

54. The best use is made of new technologies in the plan areas, contributing to sustainable/low carbon energy production from wave and tidal energy and climate change mitigation, and through the transport and storage of carbon dioxide emitted from fossil fuel use. Gas production continues to be an important activity and new technologies will have improved the ability to maximise production of hydrocarbons from reserves in the marine plan areas while continuing to ensure minimal environmental impact.

Objectives – background and development

55. The marine plan objectives describe how the vision for the East Inshore and Offshore Marine Plans will be achieved. The objectives were drafted in the context of the Marine Policy Statement and other national policy, as well as local planning documents, the Evidence and Issues Report, and consultation with government, local authorities and other stakeholders.

56. The objectives are, on the whole, integrated and cross-cutting rather than specific to individual topics and sectors which are instead considered in the plan policies chapter.

57. The plan objectives will contribute to the delivery of the High-Level Marine Objectives in the Marine Policy Statement (Box 1). They cover the full scope of sustainable development, integrating themes in the High-Level Marine Objectives of achieving a sustainable marine economy, ensuring a strong, healthy and just society and living within environmental limits. They also include specific objectives on offshore wind energy production, as the sector with the most potential to transform the marine plan areas over the next 20 years, and on climate change. Climate change will affect the coast but there

are also opportunities to contribute to mitigation in the East marine plan areas.

58. Taking account of the Marine Policy Statement and that these are the first marine plans, it was considered important to include more process-type objectives in support of the vision and the other objectives. For example there is an objective on 'Governance' that sets out what good decision-making and management means for the marine plan areas, including a joined up approach with other plans such as land-based development plans. An objective on 'Evidence' has also been included to signal the importance of, and make transparent, the need to continue to strengthen knowledge of the marine plan areas in support of marine planning.

59. Responses from the consultation on the draft marine plans indicate broad support for the format of the objectives aligned to the vision. These accord with the view expressed through the consultation on draft vision and objectives, that the proposed draft objectives provide a balanced approach whilst reflecting priorities and characteristics of the East marine plan areas.

60. The objectives are a package, with each complementary to the others. That does not mean that every objective will be met in every situation and in every location, but rather, that taking the marine plan areas as a whole, all of the objectives should be delivered in an integrated way. For example, economic, environmental and social objectives must be considered alongside one another.

61. Marine planning can make a contribution to delivering each of the objectives, but the achievement of any of them is also dependent on a range of other measures. A qualification to that effect has not been included in the wording of every objective, but the focus for delivery of each of the objectives within the marine plans should be on the contribution that marine planning can make. That approach will be assessed as marine plans are implemented and reviewed.

Objectives

62. In order to deliver the marine plans vision and support sustainable development, a number of objectives have been defined. These 11 objectives set out what the marine plans aim to achieve and are supported by detailed policies. These policies seek to ensure that proposals contribute to the achievement of the plan objectives and vision. The marine plans will not deliver the objectives in isolation, and many of the policies within the marine plans will be applied by multiple decision-makers from local to national level, in accordance with requirements of the Marine and Coastal Access Act (S58).

63. Objective 11 and its application is different to the other plan objectives as it does not have any dedicated plan policies attributed to it. This objective sets actions for the Marine Management Organisation to take forward to strengthen and further support the East marine plans and the wider development of marine planning. More details can be found in the Marine Management Organisation's Strategic Evidence Plan.

64. The Strategic Evidence Plan sets out our key evidence priorities and is reviewed on a regular basis, taking account of any newly identified evidence gaps. Strategic Evidence Plan allows for flexibility as specific gaps or issues are identified, with many of the evidence gaps revealed in the East to date also of relevance to other plan areas. This allows for new evidence to be prioritised and commissioned based on necessity and alignment to any key issues as they arise.

Objective 1

To promote the sustainable development of economically productive activities, taking account of spatial requirements of other activities of importance to the East marine plan areas.

65. This objective relates to the need to sustainably grow local and national economies through marine activities that lead to the production of goods and services that add value, (ie those that make a significant impact on Gross Value Added locally, nationally and internationally). To reflect the full range of activities already underway and planned in the East marine plan areas, reference is made to the spatial requirements of other sectors. Objective 1 is about both planning and its spatial implications and sustainable development.

Objective 2

To support activities that create employment at all skill levels, taking account of the spatial and other requirements of activities in the East marine plan areas.

66. This objective relates to the need to ensure that local people can access the jobs being created in and adjacent to the East marine plan areas. It is about helping people into work by supporting development and other activities that create jobs at all skills levels, connected to activities in the marine area.

Objective 3

To realise sustainably the potential of renewable energy, particularly offshore wind farms, which is likely to be the most significant transformational economic activity over the next 20 years in the East marine plan areas, helping to achieve the United Kingdom's energy security and carbon reduction objectives.

67. This objective relates to renewable energy, particularly offshore wind energy infrastructure which is predicted to be the fastest-growing marine activity in the East marine plan areas over the next 20 years. It is the activity that has the most potential to offer marine-based economic growth and job creation for people who live along the coast or estuaries of the East of England.

68. The East marine plan areas contain the majority of both Round 2 and Round 3 offshore wind energy sites around English Waters and as such are crucial to delivery of national policy relating to offshore wind. Due to the significant potential for related supply chain activity, offshore wind energy infrastructure

development can act as a catalyst for wider economic development and regeneration. Marine planning can make a contribution towards delivering the objective but clearly achieving the objective is dependent on a range of other initiatives and factors.

Objective 4

To reduce deprivation and support vibrant, sustainable communities through improving health and social well-being.

69. This objective aims to increase opportunities for activities that improve the health and well-being of local people, by recognising the importance of a healthy marine environment and biodiversity, providing access to marine-related recreational activities and ensuring that all people have equal opportunities to benefit from marine activities. The economic dimensions, of reducing deprivation and supporting sustainable communities, are addressed through Objectives 1 and 2, and the environmental dimensions through Objectives 6 and 7.

Objective 5

To conserve heritage assets, nationally protected landscapes and ensure that decisions consider the seascape of the local area.

70. This objective relates to the historic environment, nationally important landscapes and seascapes. It recognises the need to consider if developments are appropriate to the area they would be located in and have influence upon, and as far as possible do not compromise the value of such assets and characteristics.

Objective 6

To have a healthy, resilient and adaptable marine ecosystem in the East marine plan areas.

71. This objective recognises that a healthy functioning ecosystem is important in its own right, that it should be resilient and adaptable in the face of pressures upon it and be able to sustain the benefits that it provides to people. The objective includes the need to prevent activities in the marine area from damaging the functioning of the marine ecosystem and the benefits it provides. It recognises the need to avoid impacts accumulating through multiple activities taking place in a particular space. Delivery of the objective should benefit both people and wildlife.

Objective 7

To protect, conserve and, where appropriate, recover biodiversity that is in or dependent upon the East marine plan areas.

72. This objective addresses biodiversity in general (rather than the specific interests of Marine Protected Areas). It reflects the intrinsic value of biodiversity and the benefits of biodiversity to a healthy ecosystem and for people. Objective 7 and its associated policies closely follow the wording of the High-Level Marine Objectives and the Marine Policy Statement.

Objective 8

To support the objectives of Marine Protected Areas (and other designated sites around the coast that overlap, or are adjacent to the East marine plan areas), individually and as part of an ecologically coherent network.

73. This objective relates specifically to Marine Protected Areas and other sites designated for conservation, whether they be international, European or national. In addition to individual sites, it also encompasses consideration of a network of Marine Protected Areas, including proposals for further designation of Marine Conservation Zones.

Objective 9

To facilitate action on climate change adaptation and mitigation in the East marine plan areas.

74. This objective relates to the need to combat climate change by reducing greenhouse gas emissions (mitigation), to address the unavoidable consequences of a changing climate and by reducing related risks faced by the marine-based sectors (adaptation).

Objective 10

To ensure integration with other plans, and in the regulation and management of key activities and issues, in the East marine plans, and adjacent areas.

75. These first marine plans are being developed against a backdrop of existing statutory and non-statutory plans. The development and delivery of those plans is facilitated by numerous parties with differing areas of operation (including neighbouring countries). This objective acknowledges and addresses the existence of those plans and that many marine related activities, constraints and opportunities have a land-based element, and vice versa.

76. Many common factors affect stakeholders and public authorities active within and adjacent to the marine area, such as onshore logistical requirements, opportunities for co-existence and displacement through new activity. Marine

plans should address such issues as set out in the Marine Policy Statement (2.3.1.5), thereby reducing conflict and maximising compatibility.

Objective 11

To continue to develop the marine evidence base to support implementation, monitoring and review of the East marine plans.

77. This objective aims to ensure a continued drive to develop the evidence base in the East marine plans areas for use in marine plan implementation, monitoring and future marine plan iterations. It is critical that marine plans are based on the best available evidence in accordance with the Marine Policy Statement.

78. The Marine Management Organisation is committed to working with partners to ensure this aim is achieved both through the collation of existing evidence and commissioning of new evidence where necessary. Evidence gathered to support marine planning to date is documented in the East marine plan areas Evidence and Issues Report. As new evidence becomes available, it will be collated by the Marine Management Organisation for use in monitoring and future versions of the East marine plans.

79. Objective 11 highlights the importance of continuing to develop the evidence base beyond the marine plans publication. Objective 11 does not require specific plan policies; rather it is directly supported by the actions below. The actions will be implemented through the delivery of the Marine Management Organisation's Strategic Evidence Plan as well as through collaboration with other organisations with a duty to, or interest in, developing the marine evidence base as a whole. Their success will be monitored through the Marine Management Organisation's internal management processes, with new evidence incorporated into future marine plans formulation and decision-making as it becomes available.

80. The Marine Management Organisation will:

- prioritise the commissioning of new evidence to inform marine planning, in line with those areas identified in the Strategic Evidence Plan and ensure that where possible, all new evidence is made publicly available
- collaborate with partner organisations to ensure relevant research is utilised to improve our understanding of the activities and resources in the marine plan areas
- work with partners and stakeholders (both United Kingdom and international) to develop our understanding of how marine activities interact both with one another and the wider marine area
- support and encourage transparency, openness and removal of barriers to data sharing for all stakeholders generating data in the marine plan areas. Evidence supplied to the Marine Management Organisation to enable regulatory decisions to be taken is currently made available through the Marine Management Organisation's public register, and the Marine

Management Organisation will continue to encourage applicants to make such evidence publicly accessible

- continue to work closely with relevant partners and initiatives such as the Marine Science Coordination Committee, its groups and the United Kingdom Marine Monitoring and Assessment Strategy, through the Marine Assessment and Reporting Group and its sub-groups, to seek opportunities to enhance the marine planning evidence base and identify a robust and appropriate mechanism for sharing data
- continue to arrange data sharing with holders of marine data relevant to marine planning. This will include arrangements with international planning authorities bordering the East marine plan areas to ensure that relevant cross-border evidence is collated wherever possible

Chapter 3
Plan Policies

3.1 Introduction

81. Chapter 1 outlines the purpose of the marine plans as a whole, their scope and who they may apply to. The following provides more detailed explanation specific to plan policies. It is strongly advised that the following introductory sections are read before and/or in conjunction with considering individual policies as they are critical to understanding and applying the plan policies.

Role and scope

82. Plan policies are central to the role of marine plans in giving effect to, and conformity with, national policy. For example the Marine Policy Statement states that 'Marine plans will set out how the Marine Policy Statement will be implemented in specific areas...' (Marine Policy Statement 1.1.3), and also 'Marine plans will provide a clear, spatial and locally-relevant expression of policy, implementation and delivery' (Marine Policy Statement 2.2.1).

83. Other national policy that the plan policies need to take account of includes that set out in the National Planning Policy Framework (see chapter 1 'National policy context'). As such, the plan policies do not establish new requirements but rather apply or clarify the intent of national policy to the East plan areas taking into account the specific characteristics of those areas, including the available evidence. The plan policies therefore add value by directing activities to the most suitable locations, building on best practice and integrating the marine and terrestrial planning systems.

84. The plan policies directly contribute to delivery of the vision and objectives for the East Inshore and East Offshore Marine Plans, particularly by informing how decisions should be made. The Marine Policy Statement states that plan policies will provide detailed policy and spatial guidance for an area, and help ensure that decisions within a marine plan area contribute to delivery of United

Kingdom, national and any area specific policy objectives.[46] The marine plans should ensure that the Marine Management Organisation is able to proactively guide the future direction of the marine area, rather than responding reactively to resource demands as and when they arise[47] alongside other public authorities, and thereby control and influence, to varying degrees, the form, scale, timeframe and location of designations, uses and developments.[48]

85. These are the first marine plans, out of 11 to be delivered in total, to locally clarify and apply the Marine Policy Statement and other national policy. Taken together with the evidence available and stakeholders' views for the East Inshore and Offshore Marine Plan Areas, this has resulted in plan policies that provide more strategic guidance or overall direction, eg plan policy EC1 on economic productivity benefits as well as those that are intended to influence topics or help guide activities or sectors, eg SOC3 on marine character and WIND1 on renewable energy. For similar reasons it is not possible to define a clear outcome in every policy but, instead, some plan policies clarify how decisions will be made. Where an outcome can be defined this is provided in the supporting text to enable the plan policies to be clear and concise and to focus on what action needs to be undertaken. These considerations also arise in terrestrial planning and the resulting mix of policies in the East marine plans is consistent with good practice in comparable plans on land.

86. Where possible, plan policies are expressed locally or spatially by reference to maps and other information. In some cases the availability of, or confidence in, the evidence means it is more appropriate for the policy to apply to the marine plan areas as a whole. Consequently, most of the plan policies are indicative, providing a signal towards what is required or to be avoided, rather than being prescriptive. This also enables a suitable degree of flexibility (see also 'scope of marine plans' in chapter 1). It is anticipated that these aspects of the plan will evolve as the evidence base improves and experience in developing and implementing marine plans grows; see 'Use of evidence in the marine plans' in chapter 1 and chapter 4 for more information on implementation, monitoring and review.

87. In many cases the plan policies will apply to new, rather than existing, development, uses, management measures and other activities. They may apply in the review of existing activities or measures. In doing so, the plan policies give due consideration to supporting and maintaining existing activities, interests and resources.

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[46] HM Government (2011) Marine Policy Statement paragraph 1.1.3 http://www.DefraDefra.gov.uk/publications/files/pb3654-marine-policy-statement-110316.pdf

[47] Department for the Environment Food and Rural Affairs (2011) "*A description of the marine planning system for England*" paragraphs 3.5 and 3.26 respectively. http://archive.DefraDefra.gov.uk/corporate/consult/marine-planning/110318-marine-planning-descript.pdf

[48] In relation to the latter, note similar wording (albeit focussed more narrowly on 'development') in the National Planning Policy Framework (paragraph 154) that "...*policies that provide a clear indication of how a decision maker should react to a development proposal should be included in the plan*". https://www.gov.uk/government/policies/making-the-planning-system-work-more-efficiently-and-effectively/supporting-pages/national-planning-policy-framework

88. Many of the policies refer to ‘proposals’. It is difficult for the plans to be prescriptively comprehensive, as this would risk omitting some potentially important decisions or types of decision. To ensure that plan policies are suitably encompassing and to avoid a cumbersome list of different terms, applications and decisions to which each policy applies, the term ‘proposal’ is used. It encompasses development and uses that are subject to management by public authorities, eg fishing and certain recreation activities, together with management measures. ‘Proposal’ ensures that the intent of relevant plan policies is applied across all appropriate interests. It also reinforces the value of considering the marine plans and plan policies at an early stage whether in forward planning for measures or the pre-application stage for projects, rather than only at later or formal stages, such as at the application stage for a licence. Where a plan policy applies predominantly to a particular type of proposal, eg development, more detail is given in the justification/explanation. The supporting text may also refer to the specific processes or mechanisms involved, such as ‘applications’ where development is being referred to. Although ‘proposal’ is a ‘catch all’ term, much depends on the way it is applied (see ‘Decisions and authorities to which decisions apply’ below).

89. Proposals made in accordance with these marine plans should conform with all relevant policies set out within them. For instance, policies for particular sectors should take account of those for economic, environmental and social considerations and vice-versa. To avoid duplication, words to this effect have not been added to every policy. It is unlikely that a particular proposal or situation will invoke only one policy or all the policies. Instead, it is likely that several plan policies will be pertinent to any decision or situation. It will be for the public authorities working with the applicants and others, to determine which plan policies are appropriate to a particular decision. For some policies a cross-reference is provided to other plan policies that have an obvious or direct effect on its application, eg OG1 (oil and gas) is referred to in AGG1 (aggregates). Through implementing the plans it is anticipated that collective understanding of which sets of plan policies tend to apply to different proposals or situations will develop. In the meantime, see ‘How to use this plan’ in chapter 1 and any additional material published to support the implementation of the marine plans.

90. The application of the plan policies will also need to take account of a range of relevant considerations. Those considerations will include legislation and existing policies and measures (see section below) although the formulation of plan policies has taken account of these where required. To avoid the plan policies being too long, words to this effect have not been added to every policy. See also chapter 4 on the approach to implementing the marine plan policies including for it to be proportionate, consistent and targeted.

Decisions and authorities to which policies apply

91. The plan policies will be implemented through decisions affected by the marine plans, and therefore the policies should be read in that way to avoid repeating the phrase ‘decisions should take account of...’ to every policy. The scope of decisions to which the plan policies apply is outlined in chapter 1 (see also relevant definitions in the glossary). Those that are authorisation and

enforcement decisions (Marine and Coastal Access Act S 58(1)) encompass not only licences or consent for development in its wider sense, but also for other activities such as consents for discharges (see glossary). Such decisions must be taken in accordance with the marine plans unless relevant considerations indicate otherwise.[49] The scope extends to any other kind of decision which relate to the exercise of any function capable of affecting the United Kingdom marine area, but which are not an authorisation or enforcement decision (Marine and Coastal Access Act S 58(3)). Examples might include the designation of Marine Protected Areas or bylaws that are not an authorisation or enforcement decision. Such decisions must have regard to the marine plans.

92. The plan policies will be relevant to whoever has an interest in the subject covered, whether applicants, third parties, advisors or others, but the responsibility for ensuring that decisions take appropriate account of the plan policies lies with the public authorities. For example, it will be the relevant public authority that will determine if and how applications for development meet a plan policy, including where an order of preference is set out, eg SOC2 AGG3. Clearly the applicants in such cases would take account of the plan policies in making their application. As the relevant decision-maker will not always be the Marine Management Organisation, it is more appropriate to use 'should' rather than 'will' (as is generally the case in equivalent statutory terrestrial plans) in the plan policies. This is consistent with the language used in the Marine Policy Statement.

93. It will be for the public authority to determine other relevant considerations to take into account in arriving at a decision. Whether under 58(1) or 58(3), in many cases it is likely that there will be relevant considerations other than the marine plans. These may include legislation, regulations, other policies or existing measures (see 'Existing policies and measures' below). The relevant considerations may have a stronger influence on the decision than the marine plan policies. For example, the designation and management of Marine Protected Areas must be undertaken in accordance with the relevant legislation and policy underpinning them, whether it is the degree to which socio-economic considerations can or cannot be taken into account in relation to European Marine Sites or establishing a management measure to meet the conservation objectives of a site. In such cases, the value of the marine plan policies is to ensure that the public authority makes an appropriate check of the effect on or interaction with other interests in case that might inform or alter the decision.

94. It would be impractical to attempt to provide an exhaustive list of the relevant public authorities in the explanatory text and plan policies. Examples are provided where the main authorities involved are obvious. Where it is clear that the plan policy applies only to authorisation and enforcement decisions it is considered helpful to recognise that those taking the decision are a specific group of public authorities, distinguished by the term 'regulatory authorities'. Further information on implementation of plan policies and the roles and

[49] As detailed in Chapter 1, decisions on applications for development consent for Nationally Significant Infrastructure Projects only have to 'have regard' to the marine plans

responsibilities of relevant public authorities will be included in the implementation and monitoring plan. The implications for decisions and specific authorities are described in more detail in outline in support of these plans.[50]

Existing policies and measures

95. The plans' vision and objectives cannot be delivered solely through the policies, but are dependent on a range of measures found in other relevant plans or policies, some of which are highlighted in the following sections. Marine plans should not repeat or reformulate national policy. Some signposting to existing measures and policies has been included, partly in response to stakeholder requests.

96. **Any decisions must be compliant with relevant legislation and regulations; the plan policies complement rather than replace such requirements.** In many cases the requirements of such legislation are addressed at the level of an individual application informed by various assessments. Conformity with these plans does not negate a need for Habitats Regulations Assessment and related Appropriate Assessment in accordance with the Habitats Directive and Birds Directive where required. A Water Framework Directive compliance assessment may also be required. Relevant legislation includes, but is not limited to the:

- Environmental Impact Assessment Directive
- Strategic Environmental Assessment Directive
- Habitats Directive and the Wild Birds Directive (and their transposing legislation and regulations)
- Water Framework Directive
- Petroleum Act
- Energy Act
- Marine and Coastal Access Act (including chapters other than those on marine planning)
- Electricity Act
- Planning Act
- Flood and Water Management Act, the Marine Strategy Regulations
- the Harbours Act.

Structure and content

97. Most policies will probably be relevant, even if indirectly, to most objectives. Some will be more directly relevant to particular objectives and, in some cases, to several objectives; Table 1 provides an overview of this relationship.

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[50] Marine Management Organisation (2013) Draft East Inshore and East Offshore Marine Plans – Outline approach to Marine Plan implementation, monitoring and review. Policy implications table.

To provide some structure to the running order of the plan policies they are set out in the following way; those that support a particular objective are included first, with some brief context as a link between the objective and policies.

98. They are followed by those on individual sectors to avoid duplicating similar policies under several objectives.[51] In many cases, those policies apply to other sectors, eg DEF1 applies to the majority of sectors in addition to defence. The sectors follow the order set out in the Marine Policy Statement (with the exception of marine dredging and disposal which naturally follows ports and shipping). There is no implied difference in importance or priority in the running order of the plan policies sections.

99. The plan policies under each objective (or related objectives, eg objectives 1, 2 and 3 with an economic focus) or sector, include some or all of the following sub-sections and content:

Box 2 Policy structure

Context: to provide sufficient background to the plan policies including the issues to be addressed. Further detail can be found in supporting documents, mainly the Evidence and Issues and draft Vision and Objectives reports;

Signposting to existing policies and measures: particularly where they have emerged relatively recently, eg from the Marine Policy Statement, National Planning Policy Framework or development of the Marine Strategy Framework Directive, or may not be widely known or understood by stakeholders with an interest in the marine plan areas;

Plan policies: boxed and presented in a different font to help stand out from the rest of the text. For ease of reference throughout the marine plans, each policy is given a code, eg GOV1. See Table1 for an overview of all plan policies;

Inshore or Offshore: indicates which marine plan areas the policy applies to;

Justification/Explanation: outlines the intent and basis for the policy where required, eg requirements set out in national policy and/or issues specific to the East plan areas. Reference is made to maps or other information that indicate where the policy applies more locally or spatially in the marine plan areas. Further detail is provided to clarify or define terms used in the policy, with examples where appropriate.

100. Some of the plan policies follow a hierarchical format with criteria to be met from preferences a) through to d). They are SOC2, SOC3, GOV3, WIND1, TIDE1, CCS1, PS2, PS3, DD1, AGG3, FISH1, FISH2, AQ1, TR1, TR2. In these policies, a proposal can only move to the next criteria in the list if it has been clearly demonstrated (supported by best available evidence),[52] that the

[51] Noting stakeholder comments on 'duplication' of policies in response to the draft Vision and Objectives (see Vision and Objectives update document http://www.marinemanagement.org.uk/marineplanning/areas/documents/east_vision_objectives_update.pdf)

[52] Best available evidence is defined by the Principles of Better Regulation as being proportionate, accountable, consistent, transparent and targeted.

previous criteria cannot be met. The requirements under d) (the case for proceeding with the proposal if it is not possible to minimise or mitigate the impacts), should not be taken in any way or of itself to indicate that approval of the proposal will follow by default. Any information provided would then be taken account of with other considerations. Examples of a proposal where d) might be invoked, could be a Nationally Significant Infrastructure Project or a scheme drawing upon Imperative Reasons of Overriding Public Interest.

101. In several other policies (EC1, EC2, EC3, SOC1, OG2, WIND2, TR3) the term 'should be supported' is used rather than alternatives, such as 'prefer'. In some cases, such as EC1 and EC2, the policies can be applied as 'tie breakers' between two competing proposals where all other considerations, eg meeting other plan policies, are equal. In many cases, however, there may not be a choice to be made between competing proposals, rather the plan policy provides more strategic guidance or overall direction. Where a preference really can be indicated this is clarified in the wording of the policy, eg OG2.

Maps

102. Plan policies and relevant supporting information have been expressed spatially where possible. To view maps based on the most recent data made available to the Marine Management Organisation, please access the marine planning portal. While efforts will be made to ensure that the information provided on the marine planning portal is up to date, some data is owned by third parties, the Marine Management Organisation therefore cannot guarantee that all maps provided reflect the current position. Those using the marine plans should always consult with relevant data holders and regulatory authorities, as under existing requirements, to ensure the most up to date evidence is used when considering where plan policies apply.

103. Some of the maps included in the East Inshore and East Offshore Marine Plans have supporting text,[53] which describes how the map was derived, any analysis undertaken, and limitations in the evidence or analysis used. For ease of reference, three types of map are provided in the marine plan document; each map contains coloured text to describe whether it is a Policy Map (green text), Indicative Map (red text) or an Information Map (purple text). Each type of map is described below.

Policy Maps

104. The marine plans include five maps where the Marine Management Organisation has defined a spatially discrete area to which a policy applies (CCS1, TIDE1, PS2, AGG3 and AQ1). The policy boundaries presented on these maps are derived from analysis undertaken by the Marine Management Organisation on third party data. As such, any changes to these maps will be undertaken by the Marine Management Organisation. Policy maps are also included for policies which refer to discrete areas of activity, resource, designations, leases or licences defined by a third party (eg those referred to

[53] Accessible at: http://www.marinemanagement.org.uk/marineplanning/areas/documents/east_draftplans_annex.pdf

in DEF1 and PS1). Where a policy map is provided, the policy applies specifically to the area defined on the map.

105. Should updates or changes be made to data supporting these policy maps following publication of the marine plans, this may constitute a 'relevant consideration'[54] which would enable a deviation from the marine plans by a public authority. Should substantial revisions be made to data supporting the policy maps, for example, resulting in a significant change in where the plan policies apply, a revision of the plans through the formal amendment procedure may be required. As delegated by the marine planning authority, the Marine Management Organisation is required to review and amend the plans as deemed appropriate.[55]

Indicative Maps

106. Where confidence in the data supporting a policy is not high enough to designate specific policy boundaries, indicative maps have instead been included. For example the application of FISH1 and FISH2 relies on evidence of fishing activity, spawning and nursery areas. Maps have been included in the marine plans to provide an indication of locations which are particularly relevant for these policies based on the best available evidence. More locally specific data collected in support of project applications will be considered to supersede information provided in indicative maps, so these maps should only be seen as guidance. As there are no spatially defined boundaries to these policies, the information provided on the indicative maps should not be assumed to cover all locations to which the policies apply. Therefore, where an indicative map is provided, the policies should be taken to apply across the whole of the East marine plan areas.

Information Maps

107. Four information maps have been provided for context, or signposting. In support of objective 10, taking into account other statutory and non-statutory plans with marine relevance, maps show the boundaries of local authorities, county councils, and a selection of statutory and non-statutory plans. The information provided in these maps is not exhaustive, and there may be other information available to support the application of the GOV policies and existing policies or measures (ie applicants would need to consult other data sources to be able to apply the policy). The other information maps show the plan areas and cable locations.

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[54] Marine and Coastal Access Act s.58(1) requires that "a public authority must take any authorisation and enforcement decisions in accordance with the appropriate marine policy documents, unless relevant considerations indicate otherwise".

[55] Marine and Coastal Access Act s.54 (1b) requires that the 'marine plan authority must keep under review the matters which may be expected to affect the exercise of its functions relating to the preparation, adoption, review, amendment or withdrawal of marine plans for those areas.'

Objectives	EC1	EC2	EC3	SOC1	SOC2	SOC3	ECO1	ECO2	BIO1	BIO2	MPA1	CC1	CC2	GOV1	GOV2	GOV3	DEF1	OG1	OG2	WIND1	WIND2	TIDE1	CCS1	CCS2	PS1	PS2	PS3	DD1	AGG1	AGG2	AGG3	CAB1	FISH1	FISH2	AQ1	TR1	TR2	TR3
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1. Economic productivity	**A**													C	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		C
2.Employment and skill levels		**A**		C					C		C						C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
3. Wind energy as a transformational activity		C	**A**										C	C	C					C	C						C				C						
4. Health & well being	C	C		**A**	C	C	C	C	C		C			C	C	C																C			C	C	C
5. Heritage Assets					**A**	**A**																													C		C
6. Healthy ecosystem							**A**	**A**	C	C	C	C	C															C						C				
7. Biodiversity							C	C	**A**	**A**	C			C	C													C						C				
8. Marine Protected Areas							C	C	C		**A**				C	C												C						C				
9. Climate Change												**A**	**A**	C						C	C	C	C	C														
10. Governance										C				**A**	**A**	**A**								C														

Table 2: Relationship between objectives and policies.

A = associated policy; C = contributing (indirectly) policy

Whilst policies will be relevant, even indirectly, to many of the objectives, the table indicates those that are associated with particular objectives or most obviously contribute to specific objectives. Note this is a guide rather than being definitive.

All policies relate to the inshore and offshore marine plan areas apart from PS3, DD1, and TR3 which relate only to the inshore area.

Abbreviation	Full term	Abbreviation	Full term
AGG	Aggregates	FISH	Fisheries
AQ	Aquaculture	GOV	Governance
BIO	Biodiversity	MPA	Marine Protected Areas
CAB	Cabling	OG	Oil and Gas
CC	Climate Change	PS	Ports and Shipping
CCS	Carbon Capture and Storage	SOC	Social and Cultural
DD	Dredging and Disposal	TIDE	Tidal Stream and Wave
DEF	Defence	TR	Tourism and Recreation
EC	Economic	WIND	Offshore Wind Renewable Energy
ECO	Ecosystem		

Table 3: Key to Table 2

3.2 Economic

Context

108. The objectives to support economic growth need to consider the contribution from the East marine plan areas to national economic growth, as well as the impact on local economic development and job creation. This is considered through two general objectives which deal with economic growth across all activities, and also includes one specific objective, which is included because of the importance of offshore wind energy as a transformational economic activity in these plan areas.

109. Sustainable development is integral to all EC policies; economic productivity and employment benefits must be delivered in a sustainable way. More information on sustainable development and its application to planning can be found in the National Planning Policy Framework, particularly paragraphs 6 – 17 and also chapter 1 of these marine plans which reflects the five principles of sustainable development. The Marine Policy Statement has a presumption in favour of sustainable development and states, ‘Properly planned developments can provide environmental and social benefits as well as drive economic development,’ (Marine Policy Statement 2.5.2). This means that

social and environmental aspects of proposals should be considered alongside economic aspects. Policies EC1 – 3 and SOC1 should contribute to economic regeneration objectives, particularly in coastal areas, which is a priority for government.[56]

110. Planning has a role in trying to ensure that economic opportunities are able to be realised. It can do this by considering proposals in terms of their potential to contribute to increases in employment and productivity of an area. There is a clear need, addressed in policy documents such as the Department for Business Industry and Skills' and HM Treasury's (2011) Plan for Growth, to maintain and grow the local and national economies through activities, including marine activities, that provide jobs and income for local people and lead to the production of goods and services that add value locally, nationally and internationally. It is also desirable that development takes place in or near areas that have the ability to benefit from that activity. This could mean that the physical infrastructure or skilled workforce is available or potentially available for an activity. Local plans may be able to highlight, through their policies, where a development may be best suited. Appropriate weight should be given to the policies contained in local plans, where they may be pertinent to a decision that considers any of the three EC policies. For example, this could be where a development has both a marine and a terrestrial aspect, as is the case for marina developments.

111. In terms of ability to contribute to economic growth, most activities will have a role across both productivity and employment. For example, shipping has particular significance for an island nation where very high proportions of trade rely upon seaborne transport. There are, however, some activities that could have such a radical impact that they have the potential to transform the economic structure of an area. These transformational activities also need to be identified and accounted for within marine plans, as the potential benefits from these are likely to be more significant for the marine plan areas. In the case of the East marine plan areas, the most transformational activity over the next 20 years is offshore renewables, specifically offshore wind farms. The role of offshore wind energy projects as a transformational activity has been highlighted through national initiatives such as the Centres for Offshore Renewable Engineering, of which the East Inshore marine plan area contain two, (Great Yarmouth and Lowestoft, and the Humber) and also through the plans of Local Enterprise Partnerships in the marine plan areas,[57] which identify the economic priorities of local areas. Adjacent to the marine plan areas, there are also two Enterprise Zones, which recognise the potential for innovation to drive forward growth.

112. Certain localities bordering the marine plan areas, such as Great Yarmouth, Lowestoft, Hull, East Yorkshire, North and North East Lincolnshire and Grimsby, have identified offshore wind energy projects as a significant driver of growth and regeneration in their area, including in some cases through the initiatives mentioned above. Some places, such as Wells next-the-Sea have

[56] https://www.gov.uk/government/policies/supporting-economic-development-projects-in-coastal-and-seaside-areas--4

[57] http://www.bis.gov.uk/policies/economic-development/leps

already experienced economic benefit from the deployment of offshore wind infrastructure.

Plan policies

Objective 1

To promote the sustainable development of economically productive activities, taking account of spatial requirements of other activities of importance to the East marine plan areas.

Policy EC1

Proposals that provide economic productivity benefits which are additional to Gross Value Added currently generated by existing activities should be supported.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

113. This policy gives a measure for assessing benefits of projects, primarily to aid decision-making to secure sustainable economic growth. This adds more clarity to the Marine Policy Statement (2.5.5) which states, 'The marine plan authority should ensure... that marine planning contributes to securing sustainable economic growth both in regeneration areas and areas that already benefit from strong local economies'. The measure used is Gross Value Added, following Office for National Statistics usage of productivity measures.[58] This is the most appropriate sub-national comparator that allows for identification of economic contribution by all sectors to local economies, and allows for clear comparison across different sectors, to help guide decision-making. Gross Value Added should not be the only consideration in decision-making; it should be used appropriately and proportionately, to be consistent with the approach to implementation outlined in chapter 4. For some projects, their direct Gross Value Added impact may be minimal, but their indirect Gross Value Added impact may be larger (they could enable economic activity rather than generate economic benefit themselves), or they may achieve other broader outcomes, such as national social or environmental benefits, and these should also be considered when making a decision. Policy SOC1 for example, can help guide decision-making from the viewpoint of social benefits.

[58] Office for National Statistics (2011) Regional, sub-regional and local Gross Value Added 2010

114. Sustainable development is integral to EC1; economic development must be delivered in a sustainable way. More information on sustainable development and its application to planning can be found in the National Planning Policy Framework, particularly paragraphs 6 – 17 and chapter 1 of this plan, which reflects the five principles of sustainable development. Further to this the Marine Policy Statement has a presumption in favour of sustainable development and states, 'Properly planned developments can provide environmental and social benefits as well as drive economic development,' (Marine Policy Statement 2.5.2). This means that social and environmental aspects of proposals should be considered alongside economic aspects.

115. The economies of the areas adjacent to the marine plan areas are varied, including very prosperous areas and some of the most deprived areas in England. National policy would like to see growth for all areas, as mentioned above. The headline measure of an area's economic performance is the level and growth rate of Gross Value Added. For comparative purposes this is translated into Gross Value Added per person, which allows for meaningful comparisons of performance across different sized areas.

116. At local authority level Gross Value Added variation across those authorities bordering the East Inshore Marine Plan Area is quite pronounced, ranging from 67% of the United Kingdom average of Gross Value Added per head to 117% of the United Kingdom average in 2009,[59] so some areas adjacent to the marine plan areas are more in need of economic growth than others, and may consequently feel that this objective is more important to them than it is in very prosperous areas. The economic needs of areas bordering the marine plan areas will differ greatly, and the policy above is intended to encourage development and activities that will have a positive impact on the economies of the areas adjacent to the marine plan areas too. Local authorities and Local Enterprise Partnerships will highlight the aspirations and needs of different areas, including highlighting where there may be economic development objectives relating to marine activities.

117. It is important to also recognise the current value of existing activities and the characteristics of the East marine plan areas (and those local authority areas bordering the marine plan areas), which mean that different forms of economically beneficial development or activity may be considered more desirable in certain places. This is reflected in the policy through the reference to 'Gross Value Added currently generated by existing activities', which highlights the role of existing activities and recognises their growth potential too, not just that of new activities.

118. Economic benefit and growth will be felt primarily on land, and marine activities that will help to deliver that benefit and growth occur in both the East Marine Plan Inshore and Offshore Areas. This covers mainly inshore activities such as tourism and recreation as well as developments or activities that occur offshore, such as oil and gas production. Many offshore activities also use the

[59] Office for National Statistics (2011). Gross Value Added at Nomenclature of Territorial Units for Statistics 3 level. Available online at www.ons.gov.uk/ons/rel/regional-accounts/regional-gross-value-added--income-approach-/december-2011/rft-nuts3.xls, accessed on 5 March 2012.

inshore area too, for example oil and gas pipelines go through the East Inshore Marine Plan Area.

119. This policy is intended to promote more than the most economically beneficial developments and activities. It is also about gaining economic benefit from all developments and activities. Therefore where one project provides more economic benefit than a project of the same type, then the former should be supported. This should be the case unless there are other compelling reasons not to support the more economically beneficial project; for example it has greater negative social or environmental impacts. This policy should apply to all relevant proposals, be they for continuation of existing activity or relating to new activity. This policy will be implemented by the public authorities responsible for authorising such developments and activities.

120. This policy is intended to clarify that developments and activities delivering additional economic productivity benefits (those benefits accruing after accounting for any negative impacts on other activities) should be supported. For more information on the application of this policy as a 'tie-breaker' please see the introductory text of chapter 3. The information to make decisions on this is collected already, either at a project level through business planning processes or at a marine plans level through assessment of economic benefits (giving a baseline against which to assess projects).

121. This policy adds value over existing national policy[60] by reflecting its aspirations for growth in a sustainable manner, but then also referencing a specific measure which can be used to understand the impact of proposals. This allows for a clearer decision-making framework, by introducing a common measure to allow public authorities in localities as well as those dealing with nationally-significant infrastructure to assess the potential growth benefits of projects.

Objective 2

To support activities that create employment at all skill levels, taking account of the spatial and other requirements of activities in the East marine plan areas.

Policy EC2

Proposals that provide additional employment benefits should be supported, particularly where these benefits have the potential to meet employment needs in localities close to the marine plan areas.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

[60] For example ambitions in, 'Department for Business Industry and Skills, HM Treasury, (2011)The Plan for Growth' and the Marine Policy Statement 2.5.2

Justification/Explanation

122. The Marine Policy Statement (2.5.3) highlights employment benefits from both existing marine activities such as fishing and port activity, but also the role of new industries such as the renewable energy sector. It also highlights (Marine Policy Statement 2.5.5) the role of the marine ecosystem in providing economic and social benefits, both nationally and for local communities. It is this importance that has guided the development of this policy. National plans such as the Plan for Growth highlight the need to increase employment and rebalance it towards the private sector, away from the public sector. Employment also has social benefits, as those in work benefit from improved health and well-being.

123. The areas adjacent to the East marine plan areas have differing employment structures, with significant variation within and between local authority areas. These variations are pronounced; the local authority with the highest[61] Jobseekers' Allowance claimant rate in the country borders the East Inshore Marine Plan Area, but so do local authorities that have Jobseekers' Allowance claimant rates that are nearly half the United Kingdom average. This suggests that in some areas job creation and the potential for this from marine activities will be particularly important, particularly for large towns and cities that experience high levels of unemployment. In other areas this may not be the most important objective for marine planning to achieve. The employment needs of areas adjacent to the marine plan areas will differ greatly, and the policy and objective above are intended to recognise this. Local plans should be able to highlight employment needs that may make a particular proposal more or less suited to an area and the appropriate weight should be placed upon this when making a decision. This policy adds value over existing national policy[62] in two ways. Firstly, it encourages public authorities to consider the additional employment benefits of an application. Secondly, it allows a further consideration to be factored in, that of the potential for these employment opportunities to be transferred to areas close to the East marine plan areas.

124. This policy gives a clear signal that developments or activities that can deliver additional employment benefits (those benefits accruing after accounting for any negative impacts on other activities or developments) should be supported, especially where employment can be accessed by those in localities close to the marine plan areas. It also recognises the current value of existing developments and activities and the characteristics of the marine plan areas, which may not always fit with projects that bring employment opportunities. Employment should not be the only consideration in decision-making; it should be used appropriately. For some projects, their direct

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[61] Based on Office for National Statistics figures for February 2012 from Office for National Statistics (2012) Job Seekers Allowance claimant count by unitary and local authority. Available online at www.ons.gov.uk/ons/rel/subnational-labour/regional-labour-market-statistics/march-2012/rft-lm-table-16-march-2012.xls, accessed on 16 March 2012

[62] For example ambitions in, 'Department for Business Industry and Skills, HM Treasury, (2011)The Plan for Growth' and HM Government(2011) Marine Policy Statement 2.5.3

employment impact may be minimal, but their indirect employment impact may be larger (they could enable economic activity rather than generate economic benefit themselves), or they may achieve other outcomes, such as social benefits; these should also be considered when making a decision. Policy SOC1 for example, can help guide decision-making from the viewpoint of social benefits.

125. Sustainable development is integral to EC2; economic development must be delivered in a sustainable way. More information on sustainable development and its application to planning can be found in the National Planning Policy Framework, particularly paragraphs 6 – 17 and chapter 1 of this plan, which reflects the five principles of sustainable development. Further to this the Marine Policy Statement has a presumption in favour of sustainable development and states, 'Properly planned developments can provide environmental and social benefits as well as drive economic development,' (Marine Policy Statement 2.5.2). This means that social and environmental aspects of proposals should be considered alongside economic aspects.

126. This policy is intended to promote more than solely the most economically beneficial developments and activities. It is also about gaining employment benefit from all developments and activities. Therefore, where one project provides more employment benefit than a project of the same type, then the former should be supported. Unless there are other compelling reasons not to do so, for example it has greater negative social or environmental impacts. This policy should apply to all decisions relating to new proposals, be they for continuation of existing activity or relating to new activity. This policy will be implemented by the public authorities responsible for authorising such proposals.

127. The Marine Management Organisation commissioned study looking at the employment needs and social issues of the localities bordering the East marine plan areas can help decision-makers understand these issues and factor them into decision-making.

Objective 3

To realise sustainably the potential of renewable energy, particularly offshore wind farms, which is likely to be the most significant transformational economic activity over the next 20 years in the East marine plan areas, helping to achieve the United Kingdom's energy security and carbon reduction objectives.

Policy EC3

Proposals that will help the East marine plan areas to contribute to offshore wind energy generation should be supported.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas.

In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

128. Offshore wind energy projects are expected to provide the largest single contribution towards the United Kingdom's 2020 renewable energy generation target, and also provide important employment opportunities.[63]

129. Optimising the location and methods of deploying offshore wind farms as well as other developments and activities that may affect their delivery, will help minimise the adverse effects on both marine users and the environment. It will also help achieve the other objectives in these marine plans. The Vision (see chapter 2) for the East Inshore and East Offshore Marine Plans specifically highlights the role of offshore wind energy projects in these marine plan areas. This is based upon consultation with stakeholders and significant issues identified through the evidence base.[64]

130. Development of wind energy projects in the East marine plan areas will present opportunities for regeneration of port facilities and development of a skilled workforce, potentially placing the East marine plan areas and the United Kingdom at the forefront of the rapidly developing industry of marine renewable energy. In response to this opportunity, Local Plans, including those for Hull, East Yorkshire, North and North East Lincolnshire, Grimsby, Great Yarmouth and Lowestoft have identified renewable energy, particularly offshore wind energy projects, as a key driver of regeneration and economic growth.

131. Sustainable development is integral to EC3; economic development must be delivered in a sustainable way. More information on sustainable development and its application to planning can be found in the National Planning Policy Framework, particularly paragraphs 6 – 17 and chapter 1 of this plan, which reflects the five principles of sustainable development. Further to this the Marine Policy Statement has a presumption in favour of sustainable development and states, 'Properly planned developments can provide environmental and social benefits as well as drive economic development,' (Marine Policy Statement 2.5.2). This means that social and environmental aspects of proposals should be considered alongside economic aspects.

132. This policy and its supporting text demonstrate that the East marine plan areas are crucial to achieving government ambitions[65] for renewable energy generation. Its main role however, is to make the link between ambitions for economic development and job creation, thereby adding value by highlighting

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[63] Department For Energy And Climate Change (2011) Overarching National Policy Statement for Energy EN-1, p.26

[64] Please see for example, East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report, http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

[65] For example ambitions in, 'Department For Energy And Climate Change (2011) Overarching National Policy Statement for Energy (EN-1) section 3.4.3, p.26 and Marine Policy Statement 3.3.19

the importance of the East marine plan areas to achieving national policy for economic growth and renewable energy projects. This is more geographically specific than national policy.

133. This policy should be read in conjunction with the other policies relating to offshore wind energy projects, policies WIND1, and 2 in section 3.9 provide the detail on how any potential competition for space between offshore wind energy projects and other activities can be resolved. Other policies may be relevant depending on the location of an application.

3.3 Social and Cultural

Context

134. Marine plans have an important role in helping to realise social benefits across the marine plan areas. Opportunities exist to improve people's well-being, through promotion of activities for healthy lifestyles, and reduce deprivation through job creation, leading to increased disposable income. Ensuring that the natural and historic environment are protected and maintained can help to stimulate investment,[66] support sustainable tourism, engender pride, facilitate a sense of place and promote health and well-being.

Health, social well-being and access to the coast and marine area

Objective 4

To reduce deprivation and support vibrant, sustainable communities through improving health and social well-being.

Context

135. A number of local authority areas within and adjoining the East Inshore Marine Plan Area are recognised as experiencing social deprivation with key measures (educational attainment, employment, health and crime) lower than the national average.[67] Rural areas can have poor connectivity to areas of employment and a lack of local amenities and services. Life expectancies for both men and women are shorter than the national average in Kingston upon Hull, North East and North Lincolnshire. The East Inshore Marine Plan Area includes many towns and cities that have lost their primary markets and are facing challenges identifying alternatives. Amongst these, fishing has declined as a significant contributor to employment and economy in towns such as

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[66] English Heritage (2012), An assessment of the effects of conservation areas on value http://www.english-heritage.org.uk/content/imported-docs/a-e/assessment-ca-value.pdf

[67] East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report, page 248 http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm Department for Communities and Local Government (2011), England's Smaller Seaside Towns; and Department for Communities and Local Government (2008), England's Seaside Towns

Grimsby, Cleethorpes, Lowestoft and Great Yarmouth, though its social and heritage value remains strong.

136. Tackling deprivation and supporting sustainable communities has a social dimension as well as economic and environmental ones. Promotion of recreation and access to the coast and marine area produces direct social benefits for coastal communities and visitors. Interventions primarily aimed at delivering economic and environmental outcomes, such as increasing employment and skills (see EC1 and EC2) and maintaining the natural character of the marine environment (see ECO1 and ECO2) can also have secondary social benefits. Conversely, good health and well-being bring economic benefits in increased productivity and tax revenue, lower welfare payments and lower health treatment costs.

Plan policies specific to health, social well-being and access to the coast and marine area

Policy SOC1

Proposals[68] that provide health and social well-being benefits including through maintaining, or enhancing, access to the coast and marine area should be supported.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

137. Recreation and enjoyment of the marine environment provide national social benefits that contribute to the quality of life and well-being of coastal communities.[69] Fisheries provide important contributions to food security and healthy diets (see FISH1), and form an important part of our cultural and heritage assets, which in turn attracts coastal tourism. Some people may never even visit the coast, but still value it through various media and through its role in defining national identity and culture. However, there needs to be an awareness of potential negative impacts such as disturbance to wildlife, designated sites and other habitats, flood defences and river control structures arising from recreation and access.

138. SOC1 provides more detail and prescription than the Marine Policy Statement for considering the benefits for health and social well-being and coastal and marine access in decisions. Development and other activities that bring positive benefits to society (through maintaining the coastal environment, and access to it, in order to promote health and well-being) will be supported

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[68] Proposal is defined in Ch 2, paragraph 88 and the Glossary.

[69] Marine Policy Statement 2.5.4.5, and 3.11; and Department for Communities and Local Government (2012), National Planning Policy Framework, Section 73, p18, and Section 171, p41.

(including in preference to any alternatives subject to other plan policies). Management measures, including local development frameworks and management plans for National Parks, Areas of Outstanding Natural Beauty (and Marine Protected Areas), should consider opportunities to maximise the social benefits of management decisions in or affecting the marine area.

139. Initiatives could include, but are not limited to:

- local community renewable energy generation (stand alone or co-located)
- investment in rural amenities and services to build social capital
- representation through physical and digital interpretation of the natural and historic environment
- educational initiatives supporting marine activities
- management of, volunteering at and provision of access to nature reserves and
- apprenticeships and job placements, especially for young people

140. An area's landscape and seascape character (including both the natural and historic environment) is a key element in the setting for people's lives (see SOC3). Employment opportunities generally are addressed through EC2. For initiatives aimed at tourism and recreation see TR1 – 3. Aspects of noise and the impact on people[70] are addressed under Objective 6 as part of consideration of its effects on marine animals.

Heritage assets and seascape

Objective 5

To conserve heritage assets, nationally protected landscapes and ensure that decisions consider the seascape of the local area.

Heritage assets

Context

141. Coastal communities have historic sites and landscapes with a social value established over time. 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 such

[70] Department for the Environment Food and Rural Affairs (2010), Noise Policy Statement for England. Available online at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69533/pb13750-noise-policy.pdf

as buildings, monuments, or landscapes that have been positively identified as holding a degree of significance[71] meriting consideration, are called 'heritage assets' (Marine Policy Statement 2.6.6.1).

142. Heritage assets assist in strengthening social capital through engagement activities that help to become a focal point for community events, engendering a sense of belonging to a place and way of life and, as such, help foster support to safeguard these features.

143. The Marine Policy Statement states that '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...' (Marine Policy Statement 2.6.6.4 and 2.6.6.5). Not all heritage assets are subject to formal designation measures, but still help to shape the character of an area and should be treated as being of equivalent significance as designated assets. They should be conserved and managed in recognition of their contribution to the overall historic environment. The significance of heritage assets must be considered in terms of the values the asset holds for current and future generations, and how any proposed changes may affect the significance of the asset or its setting, which may be archaeological, architectural, artistic or historic.

144. The East Inshore and East Offshore Marine Plan Areas contain a wealth of archaeological sites, heritage assets and historic landscapes. The work undertaken by English Heritage in relation to Rapid Coastal Zone Assessment Surveys, Historic Seascape Characterisation and other projects supported by the National Heritage Protection Plan is beginning to identify the extent of prehistoric sites and other aspects of the historic environment on our coasts. In the East marine plan areas these range from locations such as Dogger Bank where the potential exists to discover evidence of prehistoric activity in areas that were once on land, to the Humber estuary where a number of highly significant prehistoric boats have been found. English Heritage guidance provides further details on the settings of heritage assets.[72]

145. In relation to the significance of any identified heritage assets (or the potential for such assets to be discovered), consideration must be given to the available evidence, including information and advice from the relevant regulator and advisors and how they are managed. It should also take into account the historic character of the marine plan areas, with particular attention paid to the landscapes, seascapes and groupings of assets that give it a distinctive identity. Designated heritage assets can be found at figure 3. It should be noted that figure 3 does not demonstrate an exhaustive representation of wreck data in the East marine plan areas, as such data in the East Offshore Marine Plan Area is incomplete. Further information can be obtained from United Kingdom Hydrographic Office. More information regarding the designation of historic wrecks, can be found in the English Heritage Designation Selection Guide.

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

[72] English Heritage (2011), The Setting of Heritage Assets. Available online at: http://www.english-heritage.org.uk/publications/setting-heritage-assets/setting-heritage-assets.pdf

Plan policies specific to heritage assets

Policy SOC2

Proposals that may affect heritage assets should demonstrate, in order of preference:

a) that they will not compromise or harm elements which contribute to the significance of the heritage asset

b) how, if there is compromise or harm to a heritage asset, this will be minimised

c) how, where compromise or harm to a heritage asset cannot be minimised it will be mitigated against or

d) the public benefits for proceeding with the proposal if it is not possible to minimise or mitigate compromise or harm to the heritage asset

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

146. The aim of this policy is to ensure that existing marine and coastal heritage assets are protected from proposals that may have a detrimental impact upon them. It ensures that all heritage assets (whether formally designated or not), are considered in the decision-making process. It gives effect to what is set out in the Marine Policy Statement (which itself is based on existing arrangements). Public authorities will need to consider non-designated heritage assets in line with information and advice from English Heritage. Decisions should aim to minimise or mitigate possible detrimental effects within the East marine plan areas. The policy will be delivered within existing mechanisms.

147. The requirement under d) is to provide information for consideration by the relevant public authorities. It does not indicate that approval of the proposal will follow by default. In determining proposals, public authorities will take account of a range of relevant considerations including compliance with legislation and regulations, and Environmental Impact Assessment where already required.

148. The Marine Policy Statement states ‘the more significant the [designated] asset, the greater should be the presumption in favour of its conservation’ (Marine Policy Statement 2.6.6.8 and 2.6.6.5). However, ‘many heritage assets 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’.

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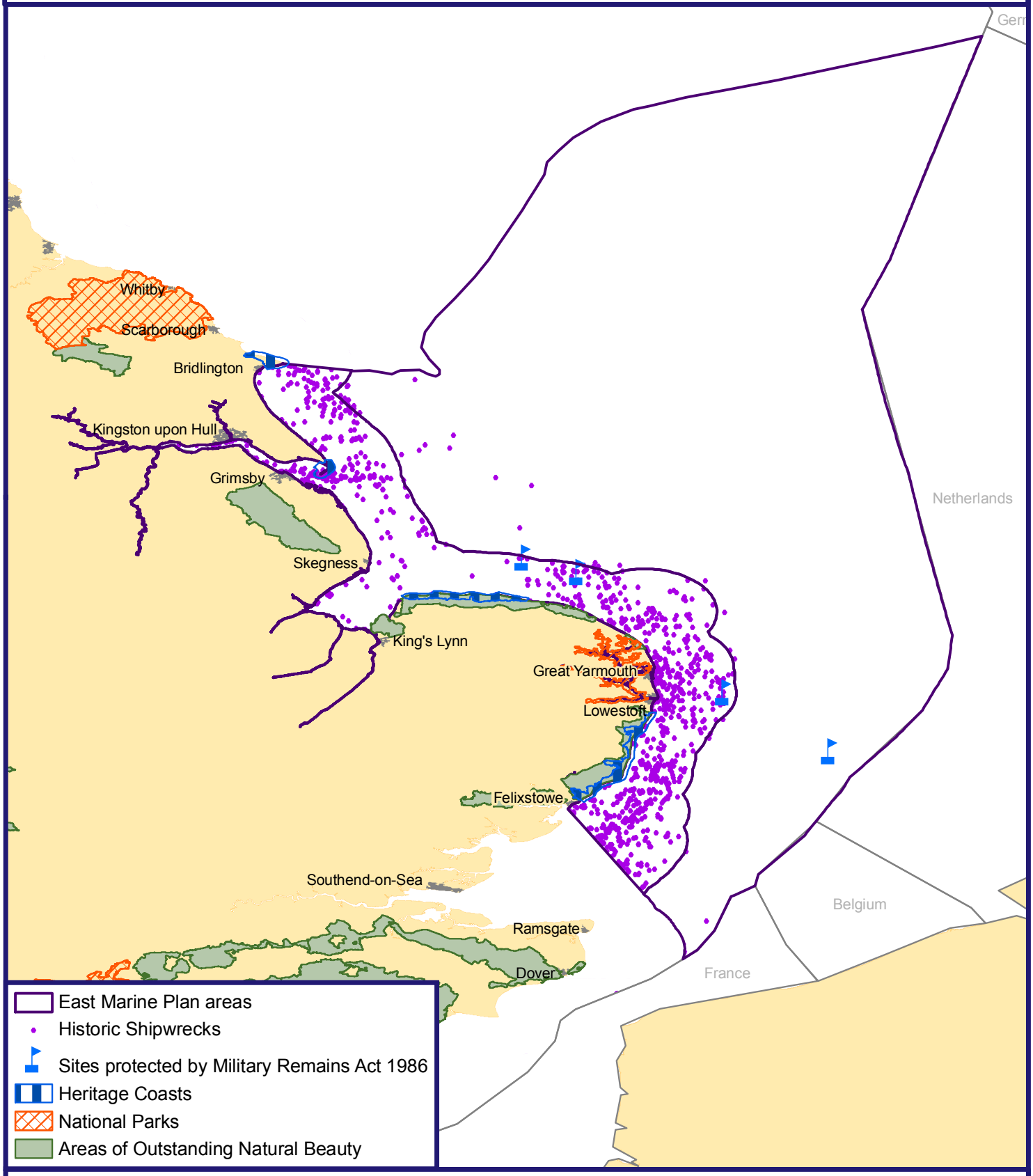
Figure 3: Heritage assets

February 2014

INDICATIVE MAP- This is an indicative map in support of policy SOC2. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.



149. Public authorities should consider the potential impact of projects on heritage assets and should take into account the risk of damage to assets. They should consult with the relevant regulators and advisors, local authorities and other bodies (such as local civic societies) to ensure that designated assets, and also non-designated assets that have a cultural, social or economic value, are considered in the decision-making process. This would be monitored by public authorities through the assessment of applications for proposals (on a case-by-case basis), and performance monitoring of marine plans and other management measures.

150. As heritage assets have cultural and social values and can be a driver for economic growth, this policy ensures that marine plans, proposals and management measures that conserve heritage assets, are supported in recognition of their value to society.

151. This policy clarifies existing national policy (as contained in the National Planning Policy Framework[73] and Marine Policy Statement) by removing any potential uncertainty amongst public authorities regarding designated and non-designated heritage assets and their level of significance. Whilst recognising the presumption set out in the Marine Policy Statement in favour of conservation of designated heritage assets, in a manner appropriate to their significance, similar consideration should also be afforded to non-designated assets that have the potential to become significant following further investigation into an asset or site.

152. National Policy Statement EN-1 should also be considered when addressing visual impact on heritage assets in relation to wind energy development. Further explanation can be found within the National Policy Statement at section 5.8.

Nationally designated areas

Context

153. There are a number of statutory designations and non-statutory categories protecting England's terrestrial, natural, and historic environment under both national and international law.[74] Many of these protected landscapes have marine elements. In the East inshore area these comprise:

- Areas of Outstanding Natural Beauty
- The Broads
- Heritage Coasts (non-statutory)

[73] Section 73, p18, and Section 171, p41.

[74] More information can be found at figure 9 and at https://www.gov.uk/protected-or-designated-areas

154. The statutory purpose of Areas of Outstanding Natural Beauty is the conservation and enhancement of natural beauty. The Broads shares two statutory purposes with national parks - to conserve and enhance the natural beauty, wildlife and cultural heritage; and to promote opportunities for the understanding and enjoyment of the special qualities of national parks by the public, having also a duty to seek to foster the economic and social well-being of local communities within the national park while meeting these purposes. The Broads also has an additional statutory purpose to protect the interests of navigation.

155. The boundaries of the Norfolk Coast Area of Outstanding Natural Beauty, the Suffolk Coast and Heaths Area of Outstanding Natural Beauty and The Broads generally extend to mean low water spring tide. This means that they physically overlap with the East marine plan areas and could be impacted by marine development. It may be beneficial for applicants and others to consider the purpose of these nationally designated areas in formulating their proposals.

156. Designated areas can bring direct economic benefits to the tourism and recreation industry through visitor footfall. These designations help provide income to local communities, create jobs and promote health and well-being through maintaining high quality coastal and marine environments (Marine Policy Statement 3.11.2).

Signposting to existing policy and measures

157. The Marine Policy Statement (2.6.5.4) addresses proposed development within or relatively close to nationally designated areas, stating: ‘For any development proposed within or relatively close to nationally designated areas the marine plan authority should have regard to the specific statutory purpose of the designated areas. The design of the development should be taken into account as an aid to mitigation.’

158. This signposting recognises the need to maintain the surrounding area to protect both the designation, and all that it offers the tourism and recreation industry, and in turn the local economy. In order to maintain the appeal and benefits relating to these designations, it is important to protect the qualities of such areas.

Seascape

Context

159. During the planning process many stakeholders have suggested that the importance of seascape should be reinforced within the marine plans. This would help to add a sense of place, conserve and protect nationally important seascapes and reflect the direction for planning as set out in the Marine Policy Statement.

160. The Marine Policy Statement states that: ‘There is no legal definition for seascape in the United Kingdom but the European Landscape Convention 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’’ (Marine Policy Statement 2.6.5.1). The Marine Policy Statement also states: ‘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.’ The Marine Policy Statement goes on to include in ‘Issues for consideration’, that Marine plan authorities should consider at a strategic level cultural, historical and archaeological, as well as visual impacts (Marine Policy Statement 2.6.5.2).

161. The following sections clarify the scope and application of seascape in the East Inshore and Offshore Plan areas by separating visual and character aspects, distinguishing description, measures and, if required, plan policies that appropriately apply to only one or other of visual or character aspects.

162. Irrespective of which aspect is under consideration, it is recognised that any development and other activity or management measure has the potential to change views and character. The Marine Policy Statement notes: ‘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’ (Marine Policy Statement 2.6.5.3).

Visual Resource

163. Visual resource can be interpreted primarily as views of the coast and sea from the land. Views from the sea to land, and sea to sea, are also relevant.

164. Consideration of potential impacts should take into account visibility, weather conditions, the angle of view and the temporal or permanent nature of a structure (including its scale and design or activity).

165. Whilst the above issues are relevant to marine planning, there are a range of policies and measures already in place to address the issues outlined above. Proposals should have regard to nationally designated areas, namely National Parks and Areas of Outstanding Natural Beauty.

Signposting to existing policy and measures

166. A number of measures merit highlighting, by way of signposting rather than being duplicated as specific plan policies.

167. The National Policy Statement for Energy states: ‘The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the

purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant constraints'. However, it also makes clear 'The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent'. This reinforces the need for decision-makers and others to consider the impact of development on nationally designated areas.

168. National Policy Statements EN-1 and EN-3 should also be considered when addressing visual impact in relation to wind energy project development. National Policy Statement EN-3 makes clear that consent for a development should not be refused solely on the ground of an adverse effect on the seascape or visual amenity unless:

- it considers that an alternative layout within the identified site could be reasonably proposed which would minimise any harm, taking into account other constraints that the applicant has faced such as ecological effects, while maintaining safety or economic viability of the application or
- taking account of the sensitivity of the receptors as set out in EN-1, ie where the harmful effects are considered to outweigh the benefits of the proposed scheme

169. There is a variety of guidance or assessments that may inform consideration of visual impacts. For example, the government has published recommendations on how to assess and deal with the Seascape and Visual Impact Assessment element of an Environmental Impact Assessment for an offshore wind farm development.[75]

170. It is recognised that implementation of these plan provisions could be assisted by a spatial representation of the visual resource. This would indicate on a map, areas delineated by views of the marine area from the land. The areas would also relate to the adjacent landscape character areas and nationally designated areas. Such spatial information was not available at the time of development of the marine plans, but such a spatial representation is currently being undertaken in the South marine plan areas which may be useful in the future when considering visual resource in the East.

Character

171. In the marine environment 'character' relates to the perception of an area, and the combination of characteristics at the surface, within the water column and on the seabed.

[75] Department for Trade and Industry (2005), Seascape and Visual Impact Report, http://webarchive.nationalarchives.gov.uk/+/http://www.berr.gov.uk/files/file22852.pdf

172. In a study carried out by Natural England the East marine plan areas have been divided into 10 individual seascape character areas;[76] these can be found at figure 4. It should be noted that figure 4 does not relate to the visual element of seascape.

173. In 2012 the Marine Management Organisation undertook an informal consultation to clarify the key characteristics identified in the East seascape study produced by Natural England. The seascape character area assessment[77] should be viewed as an update and a record of development towards the revision of the key characteristics identified in the pilot study. Each of these areas is determined by their own individual character derived from both visual and non-visual elements, including underwater processes which reflect activities on the surface. They include areas that fall within the Marine Policy Statement definition of seascape as viewed from the land and other areas further offshore. The pilot study and updated key characteristics are available to assist decision-makers and others when considering proposals.

174. The East marine plan areas range from expansive open shallow water on the Dogger Bank to colourful seafront towns with bustling tourism and recreation activities along the Suffolk coast. Heritage and archaeological features are prevalent across both marine plan areas including highly significant finds such as early human activity, prehistoric boats and historic landscapes.

Plan policies specific to character

Policy SOC3

Proposals that may affect the terrestrial and marine character of an area should demonstrate, in order of preference:

a) that they will not adversely impact the terrestrial and marine character of an area

b) how, if there are adverse impacts on the terrestrial and marine character of an area, they will minimise them

c) how, where these adverse impacts on the terrestrial and marine character of an area cannot be minimised they will be mitigated against

d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts

[76] Natural England (2011) Seascape Characterisation around the English Coast (Marine Plan Areas 3 and 4 and Part of Area 6 Pilot Study) Available online at: http://publications.naturalengland.org.uk/publication/2736726?category=10006

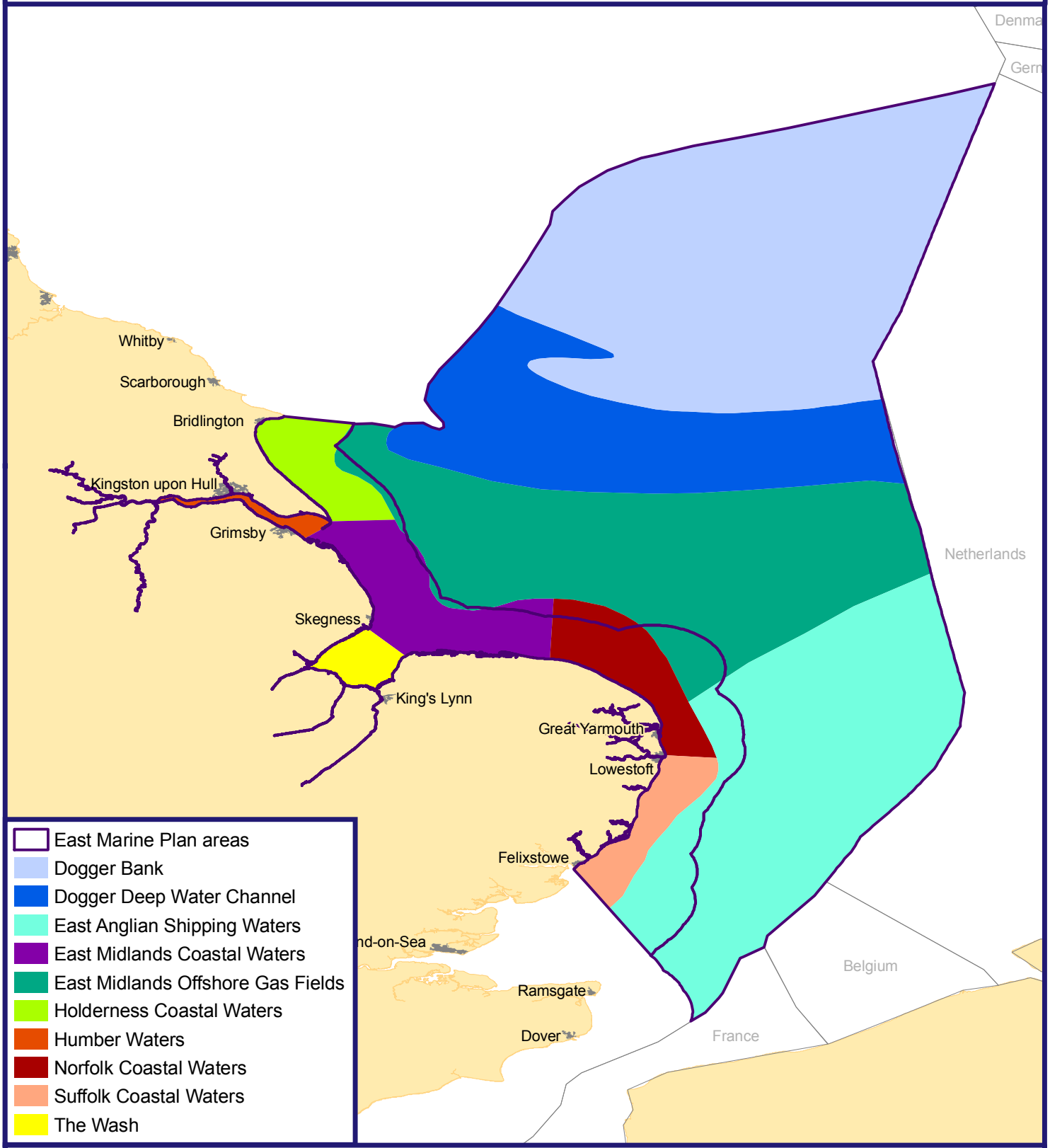
[77] Marine Management Organisation (2012), Seascape character area assessment - East Inshore and East Offshore marine plan areas. Available online at: http://www.marinemanagement.org.uk/marineplanning/areas/documents/east_seascape.pdf

HM Government

Figure 4: East Inshore and Offshore character areas (SOC3)

February 2014

POLICY MAP- SOC3 applies across the whole of the East Inshore and Offshore marine plan areas. This data may be reviewed as necessary during the life of the Marine Plans. The reader should check for any updates via the link provided in paragraph 102. It should be noted that figure 4 does not relate to the visual element of seascape.



Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

175. The Marine Policy Statement states 'at a strategic level visual, cultural, historical and archaeological impacts not just for those coastal areas that are particularly important for seascape, but for all coastal areas' should be considered (Marine Policy Statement 2.6.5.2).

176. Considering character as part of the marine planning process is relatively new. This policy adds value to what is described in the Marine Policy Statement by ensuring that the character of specific areas is considered not only in the development of marine plans, but also in all decisions, such as on proposals for development, activities or management measures. Decisions should aim to minimise or mitigate possible detrimental effects within the East marine plan areas.

177. The requirement under d) is to provide information for consideration by the relevant public authorities. It does not indicate that approval of the proposal will follow by default. In determining proposals, the public authorities will take account of a range of relevant considerations including compliance with legislation and regulations.

178. In considering the impact of a proposal on an area's character, the public authority should take into account existing character and quality, how highly it is valued and its capacity to accommodate change specific to any proposal (Marine Policy Statement 2.6.5.3). Where an application or proposal is found to have a negative impact on character, the applicant or proposer should demonstrate what measures have been taken to minimise impacts on the area's character.

179. In determining an area's character, public authorities, such as those determining an application, should consult with relevant bodies including Natural England and English Heritage advisors as well as local authorities. Public authorities may also consider an area's characterisation assessment,[78] where one is in place. Applicants for new development or proposals for other activities should consider what impact they might have on an area's landscape and marine character.

180. This policy adds clarity to existing national policy by identifying where character areas and key elements exist within the East Inshore and East Offshore Plan areas. The policy clarifies the role of decision-makers and others, for early intervention, in dealing with issues or conflicts which may arise. Character areas can be found at figure 4.

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[78] Natural England (2011) Seascape Characterisation around the English Coast (Marine Plan Areas 3 and 4 and Part of Area 6 Pilot Study) see http://publications.naturalengland.org.uk/publication/2736726?category=10006

3.4 Environment

181. The three plan objectives below pay particular attention to the environmental element of sustainable development. They apply the high level marine objectives under 'Living within environmental limits' in the Marine Policy Statement, in a way that is appropriate for the East marine plan areas. For example, the wording of objective 6 and 7 follow closely the wording of the high level marine objectives and the Marine Policy Statement. There is a specific objective on Marine Protected Areas because of the importance placed on them at a national level as a delivery mechanism for environmental outcomes, and because of the significance of the current and potential future coverage by Marine Protected Areas across the East Inshore and Offshore areas and the resulting interaction with a range of other interests.[79]

182. Relevant links to the Marine Strategy Framework Directive are included in the following objectives. The Marine Strategy Framework Directive is focused on delivering the environmental pillar of sustainable development in the marine environment, while acknowledging the importance of wider social and economic uses of our seas, by seeking to achieve Good Environmental Status in United Kingdom waters by 2020. The Marine Policy Statement outlines the relevance of Marine Strategy Framework Directive to marine planning. More recently, targets and indicators for descriptors of Good Environmental Status have been identified. The descriptors are at different stages of development with few operational and many in need of further development.[80] Marine planning is likely to be more relevant to certain descriptors, such as those for seafloor integrity, biodiversity, hydrographical conditions and noise, than to others. Marine plans will make a contribution to implementing the Marine Strategy Framework Directive alongside a range of other measures. The nature and scale of the contribution will become clearer as the programme of measures for achieving Good Environmental Status is developed and as marine planning matures. In the meantime, the East Inshore and East Offshore Marine Plans can highlight the requirements and any known implications of the Marine Strategy Framework Directive for the marine plan areas through the objectives and plan policies and through subsequent implementation and monitoring.

Objective 6

To have a healthy, resilient and adaptable marine ecosystem in the East marine plan areas.

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[79] See further explanation in Marine Management Organisation (2012), Vision and Objectives Update www.marinemanagement.org.uk/marineplanning/areas/documents/east_vision_objectives_update.pdf

[80] Marine Strategy Part One: Framework Directive consultation: United Kingdom Initial Assessment and Proposals for Good Environmental Status. www.defra.gov.uk/publications/2012/12/20/pb13860-msfd-strategy-part-one/

Context

183. Objective 6 reflects policies and commitments on the wider ecosystem, set out in the Marine Policy Statement including those to do with the Marine Strategy Framework Directive and the Water Framework Directive, as well as other environmental, social and economic considerations.[81]

184. Elements of the ecosystem beyond specific biodiversity interests (see Objective 7) might include:

- the functioning of biological communities, such as the interaction between species
- nutrient and carbon cycling
- water quality characteristics critical to supporting a healthy ecosystem and pollutants that may affect these (from marine as well as riverine and terrestrial sources)
- coastal processes (see also coastal change management section in Governance) and the hydrological and geomorphological processes in water bodies and how these support ecological features
- the interaction between various pressures acting on the environment as a whole and
- the benefits to people from the provision of ecosystem services, such as flood protection or 'natural capital'.[82] As our understanding of such benefits is still developing, the topic is recognised as a priority evidence requirement to support marine planning (see Objective 11 in chapter 2)

185. Marine planning will take an ecosystem-based approach,[83] including how to manage the collective pressure of human activities. While there are a range of pressures (and activities that generate them) that could be considered, the following are issues in the East marine plan areas (the majority are related to a Marine Strategy Framework Directive descriptor signposted below):[84]

- cumulative impacts including in relation to seabed habitat loss and physical change as a result of potential increased use in addition to current activities (descriptor 6)

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[81] East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report, Chapter 4.8 http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm The report provides more detail on commitments, policies and relevance of the East Marine Plan areas to the wider marine ecosystem.

[82] See the United Kingdom National Ecosystem Assessment (uknea.unep-wcmc.org) and The Natural Capital Committee (www.defra.gov.uk/naturalcapitalcommittee/) for more information.

[83] Marine Policy Statement Page 4 and 2.3.1; and www.defra.gov.uk/environment/marine/protect/planning.

[84] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/82639/20120327-msfd-consult-document.pdf

- changes to water quality and resulting effects on wildlife and on people in general and specifically from marine sources of hazardous substances[85] in view of the amount of shipping, the 'busy' nature of the marine plan areas for existing activities and potential new development (descriptor 5 and 8)
- changes to hydrographical conditions related to the Marine Strategy Framework Directive and Water Framework Directive requirements – see Objective 9, Climate Change (descriptor 7)
- air quality including effects on adjacent coastal communities in view of identified Air Quality Management Areas and the amount of current and potential future shipping traffic in the marine plan areas
- introduction of non-indigenous species in general and related to the Marine Strategy Framework Directive requirements (descriptor 2)
- noise particularly related to the Marine Strategy Framework Directive requirements and potential impact on sensitive species from potential new development combined with current activities (descriptor 11)
- litter particularly related to the Marine Strategy Framework Directive requirements (descriptor 10)

186. Most of these issues may also be influenced by climate change which is considered under Objective 9. There are specific expectations in the Marine Policy Statement that marine plans will help to address cumulative effects and this is given particular attention below.

Signposting to existing policies and measures

187. There are a range of policies and measures already in place that address the issues outlined above, for example to manage the effect of fisheries. A number of measures merit highlighting as they may not be widely known or understood, particularly where they have emerged relatively recently from the Marine Policy Statement or development of the Marine Strategy Framework Directive. The following are signposted because the issues are addressed by measures (existing or in development) other than marine planning and/or because current evidence does not enable plan policies to be drafted. Including the topics below does not mean that marine planning is the mechanism by which they will be addressed.

188. **Cumulative impacts or effects**: The Marine Policy Statement (2.3.2.1) sets out the need to address cumulative impacts or effects, ie 'When considering potential benefits and adverse effects, decision-makers should also take into account any multiple and cumulative impacts of proposals,[86] in the light of other projects and activities'. In considering the expected contribution of

[85] Defined for the purposes of the Water Framework Directive as 'substances or groups of substances that are toxic, persistent and liable to bio-accumulate, and other substances or groups of substances which give rise to an equivalent level of concern'. Directive 2000/60/EC (WFD) Article 2: Definitions (29) http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32000L0060:EN:HTML

[86] See paragraph 88.

marine planning, it must first be recognised that such effects are considered to some degree through existing mechanisms, (see plan policy ECO1 for expectations set out in the Marine Policy Statement for an additional contribution from marine planning to complement those mechanisms). In particular, a broad range of effects are assessed at a strategic level through Strategic Environmental Assessment or at project level through Environmental Impact Assessment. A narrower range of 'in combination' effects, focussed on features for which sites are designated, is assessed through Habitats Regulations Assessment. Various guidance[87] is in place to inform these assessments that should be referred to as appropriate.

189. **Ecological and chemical water quality – general**: Terrestrial and riverine inputs that might affect marine water quality have long been the focus of various policies and measures (Marine Policy Statement 3.10), eg through discharge consents issued by the Environment Agency. Diffuse pollution (polluted water from other sources, such as run off from farmland) has been identified as a significant waterbody management issue; a key objective of the Water Framework Directive is to prevent deterioration of water bodies, including coastal, marine and transitional waters. Through the delivery of River Basin Plans,[88] all waterbodies should meet Good Ecological Status or Potential and Good Chemical Status, defined by a set of biological, chemical and physical standards. The Marine Policy Statement (2.6.4) recognises that marine development and activities can have adverse effects on marine waters. Furthermore it highlights the role of public authorities to consider the impact of a development on the status of a waterbody in relation to the Water Framework Directive[89] as well as the marine plan authority in relation to marine sources. Proposals should take account of any potential impacts on ecological and chemical water quality and consult the relevant River Basin Management Plans for more detailed information.

190. **Hazardous substances – management measures**: There are several directives and conventions that specifically address the release of hazardous substances into the marine environment, these include the Marine Strategy Framework Directive, commitments made under the Oslo/Paris Convention for the Protection of the Marine Environment of the North-East Atlantic, the London Convention (Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter) and the International Convention for the Prevention of Pollution from Ships. These apply to both East Inshore and Offshore Marine Plan Areas and are transposed into regulations that set out

[87] Eg, The Crown Estate's 'Assessment of Cumulative Effects for Offshore Wind in United Kingdom Waters'

[88] The term River Basin Plan is used to refer to the full suite of documents associated with each river basin area up to and including a River Basin Management Plan (River Basin Management Plans). The aim of the Water Framework Directive planning is to provide detail on the issues and intentions at a resolution required by users. Therefore there will be plans at a variety of scales including individual waterbodies, operational catchments, and full River Basin level that may need to be considered.

[89] For example, Marine Policy Statement 2.6.4.3: "Decision-makers should also take into account impacts on the quality of designated bathing waters and shellfish waters from any proposed development" and "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 Water Framework Directive applies"

restrictions, requirements and assessments used to manage activities involving hazardous substances.

191. **Ship-to-ship transfers**: In addition to other measures to avoid or minimise the accidental release of hazardous substances at sea, public authorities should take account of the designated ship-to-ship transfer site off Suffolk,[90] liaising with the Maritime and Coastguard Agency, which regulates transfer activities.

192. **Air quality**: Development and other activities in the marine and coastal area can have adverse effects on air quality at various stages. The Marine Policy Statement (2.6.2.2) states: 'When developing marine plans, marine plan authorities should be satisfied that air quality impacts have been taken into account' in developing marine plans, liaising with terrestrial authorities particularly in relation to Air Quality Management Areas. There are 10 Air Quality Management Areas adjacent to the East Inshore area, most declared for nitrogen dioxide levels. The Sustainability Appraisal[91] does not indicate the need for any specific East Inshore Marine Plan policies on air quality.

193. **Invasive non-indigenous (or non-native) species**: The Marine Policy Statement (3.4 and 3.9) draws attention to measures in place to assess and manage the introduction and transmission of non-indigenous species, for example in relation to ports, shipping activities and aquaculture. Decision-makers and others should note the Invasive Non Native Species Framework Strategy for Great Britain which aims to minimise the risk posed, and reduce the negative impacts caused, by such species. Invasive non-indigenous species are also considered a significant waterbody management issue; see key species in the River Basin Management Plans for the East Marine Inshore Plan areas.[92] Marine planning considerations might include the role of newly built infrastructure in introducing or facilitating the spread of species. Reference should also be made to the targets and indicators to address Marine Strategy Framework Directive Descriptor 2 'Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems'.

194. **Noise**: The Marine Policy Statement (2.6.3) outlines issues to consider in relation to noise, including the potential for adverse effects on wildlife and on people,[93] and existing legislation and requirements. In addition, reference should be made to targets and indicators to address Marine Strategy Framework Directive Descriptor 11 'Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment'. More research and evidence is required to understand the effects of noise and determine if and what further measures are required.[94]

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[90] Site for ship to ship transfers identified here in this Notice to Mariners MSN1829: http://www.dft.gov.uk/mca/msn1829.pdf

[91] www.marinemanagement.org.uk/marineplanning/areas/east_plans.htm

[92] See figure 11: Selected statutory and non-statutory management plans

[93] Note also Department for the Environment Food and Rural Affairs (2010), Noise Policy Statement for England

[94] Marine Strategy Framework Directive consultation: United Kingdom Initial Assessment and Proposals for Good Environmental Status. Mar 2012

Irrespective of the outcome of such research, it is clear that marine planning would be only one of a range of potential measures; others would include licensing and conditions placed on individual developments.

195. **Litter**: The challenges of identifying a litter source is discussed in the Marine Policy Statement (3.11.4). For proposed and current measures, reference should also be made to targets and indicators to address Marine Strategy Framework Directive Descriptor 10 'Properties and quantities of marine litter do not cause harm to the coastal and marine environment'. Litter originating from marine activities is also addressed via International Convention for the Prevention of Pollution from Ships. Litter originating from the land is addressed through the Environmental Protection Act 1990, the Clean Neighbourhoods and Environment Act 2005 and waste regulations.

Plan policies

Policy ECO1

Cumulative impacts affecting the ecosystem of the East marine plans and adjacent areas (marine, terrestrial) should be addressed in decision-making and plan implementation.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

196. As set out in the Marine Policy Statement, marine plans should contribute to considering cumulative impacts, eg 'Marine plans should ... identify how the potential impacts of activities will be managed, including cumulative effects' (2.3.1.6). There is an expectation that more is done than currently provided for in existing measures, to ensure that the collective pressure of human activities is kept within levels compatible with achievement of Good Environmental Status. That expectation is reinforced by the potential role of marine plans in the implementation of the Marine Strategy Framework Directive (see paragraph 182).

197. ECO1 highlights what needs to be done by public authorities, predominantly those determining applications, and the marine planning authority to put those expectations into practice. The policy supports the aim of integration across and between different plans (see also Objective 10 on Governance in general, and GOV3 for consideration of the specific inter-activity cumulative impact of displacement), in referring to the impacts of marine activities on the terrestrial, as well as marine ecosystems and vice-versa. It also draws attention to, and reinforces, the role of authorities in and adjoining the East marine plan areas to work together to identify and manage cumulative impacts, including through other relevant plans or programmes, such as River Basin Plans. This policy

should be used alongside existing processes such as Environmental Impact Assessment and Strategic Environmental Assessments which also consider cumulative effects (see signposting, paragraph 188 cumulative effects). These processes consider the need to avoid, minimise or mitigate impacts caused by cumulative effects, and this also is reflected in the principles of the National Planning Policy Framework and the Marine Policy Statement (2.6.1.3) on conserving and enhancing the natural environment.

198. Cumulative effects can arise from a range of pressures, including those listed in 'signposting' above, (paragraph 188) and others such as disturbance or damage to the seabed. The effect of such pressures and whether or not they have an impact will depend on the sensitivity of the components of the ecosystem that are affected and the level of exposure to those pressures. While this is an important step to understanding cumulative effects in the East marine plan areas, we are limited by current evidence, making it difficult to provide more prescriptive or plan-specific detail, let alone determine limits.[95] This policy signals to interested parties, including applicants subject to decisions, that public authorities will look to ensure that current and future guidance as it becomes available is clearly highlighted, applied, and reviewed (where required), working with, for example, the Joint Nature Conservation Committee and Natural England, The Crown Estate and industry.[96] Review and updating may include taking into account the implications of targets and indicators for the Marine Strategy Framework Directive descriptors and the timeline over which to consider impacts (the marine plans seek to consider the next 20 years but different issues may require different timeframes to be considered).

199. There is a need to undertake further research into cumulative impacts in general and in the marine plan areas in particular (as recognised in Objective 11). In the meantime, attention is drawn to analysis of cumulative pressures and sensitive seabed habitats in the East marine plan areas undertaken by the Marine Management Organisation.[97] This analysis illustrates one possible method for assessing cumulative effects. There are limitations in the methodology and the quality of the data on which the analysis is based, but the analysis still provides useful marine plan area-wide contextual information on areas of seabed at potentially greater risk of cumulative impact than other areas. A variety of work is being undertaken by different organisations to develop our knowledge of environmental sensitivity to pressure, as well as on how this information can be best analysed to develop our knowledge of areas at greater risk of cumulative effects. The Marine Management Organisation will continue to collaborate with third parties to ensure that any developments

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[95] Marine Policy Statement 2.3.1.6: "The consideration of cumulative effects alongside other evidence may enable limits or targets for the area to be determined in the Marine Plan, if it is appropriate to do so".

[96] See, for example, the Cumulative Impact Assessment Guidelines by RenewableUK www.renewableuk.com/en/publications/index.cfm/cumulative-impact-assessment-guidelines.

[97] East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report, Chapter 4.8 http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

in knowledge can be considered in future marine planning.[98] This may result in more prescriptive policy at such time as the evidence base is deemed robust enough to support it.

Policy ECO2

The risk of release of hazardous substances as a secondary effect due to any increased collision risk should be taken account of in proposals that require an authorisation.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

200. The Marine Policy Statement (2.6.4.3) states that '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 Water Framework Directive applies' which includes the release of hazardous substances, such as chemicals or oil, in the East inshore area. The Marine Strategy Framework Directive and commitments made under the Oslo/Paris Convention for the Protection of the Marine Environment of the North-East Atlantic address the release of hazardous substances in the wider marine environment including the East offshore area.

201. 'Marine plans and individual decisions should [also] take account of environmental ...effects' (Marine Policy Statement 3.4.7) arising from increased competition that may affect the sea space available for the safe navigation of ships. There are a range of existing measures (see Hazardous substances in signposting above) which do not need to be repeated in marine plan policy. However there is a characteristic of the East marine plan areas which merits additional attention, ie they are already busy, include some of the highest concentrations of shipping in the world, and are seeing increased competition for space, eg for energy generation. The marine plans in complementing existing measures should address issues to do with the use or competition for space.

202. The potential for the release of hazardous substances increases with risk of collision. Collision could occur directly, eg through additional static infrastructure in areas subject to vessel movements, or indirectly such as through displacement of vessels from established routes. The issue is of concern to a range of stakeholders in the East marine plan areas.

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[98] See the Strategic Evidence Plan for an overview of proposed Marine Management Organisation projects and their respective scheduling: http://www.marinemanagement.org.uk/about/documents/strategic_evidence_plan.pdf

203. Plan policy ECO2 helps to meet the expectation placed on the marine plan authority (delegated to the Marine Management Organisation) by the Marine and Coastal Access Act It reflects the need to link between different considerations in the Marine Policy Statement and the importance placed on the issue by stakeholders in the East marine plan areas. In many cases the policy will be applied by public authorities in determining applications for developments.

204. Risks are likely to be identified and addressed through existing mechanisms, such as environmental assessment, navigational risk assessment, safety measures and contingency plans. It is essential that potential indirect effects are fully considered in practice. Public authorities may need to liaise with those with expertise and/or a remit relevant to the policy in making their decisions, and determining unacceptable levels of risk, in addition to consultation of guidance[99] and existing regulations, such as the Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations 2005 (as amended), and the Conservation of Habitats and Species Regulations 2010. See also the objective on Governance.

Objective 7

To protect, conserve and, where appropriate, recover biodiversity that is in or dependent upon the East marine plan areas.

Context

205. Biodiversity has intrinsic value and plays an essential role in healthy, functioning ecosystems, provision of ecosystem services, supporting sustainable development and enhancing quality of life. For example, wildlife and habitats adjacent to and within marine plan areas are important factors attracting tourists to the region.[100] The delivery of this objective must take account of the natural variation in habitats and species over time (including as a result of the dynamic nature of the marine and coastal environment in the marine plan areas), as well as the life cycles and behavioural patterns of a variety of species.

206. The United Kingdom Government is committed to halting the loss of biodiversity and restoring it so far as is feasible. It aims to ensure the following:

- halting and, if possible, a reversal of biodiversity loss with species and habitats operating as a part of healthy, functioning ecosystems

[99] Such guidance may include the Maritime and Coastguard Agency Marine Guidance Note (MGN) 371 (M+F) Offshore Renewable Energy Installations - Guidance on United Kingdom Navigational Practice, Safety and Emergency Response Issues

[100] For example in Suffolk, see www.choosesuffolk.com/tourismpartnership

- 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[101]

207. This is reflected in the Natural Environment and Rural Communities Act, and through a wider commitment to the European Union Biodiversity Strategy, which highlights the need to 'protect, value and appropriately restore biodiversity for its intrinsic value and essential contribution to human well-being and economic prosperity'. The Natural Environment White Paper also sets the objective of achieving no net loss of biodiversity.

208. The East marine plan areas include a wide range of habitats and species, not all of which occur within designated sites or are subject to statutory protection. Seabed habitats are predominantly sedimentary but with scattered examples of hard substratum or reef-like habitats, such as chalk around Flamborough Head and the north Norfolk coast or Ross worm reefs off East Anglia. In terms of species, the coastline and adjacent waters support breeding populations of many of the seabirds that are known to breed in the United Kingdom. Wide ranging mobile species (that are statutorily protected wherever they occur in the marine plan areas) include many sea and waterbirds, eg foraging species such as kittiwakes and red-throated diver, cetaceans such as harbour porpoise, white-beaked dolphin, Atlantic white-sided dolphin and minke whale. In addition, the largest colony of common seals in Europe occurs around the Wash, and at Donna Nook, there is one of the largest breeding colonies of grey seals in the United Kingdom. Other interests include habitats of low or limited mobility species of conservation interest, such as those listed under Biodiversity 2020 (eg blue mussel beds on sediment, or subtidal chalk). Even within designated sites, there may be habitats and species which are not protected by the legislation that applies to the site, because they are either not the features for which the site is designated or are not critical to the functioning site in support of those features.

209. The draft Vision and Objectives update provides more background on commitments, policies and the biodiversity found in the East marine plan areas, supported by greater detail in the Evidence and Issues Report.

Evidence

210. While the evidence base is continually improving, it is recognised that there are gaps in understanding of biodiversity both in general and in the East marine plan areas, such as the distribution of habitats and species, the location of ecologically important areas, and the impact upon them of particular activities or pressures, that affect the ability to take account of them in planning and decision-making. Relevant bodies need to work with the Statutory Nature Conservation Bodies (Natural England within 12 nautical miles and the Joint Nature Conservation Committee beyond 12 nautical miles), as the lead advisers on biodiversity, to address these gaps. Work has been undertaken to better understand the spatial distribution of important bird

[101] Marine Policy Statement 2.6.1.1

species across the East marine plan areas through the use of the European Seabirds at Sea database and additional data on foraging radii. It is anticipated that knowledge of the spatial distribution of cetaceans will develop further as a result of the work from the Joint Cetacean Protocol. It should be noted however, that evidence on the spatial distribution of mobile species is subject to a number of variables, eg behaviour may often change year on year. Limitations in information on the sensitivity and distribution of seabed habitats is recognised as a strategic evidence need. Work is underway to collate and collect survey data and refine predictive modelling, and aims to improve information in the East marine plan areas to underpin analysis, eg to identify sensitive or important locations, contributing to informed decision-making.

211. In addition to the data layers currently being used by the Marine Management Organisation at an East marine plan area scale, it is important to highlight that specific project-level information may be required to provide more up-to-date evidence or further detail at a more local level, such as that being collected by developers as part of the Round 3 Zone Appraisal and Planning (see also section 3.9 on offshore wind energy).

Signposting to existing policies and measures

212. Marine planning can help to deliver biodiversity objectives by complementing a number of existing policies and measures. Existing requirements that may not be widely known or understood,[102] are listed below by way of signposting. It should be noted that there is a specific descriptor for 'maintaining biological diversity' in defining Good Environmental Status under the Marine Strategy Framework Directive; the targets and indicators for this descriptor in the United Kingdom include birds, marine mammals, fish, sediment, rock and biogenic reef and pelagic habitats.[103] Public authorities and other interested parties should ensure that they consider the following:

a. Many wildlife species receive statutory protection under a range of legislative provisions wherever they occur in the marine plan areas including beyond designated sites.[104] Species and habitats with statutory protection should be protected from the adverse effects of development in accordance with applicable legislation. Estuaries within the inshore marine area are critical for migratory fish species of conservation importance, such as Atlantic salmon, sea trout, eel, sea lamprey and river lamprey. These migratory fish need high quality habitats in order to complete their lifecycles. The Eel Regulations, for example, which protect eel migration, are relevant as the East marine plan areas may include the first barrier to natural elver movements.

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[102] Marine Policy Statement 2.6.1.6

[103] Marine Strategy Framework Directive consultation: United Kingdom Initial Assessment and Proposals for Good Environmental Status. Mar 2012

[104] Such as the Salmon and Freshwater Fisheries Act 1975 (as amended), and the Eels (England and Wales) Regulations 2009.

b. Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in the United Kingdom, requiring conservation action, or are subject to recommended conservation actions by an appropriate international organisation. The Natural Environment and Rural Communities Act (S41), requires the Secretary of State to publish a list of habitats and species of principal importance for the conservation of biodiversity in England.[105] The S41 list is used to guide decision-makers in implementing their duty under the Natural Environment and Rural Communities Act (S40), to have regard to the conservation of biodiversity in England when carrying out their functions. Public authorities will also use the S41 list to identify which habitats and species should be afforded priority when applying the requirements of the National Planning Policy Framework (S11) to create, protect, enhance and manage networks of biodiversity. In addition, the Marine Policy Statement states that the: 'marine plan authority should ensure that development does not result in a significant adverse effect on the conservation of habitats or the populations of species of conservation concern' (Marine Policy Statement 2.6.1.6).

c. Different groups including fish (commercial and non-commercial), macro-invertebrates, macrophytes and angiosperms are important indicators used to determine Good Environmental Status under the Water Framework Directive. Specific indicators and targets for particular water bodies can be found through River Basin Plans.[106]

Plan policies

Policy BIO1

Appropriate weight should be attached to biodiversity, reflecting the need to protect biodiversity as a whole, taking account of the best available evidence including on habitats and species that are protected or of conservation concern in the East marine plans and adjacent areas (marine, terrestrial).

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

[105] The S41 list includes 56 habitats and 943 species of principle importance. These are the habitats and species in England which were identified as requiring action in the United Kingdom Biodiversity Action Plan, and which continue to be regarded as conservation priorities under the United Kingdom Post-2010 Biodiversity Framework. The list can be accessed at: www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx. A list of threatened and declining species has also been identified for the North East Atlantic under the Oslo/Paris Convention for the Protection of the Marine Environment of the North-East Atlantic Commission www.ospar.org

[106] See figure 11: Selected statutory and non-statutory management plans

Justification/Explanation

213. 'Appropriate' should be judged by reference to the Marine Policy Statement, existing requirements (see, for example, 'signposting' above) and information provided in the East marine plans.

214. The Marine Policy Statement and the Marine Strategy Framework Directive both highlight the importance of conserving wider biodiversity. In the United Kingdom this has principally been done through the designation of sites of special scientific interest, special protection areas, special areas of conservation and Marine Conservation Zones and specific legislation protecting important species, eg cetaceans in the Wildlife and Countryside Act. However, it is also important to ensure that biodiversity in United Kingdom waters is maintained beyond these designated sites, and this is currently done through relevant licensing legislation (eg Marine and Coastal Access Act, Planning Act, Petroleum Act, Electricity Act) and related Environmental Impact Assessment regulations. The Marine Policy Statement (2.6.1.3) requires that as a general principle, development should aim to avoid harm to biodiversity including through location, mitigation and consideration of reasonable alternatives. Where significant harm cannot be avoided, then appropriate compensatory measures should be sought. Decision-makers should apply precaution within an overall risk-based approach,[107] in accordance with the sustainable development policies of the United Kingdom Administrations, ensuring that appropriate weight is attached to, amongst other things, protected species and habitats and other species and habitats of principal importance for the conservation of biodiversity.[108] In applying the policy, consideration should be given to the importance of biodiversity in the functioning of healthy, resilient and adaptable ecosystems (for example to the effects of climate change), and the provision of ecosystem services such as flood protection and water filtration.

215. It is essential to identify relevant habitats and species in the East marine plan areas and, where possible, the location of such interests and of sites important for biodiversity, including beyond Marine Protected Areas. The plan policy is made locally and spatially specific, by reference to figures 5 – 8 which show the location or distribution of broadscale habitats, and of some of the habitats and species that are protected or of conservation concern, based on best available evidence. Figures are provided where the evidence is considered adequate, or where it is limited, and it is useful to highlight the available evidence in conjunction with a clear indication of uncertainties as set out in the supporting text (in the Annex). When applying BIO1, consideration should be given to wider biodiversity interests, such as broadscale habitats[109] and areas of ecological importance (for example essential foraging grounds or migratory routes) to highly mobile species such as fish, sea birds and marine mammals

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[107] See paragraph 495-499

[108] Marine Policy Statement 2.6.1.5

[109] The best available broadscale habitat map is provided in Marine Management Organisation, 2012, Recommendations on the use of habitat maps in the planning process and requirements for future planning areas (Marine Management Organisation 1014), accessible at www.marinemanagement.org.uk/evidence/documents/1014.pdf.

(see Objective 7 signposting, paragraph 208). Where new evidence emerges that improves or changes the evidence provided here, this must be taken account of in applying the policy. Applicants, as well as other users of the marine plan areas, should consider this evidence, together with any other evidence gathered (eg any proposal specific environmental assessments), in determining potential impacts from their activity on biodiversity interests and vice-versa.

216. This plan policy is intended to ensure that all current publically available evidence relating to biodiversity interest in the East marine plan areas is taken account of by the relevant public authority in the appropriate manner with advice from the Statutory Nature Conservation Bodies. It is important to note that the absence of evidence does not equate to the absence of features that are sensitive or of conservation concern; additional proposal specific evidence may be required. BIO1 also helps to ensure that commitments within the current legislative regime to biodiversity beyond designated sites are clearly understood by stakeholders. It provides signposting to what is currently considered to be the best available evidence on biodiversity interests in the East marine plan areas.

Policy BIO2

Where appropriate, proposals for development should incorporate features that enhance biodiversity and geological interests.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

217. This policy adds value to existing policy by providing a clear direction to public authorities that they should show a preference for proposals that enhance benefits to marine ecology, biodiversity and geological conservation. Such benefits may include the enhancement of resilience of ecosystems (for example to the effects of climate change), and the provision of ecosystem services such as flood protection and water filtration. It is possible that offsetting could have a role to play in some circumstances in the marine environment (ie beyond mean low water mark). However at present government do not intend to include the marine environment within their general proposals for an offsetting regime at this stage. This is because there is currently much less understanding or experience of applying offsetting measures to the different circumstances of the marine environment. The impacts of marine development will continue to be considered on a case-by-case basis in accordance with existing guidance and legislation. Offsetting could apply in coastal zones, with suitable recognition of their particular circumstances. A green paper regarding biodiversity offsetting is under review.

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Figure 5: Broadscale habitats

February 2014

INDICATIVE MAP- This is an indicative map in support of policy BIO1. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.

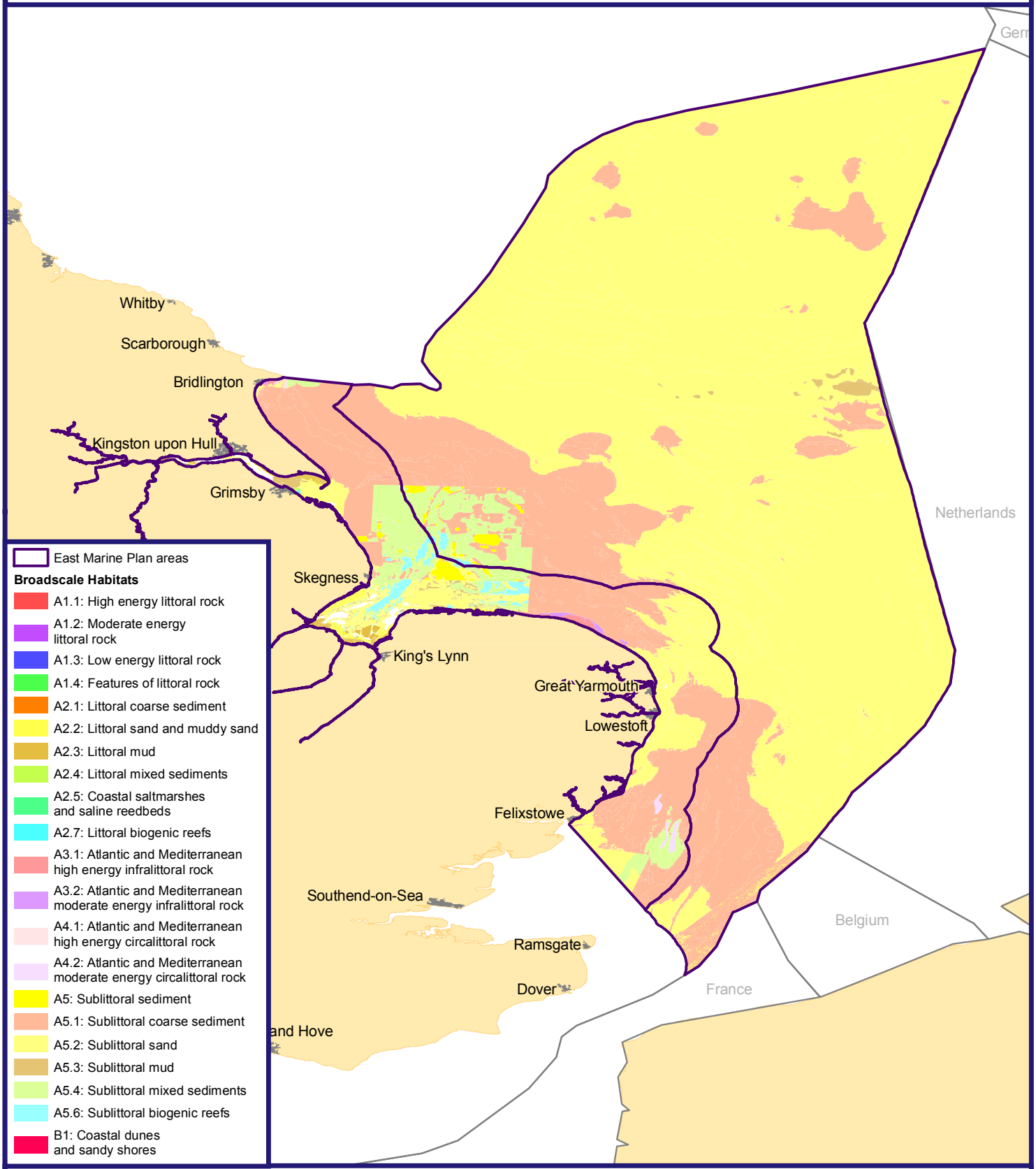

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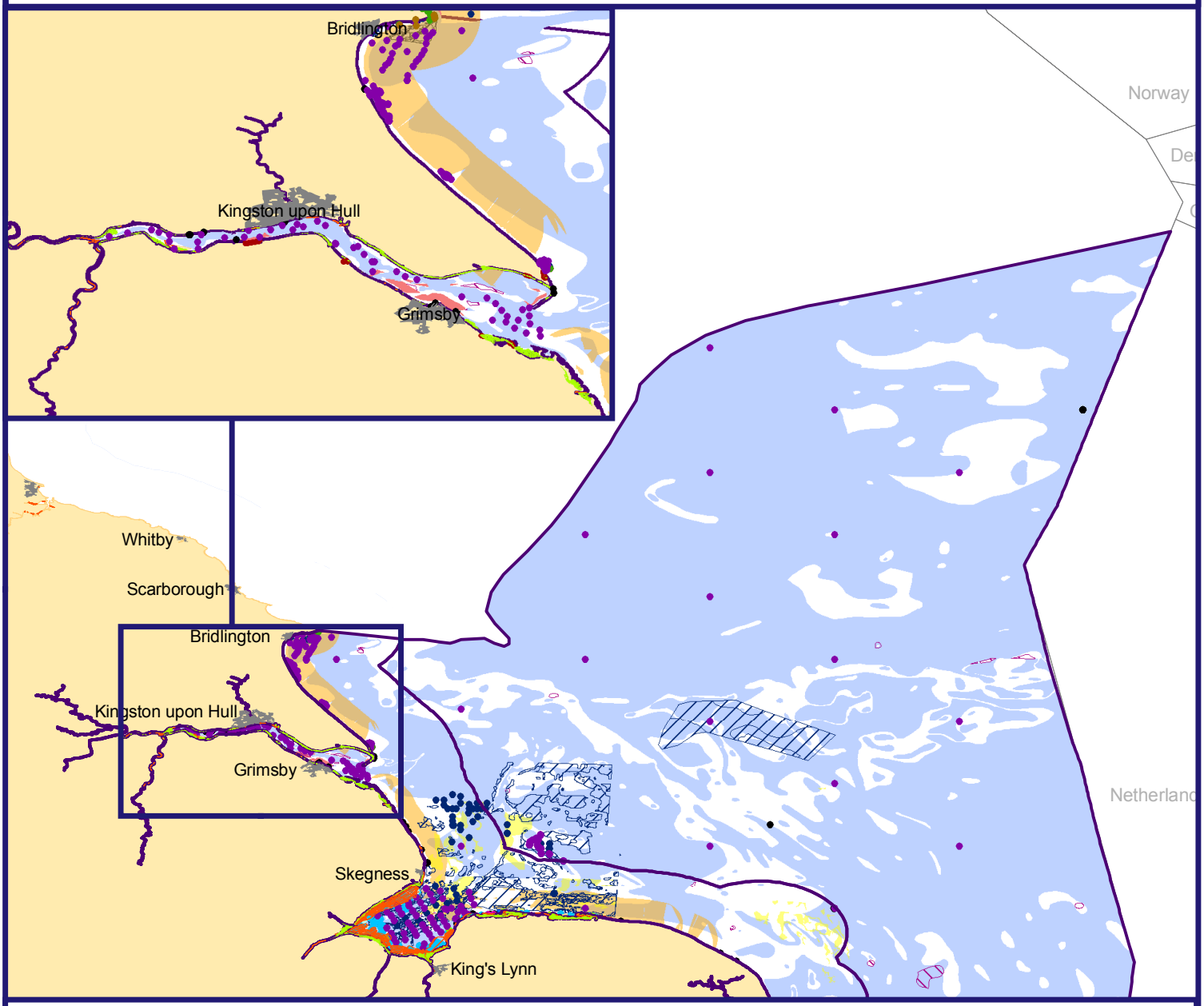
Figure 6a: Habitats of conservation importance

February 2014

INDICATIVE MAP- This is an indicative map in support of policy BIO1. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.



- East Marine Plan areas
- Subtidal sand and gravels
- Subtidal chalk
- Sheltered muddy gravels
- Seagrass beds
- Sabellaria spinulosa
- Peat & clay exposures possible
- Peat & clay exposures
- Intertidal mytilus edulis beds
- Intertidal mudflats
- Estuarine rocky habitats
- Coastal saltmarsh
- Blue mussel beds

Habitats based on surveys

- Peat bed exposures
- Coastal saltmarsh
- Intertidal mudflats
- Subtidal sand and gravels
- Estuarine rocky habitats
- Seagrass beds
- Saline lagoons
- Blue mussel beds
- Peat & clay exposures
- Sabellaria spinulosa

Modelled Habitats

- Subtidal mixed muddy sediment
- Sheltered muddy gravels
- Subtidal chalk
- Subtidal sand and gravels

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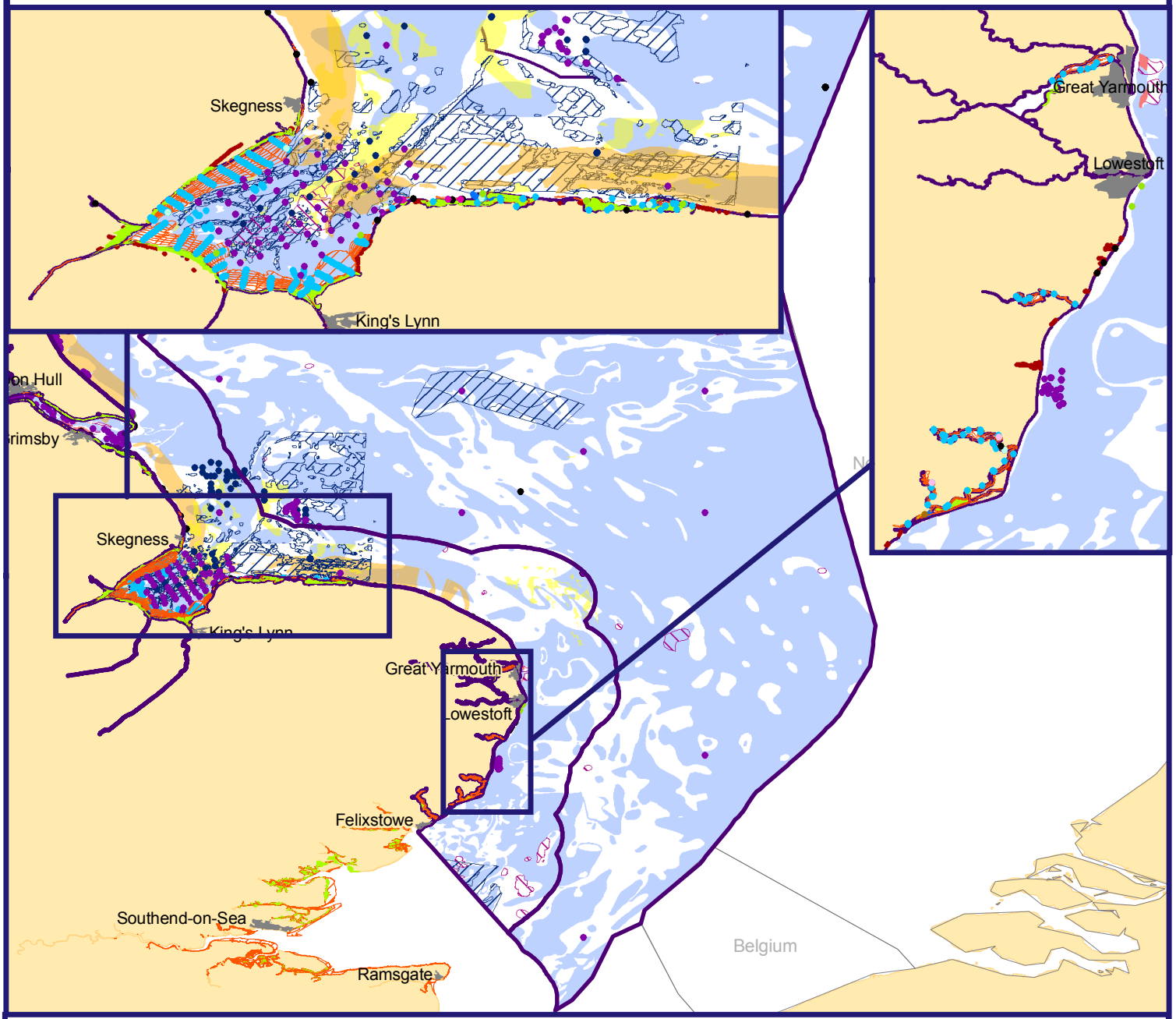
Figure 6b: Habitats of conservation importance

February 2014

INDICATIVE MAP- This is an indicative map in support of policy BIO1. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.



- East Marine Plan areas
- Subtidal sand and gravels
- Subtidal chalk
- Sheltered muddy gravels
- Seagrass beds
- Sabellaria spinulosa
- Peat & clay exposures
- Peat & clay exposures possible
- Intertidal mytilus edulis beds
- Intertidal mudflats
- Estuarine rocky habitats
- Coastal saltmarsh
- Blue mussel beds

Habitats based on surveys

- Peat bed exposures
- Coastal saltmarsh
- Intertidal mudflats
- Subtidal sand and gravels
- Estuarine rocky habitats
- Seagrass beds
- Saline lagoons
- Blue mussel beds
- Peat & clay exposures
- Sabellaria spinulosa

Modelled Habitats

- Subtidal mixed muddy sediment
- Sheltered muddy gravels
- Subtidal chalk
- Subtidal sand and gravels

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Figure 7: Species (of low or limited mobility) of conservation importance

February 2014

INDICATIVE MAP- This is an indicative map in support of policy BIO1. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.

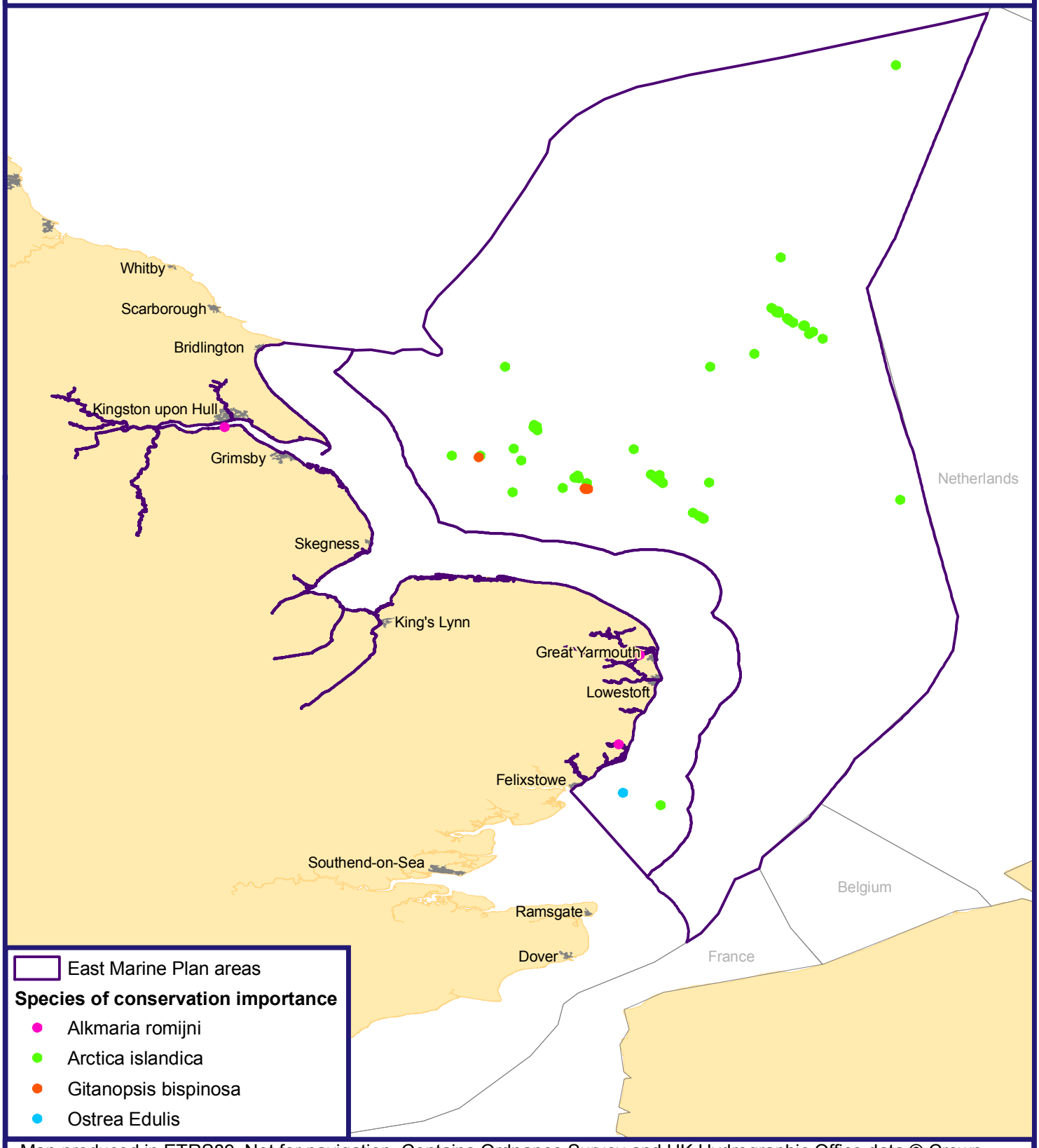

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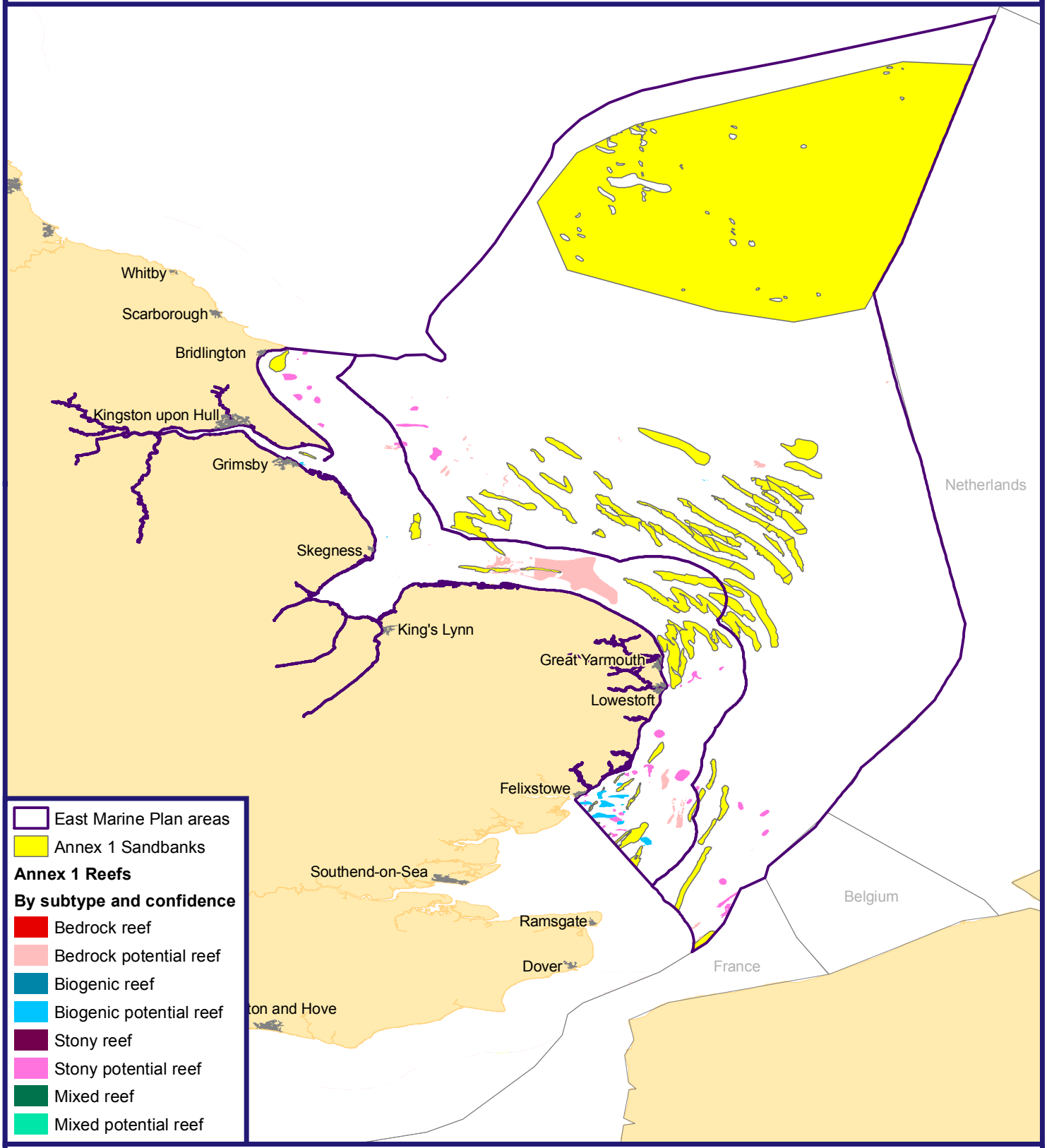
Figure 8: Habitats directive, annex 1 habitats

February 2014

INDICATIVE MAP- This is an indicative map in support of policy BIO1. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.



218. The plan policy reflects the aspiration set out in the Marine Policy Statement and the fact that such opportunities 'should be maximised'.[110] 'Where appropriate' includes where it is reasonable to expect such features to be included that are consistent with or do not compromise (whether to do with technical constraints, cost or other reasons) the primary purpose for which the development is proposed. Identifying positive impacts of a proposal does not negate the need to assess negative impacts in line with whatever legislation or assessment requirements apply. Enhancement is not a substitute for avoidance, protection or mitigation measures.

219. In encouraging relevant design, public authorities may provide guidance on good practice in design that incorporates relevant features. To do so should involve working with industry and the Statutory Nature Conservation Bodies (including supporting monitoring to assess the predicted benefits).

Objective 8

To support the objectives of Marine Protected Areas (and other designated sites around the coast that overlap, or are adjacent to the East marine plan areas), individually and as part of an ecologically coherent network.

Context

220. United Kingdom Administrations are committed to completing an ecologically coherent network of Marine Protected Areas[111] in the North East Atlantic as part of a broad-based approach to nature conservation. This will include Sites of Special Scientific Interest , Special Protection Areas, Special Areas of Conservation, Ramsar sites and Marine Conservation Zones, and will contribute to a wider European Marine Protected Area network under the Oslo/Paris Convention for the Protection of the Marine Environment of the North-East Atlantic. The East marine plan areas are particularly significant for Marine Protected Areas , with 39% made up of either existing or proposed Special Areas of Conservation or Special Protection Areas (or both) and with 78% of all English Special Areas of Conservation and 42% of all English Special Protection Areas located here[112] (see figure 9). There are also many other sites designated for conservation that either overlap or are adjacent to the East marine plan areas; these are also included under Objective 8. Contributing to coherent and representative networks is a key measure towards achieving Good Environmental Status as required by the Marine Strategy Framework Directive (article 13(4)).

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[110] Marine Policy Statement 2.6.1.4: "Development proposals may provide, where appropriate, opportunities for building-in beneficial features for marine ecology, biodiversity and geodiversity as part of good design... When developing Marine Plans, marine plan authorities should maximise the opportunities for integrating policy outcomes"

[111] Marine Policy Statement 3.1.2

[112] These figures were calculated by the Marine Management Organisation in 2013 using GIS analysis of features contained within the boundary of the plan area.

221. The management measures for a number of proposed sites are still to be defined. The establishment of new Marine Protected Areas (including new Marine Conservation Zones), or changes to management measures for existing sites could have implications for activities across the East marine plan areas (including potential for displacement which may increase as a result of other major changes such as the growth in offshore wind farms). Co-existence will be supported by the Marine Management Organisation where such activity or development is compatible with the conservation objectives for the site features and does not impact on site integrity (see policy GOV2).

222. Protection of sites is provided for by existing statutory measures, including site-specific objectives and management plans, delivered by competent and relevant authorities. Protection of areas outside of sites is also provided by existing measures such as Strategic Environmental Assessments and Environmental Impact Assessments which require applicants to consider environmental features beyond designated sites. Marine planning supports and complements such measures particularly through providing a framework and context for site-based measures such as to:

- help ensure links are made between licensing processes/decision-making in the East marine plan areas that would affect designated sites contiguous with or adjacent to the marine plan areas (both on land, in adjoining marine plan areas and adjoining areas outside of English waters)
- highlight the relevance of areas outside of designated sites to the delivery of conservation objectives for sites individually and as part of a network
- encourage decision-makers to consider cumulative effects arising within and outside of designated sites (and within and outside of English waters) on both individual sites and an ecologically coherent network (see policy ECO1)

223. In relation to the future designation of a Marine Protected Area or bringing forward a management measure, note that these can be considered ‘proposals’ (see paragraph 88). Whether the decision on such proposals is under sections 58(1) or 58(3) of the Marine and Coastal Access Act , there will be other factors that determine the decision and which may well carry greater weight than the plan policies. For example, the designation and management of European marine sites must be undertaken in accordance with the relevant regulations which, amongst other things, prescribe the degree to which socio-economic considerations can or cannot be taken into account. The decision to designate a Marine Conservation Zone will first and foremost take account of the requirements of the Marine and Coastal Access Act for such sites and any associated policy and guidance, including the reasons for protecting a particular feature.

224. The decision to put in place management measures will clearly be driven by the state of the feature for which a site is designated in relation to its conservation objective. What the marine plan policies do is to ensure that, in deciding to designate or put in place a management measure, the public authority makes an appropriate check of the effect on or interaction with other

interests in case that might inform or alter the decision. In that sense, the policies seek to embed a strategic and forward-looking approach, similar to that for designating Marine Conservation Zones which 'may have regard to any economic or social consequences'.

Signposting existing policies and measures

225. There are also a range of policies or measures already in place that are designed to address the issues outlined above. Due to the recent review of the implementation of the Birds and Habitats Directives, and significant work underway in developing a network of Marine Protected Areas , a number of measures merit highlighting, by way of signposting rather than being duplicated as specific plan policies. An ecologically coherent Marine Protected Area network is not yet complete and as new Marine Protected Areas are designated or proposed relevant maps in the marine plans will be updated to reflect this (see paragraph 102). Public authorities and applicants should ensure that they consider the following:

a) **Individual** Marine Protected Areas
On-going activities and new developments must continue to abide by legislation and policy that applies to different designated sites, consistent with the management measures set out for each site.[113] These include:

i) **Special Protection Areas and** Special Areas of Conservation **(including candidate** Special Areas of Conservation**, and Sites of Community Importance)**: Competent authorities[114] have a legal obligation to exercise their functions relevant to nature conservation in a manner so as to secure compliance with the Birds and Habitats Directives, as implemented through the Conservation of Habitats and Species Regulations 2010 and the Offshore Marine Conservation Regulations (Amendment) 2010. One specific requirement is that any plan or project (within or outside a site boundary) that is likely to have a significant effect on the site, alone or in combination with other plans or projects must undergo an appropriate assessment of its implications for the site's conservation objectives. The implementation of the directives has recently been reviewed and there are a number of relevant guidance documents which set out how this must be achieved. In addition to the assessment of plans and projects, there is an obligation to take appropriate steps to avoid deterioration to sites or significant disturbance of species. Conservation objectives and advice to managing authorities are issued by the Statutory Nature Conservation Bodies for Special Areas of Conservation and Special Protection Areas.[115]

ii) **Proposed Special Protection Areas/**Special Areas of Conservation: For the purposes of considering development proposals, competent authorities should

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[113] Marine Policy Statement 3.1

[114] Organisations with legally delegated powers from the United Kingdom government to perform a designated function.

[115] For links to Statutory Nature Conservation Bodies advice visit: http://www.marinemanagement.org.uk/protecting/index.htm

consider potential Special Protection Areas and possible Special Areas of Conservation in the same way as if they had already been designated.[116]

iii) **Future Special Protection Areas/**Special Areas of Conservation: There are also locations within the East marine plan areas that are currently being considered by Natural England and Joint Nature Conservation Committee as future Special Areas of Conservation/ Special Protection Areas. These include 'Areas of Search' and 'draft Special Areas of Conservation'. Applicants for authorisations are advised to consult with Statutory Nature Conservation Bodies s to ensure they are aware of these sites as areas in possible need of protection.

iv) **Marine Conservation Zones**: In November 2013[117] Department for the Environment, Food and Rural Affairs ministers designated the first tranche of 27 Marine Conservation Zones. None of these are in the East marine plan areas. As set out in sections 125 and 126 of the Marine and Coastal Access Act , public authorities have general and specific duties in relation to Marine Conservation Zones. For example, in assessing marine licence applications the Marine Management Organisation will be required to follow the procedure set out in Section 126 of the Act, which relates to the authorisation of any act that is capable of affecting (other than insignificantly) the protected features of a Marine Conservation Zone or any ecological or geomorphological process on which the conservation of any protected feature of a Marine Conservation Zone is (wholly or partly) dependant.[118]

Any interim bylaws implemented by the Marine Management Organisation to protect proposed Marine Conservation Zones will be available to view through its table of management measures.[119]

In November 2013 Department for the Environment, Food and Rural Affairs ministers also announced plans for designating two further Marine Conservation Zone tranches which with other Marine Protected Areas will aim to complete the English contribution to an ecologically coherent network. The number and location of sites will be dependent on the requirements of the network. In the East plan areas there are 10 recommended Marine

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[116]The following wildlife sites should be given the same protection as Special Areas of Conservation and Special Protection Areas: i) potential Special Protection Areas and possible Special Areas of Conservation; ii) listed or proposed Ramsar sites; and iii) sites identified, or required, as compensatory measures for adverse effects on European sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

[117] The intention is to designate two further tranches of Marine Conservation Zones over the next three years. These will combine with other protected areas to complete our contribution to an ecologically coherent network including the waters around our islands. The exact number and location of sites will depend on what is required to meet this. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/259856/mcz-site-specific-responses-20131121.pdf

[118] For further information on how the Marine Management Organisation will undertake Marine Conservation Zone assessments please see: http://www.marinemanagement.org.uk/licensing/documents/guidance/13.pdf

[119]Marine Management Organisation's Marine Protected Areas Strategic Management Table, http://www.marinemanagement.org.uk/protecting/conservation/documents/mpas_risk.pdf

Conservation Zones (see figure 9) which will be considered in future rounds of consultation. These sites will not be subject to the Marine Management Organisation's Marine Conservation Zone assessment process, until they are included in a formal consultation; however the evidence base associated with the Marine Conservation Zones will be relevant and material to any licensing decision made by the Marine Management Organisation. Moreover, any proposal will be subject to the licensing provisions of the Marine and Coastal Access Act (and other relevant legislation), including to assess any environmental impacts, which should take account of the enhanced evidence base associated with the recommended sites. In recognising the ongoing evidence gathering process, decisions should apply precaution by considering the level of uncertainty associated with the evidence, the risk associated with the proposal, and the likelihood of future designation.

b) **Areas outside** Marine Protected Areas **that are important to features for which an** Marine Protected Area **has been designated**

i) **Special Protection Areas/**Special Areas of Conservation: The Birds Directive requires public authorities and applicants to take the ecological needs of the species and habitats outside of Special Protection Areas into consideration, where proposals in such locations have a likely significant effect on species which are the reasons for their designation, (for example areas outside of Special Protection Areas that are important foraging grounds for birds as shown in figure 10). This also applies to locations that have a likely significant effect on protected species as a whole. The Habitats Directive requires that where it is deemed necessary, public authorities and applicants should consider features of the landscape (or locations) outside Special Areas of Conservation which are of major importance for flora and fauna within sites, (such as those which by virtue of their linear and continuous structure, or their function as stepping stones to and from the site, are essential for the migration, dispersal and genetic exchange of wild species) so as to improve ecological coherence.[120] Favourable conditions may only be achieved where the specific structure and functions necessary for a habitat's long-term maintenance exist.

ii) **Marine Conservation Zones**: The Marine and Coastal Access Act (S 125 (4b)) also reinforces this in relation to Marine Conservation Zones, highlighting the need to protect 'any ecological or geomorphological process on which the conservation of any protected feature of an Marine Conservation Zone is (wholly or in part) dependant'.

Plan policies specific to the marine protected area network

226. Whilst it is considered sufficient to signpost existing measures for individual sites, including where they apply outside of a site, it is essential to draw attention to the importance of considering the integrity of the wider Marine Protected Area network in the plan policies.

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[120] Article 10
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:1992:206:0007:0050:EN:PDF

Policy MPA1

Any impacts on the overall Marine Protected Area network must be taken account of in strategic level measures and assessments, with due regard given to any current agreed advice[121] on an ecologically coherent network.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

227. The Marine and Coastal Access Act (S 117) sets out the United Kingdom Administrations' commitment to designate Marine Conservation Zones alongside other 'relevant conservation sites' in order to form a network of Marine Protected Areas in the United Kingdom marine area. The Marine Policy Statement (3.1.2) furthers this through a commitment to 'substantially complete an ecologically coherent network as part of a broad based approach to nature conservation', while the National Planning Policy Framework also refers to the need to establish 'coherent ecological networks that are more resilient to current and future pressures'. The East marine plan areas will make a significant contribution to the United Kingdom Marine Protected Area network, through the substantial number of existing and proposed Marine Protected Areas located here. The importance of the areas for future marine development, in addition to current activities, may present risks to implementing a coherent network, eg from potential cumulative effects. Delivering both a network of Marine Protected Areas and additional new development is therefore a significant challenge in the East marine plan areas which can be met if it is given appropriate attention.

228. The Department for the Environment, Food and Rural Affairs is working with the Joint Nature Conservation Committee and Natural England to develop the English contribution to the ecologically coherent network, but statutory guidance on considering a network in decision-making is yet to be agreed by government. In the meantime, the characteristics of a 'network' have been set out in the Marine Conservation Zone consultation document.[122] It highlights the need to consider wider network coherence in addition to considering the objectives of individual sites. This is based on principles agreed by the United Kingdom and others through the Oslo/Paris Convention for the Protection of the Marine Environment of the North-East Atlantic[123] which covers the five

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[121] As agreed by government.

[122] http://www.defra.gov.uk/consult/files/mcz-condoc-121213.pdf

[123] Oslo/Paris Convention for the Protection of the Marine Environment of the North-East Atlantic, 2006, Guidance on developing an ecologically coherent network of the Oslo/Paris Convention for the Protection of the Marine Environment of the North-East Atlantic marine protected areas. (Reference number 2006-03)

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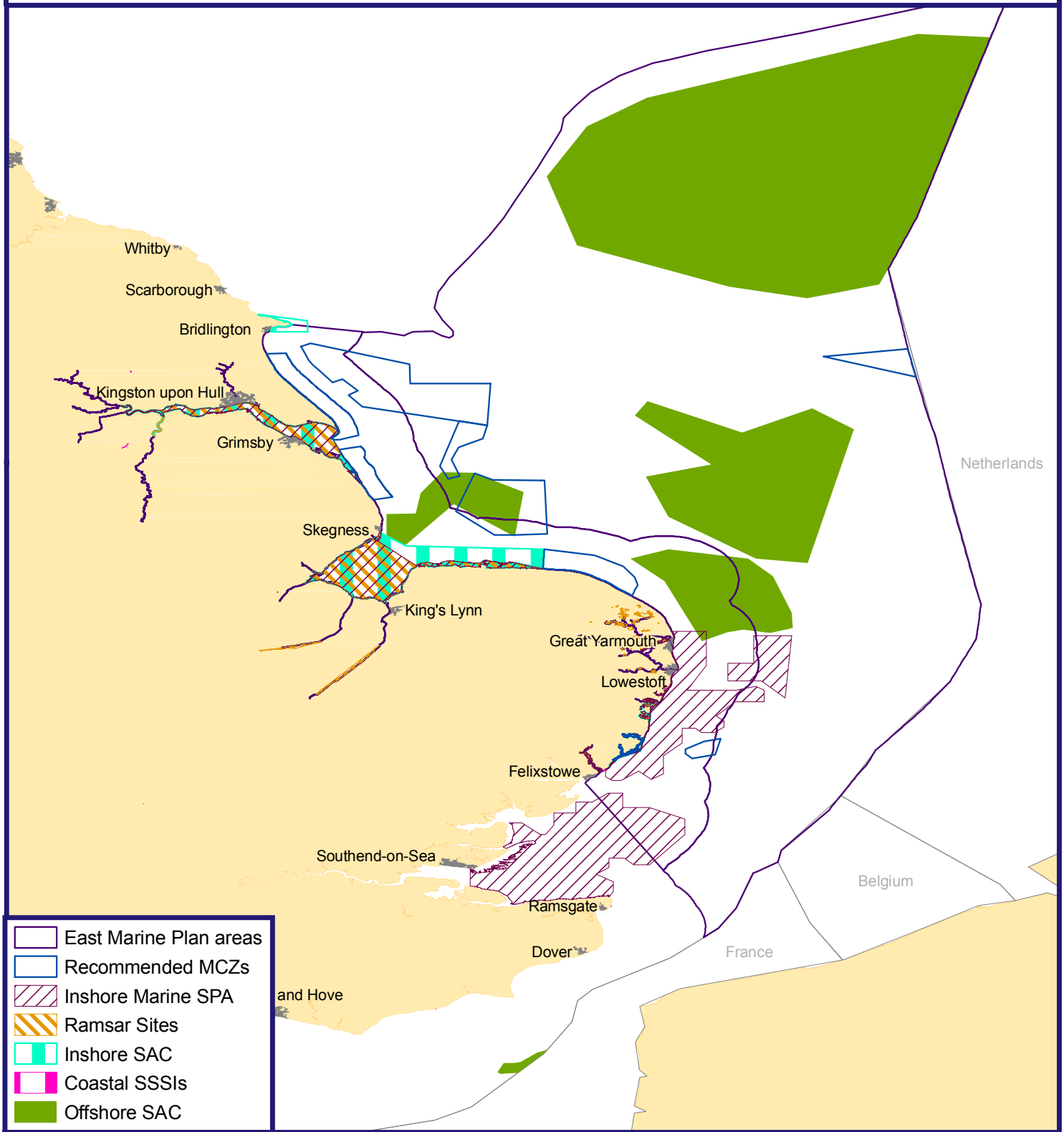
Figure 9: Marine protected areas including recommended Marine Conservation Zones (MPA1)

February 2014

POLICY MAP- MPA1 applies across the whole of the East Inshore and Offshore marine plan areas. This data may be reviewed as necessary during the life of the Marine Plans. The reader should check for any updates via the link provided in paragraph 102.

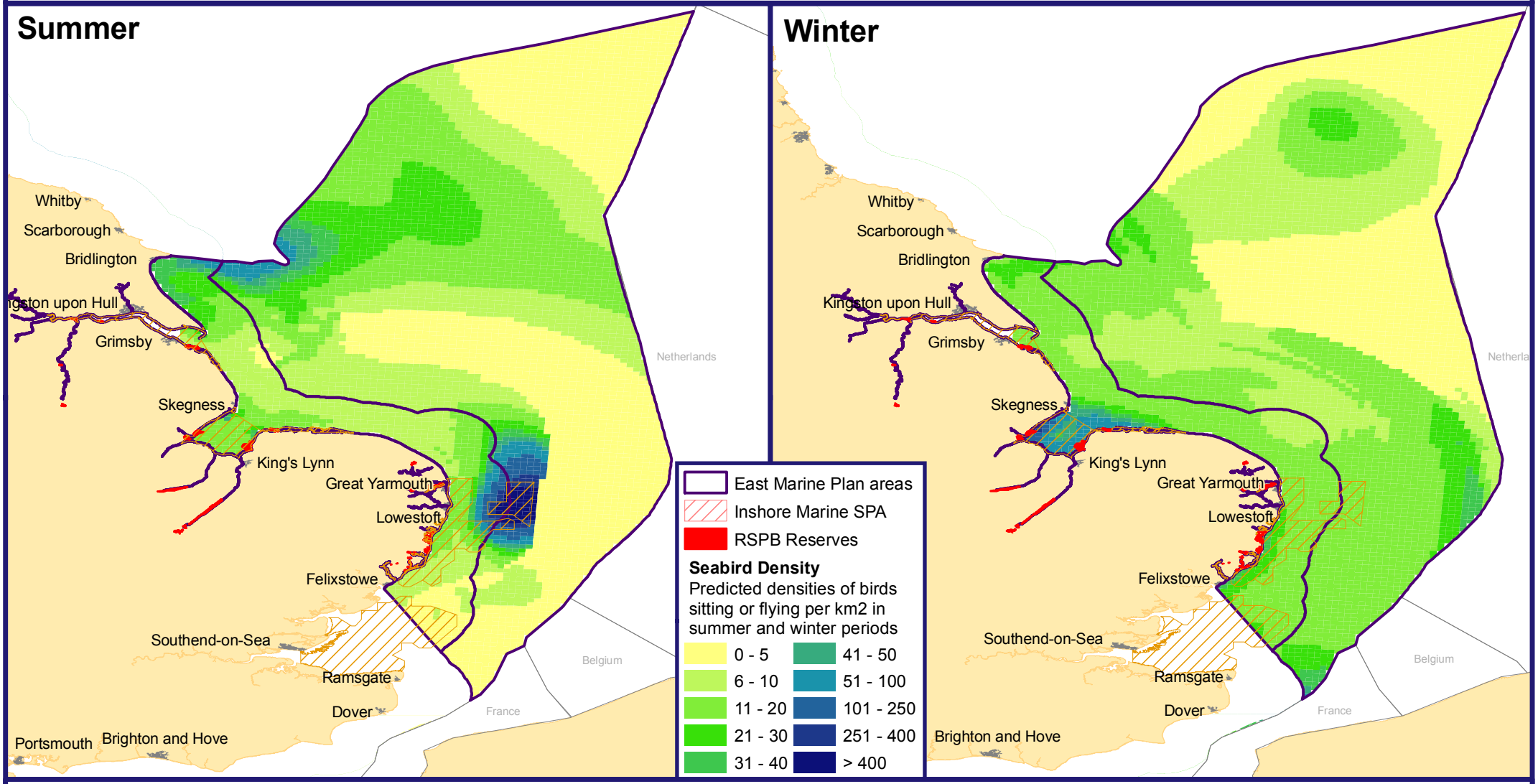


HM Government

Figure 10: Seabird foraging ranges

February 2014

INDICATIVE MAP- This is an indicative map in support of policy MPA1. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.



principles of a coherent network, for example connectivity and replication. In light of this, while figure 9 shows the locations of individual sites within the Marine Protected Area network, in order to consider ecological coherence, MPA1 should be applied throughout the whole of the East Inshore and East Offshore Marine Plan Areas.

229. Plan policy MPA1 adds value to existing policy by clarifying the need for public authorities to not only consider impacts on individual sites, but also impacts on the overall ecological coherence of the Marine Protected Area network. It supports the practical application of legislation in the East marine plan areas by highlighting the need to refer to the most current government guidance as to 'how' to take account of a network. This policy also indicates that this should be done at a strategic level rather than at a project level which is more relevant to individual Marine Protected Areas, and is addressed through assessments such as Environmental Impact Assessments. For example it would be anticipated that factors to be taken into account will be considered in regional environmental assessments, Strategic Environmental Assessments or in assessments and measures brought forward in support of the Marine Strategy Framework Directive. Defining the characteristics of a network at the United Kingdom-level is still in an early stage, but as understanding improves, future marine plans will make reference to any guidance from Department for the Environment, Food and Rural Affairs. This may support the development of more prescriptive policy if the evidence is available. It will be the responsibility of public authorities to keep informed of the latest government guidance on how to consider a network and how this may evolve over time.

3.5 Climate Change

Objective 9

To facilitate action on climate change adaptation and mitigation in the East marine plan areas.

Context

230. The East marine plan areas have a role to play in realising national ambitions with regard to climate change. Mitigation could include, for example, permitting offshore low-carbon energy infrastructure. Adaptation involves modifying infrastructure to better deal with climate change conditions and helping people to determine how to adjust their behaviour/decisions to enable them to adapt to the challenges of a changing climate. The approach taken in these marine plans to support transition to a low carbon future incorporates both specific and general measures, informed by the National Planning Policy Framework[124] as well as the Marine Policy Statement (2.6.7).

[124] In particular the core planning principles set out in section 17, and the key role of planning in meeting the challenges of climate change mitigations and adaptation as set out in section 93

231. The East of England has a rapidly changing coastline, acknowledged in the Marine Policy Statement (2.6.7.1 to 2.6.7.3). The East Inshore and East Offshore Marine Plan Areas are also particularly important in mitigating climate change through a range of measures and activities, eg in achieving United Kingdom renewable energy production and greenhouse gas reduction targets. Over the next 20 years, the most transformational activity in the marine plan areas is likely to be renewable energy generation, specifically offshore wind farms with further potential to generate wave and tidal energy (see relevant sectoral sections of the plan for further context). The plan areas will also be important for mitigation strategies such as Carbon Capture and Storage due to the high availability of potential storage sites (see section 3.10 of the plan for further detail and policy related to Carbon Capture and Storage). The East marine plan areas are also strategically important for ports and shipping and these activities support modal shifts to waterborne freight that can contribute to carbon reduction, particularly with the direction set by recent International Maritime Organization measures,[125] (see section 3.11 of the plan for further context on policy related to ports and shipping). As illustrated, there are numerous parts of the marine plans that are related to climate change, and decision-makers should therefore be aware that decisions on proposals based on a given policy, may result in achieving multiple marine plan objectives, eg meeting specific policy requirements for contributing sectors will support delivery of objective 9.

232. Marine planning can make a contribution to climate change mitigation and adaptation in line with United Kingdom national policies and moves towards a low carbon economy via specific marine plan policies such as EC3, and the WIND, TIDE and CCS policies. The United Kingdom government has committed to the European Union Renewable Energy Directive, which obligates the United Kingdom to generate 15% of all its energy requirements from renewable sources by 2020. This target will contribute to the reduction of the United Kingdom's carbon budget in line with the Climate Change Act. The Climate Change Act requires public bodies and statutory undertakers to report on the steps that they are taking to respond to climate change. The Marine Management Organisation has voluntarily identified the need to produce a climate change adaptation report, known as an Adaptation Reporting Power report. Although marine planning itself will not be directly affected by climate change, the content of marine plans may be, as consideration is given to climate change effects such as sea level rise and surge, flooding, and coastal erosion on marine developments and other activities.[126] Objective 9 seeks to encourage all users of the marine plan areas to incorporate relevant climate change considerations into their practices.

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[125] Including Ship Energy Efficiency Management Plans that establish a mechanism for a company and/or a ship to improve the energy efficiency of a ship's operation, and Energy Efficiency Design Index for new ships aimed at promoting the use of more energy efficient equipment and engines (http://www.imo.org/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Technical-and-Operational-Measures.aspx)

[126] Townhill, B.L., Buckley, P.J., Pinnegar, J.K. (2013), Marine Management Organisation Climate Change Adaptation Reporting. Feeder Report. Centre for Environment, Fisheries and Agricultural Science contract report C5830.

233. Responding to the United Kingdom Climate Change Risk Assessment, which analysed the potential effects of climate change and the risks and opportunities for the United Kingdom, the National Adaptation Programme for England contains a mix of policies and actions to achieve a vision of society which makes timely, far-sighted and well-informed decisions to address the risks and opportunities posed by a changing climate. The National Adaptation Programme looks across a range of sectors including a number that are described in the Marine Policy Statement such as transport and energy. The following marine plan policies should contribute to a number of the delivery mechanisms within the National Adaptation Programme, including use of green infrastructure.

234. Decisions made in line with policies CC1 and CC2 should accord with the better regulation principles and lead to action that is proportionate, consistent and targeted, delivered through a transparent and accountable process. A proportionate level of strategic and detailed assessment should be considered in decision-making determined by the complexity, scale and sensitivity of the project or activity. Proportionality in the case of these policies should consider the lifetime of projects, for example whether a proposal has short-term one-off climate change considerations or whether implications will be longer term.

Existing coastal change management

235. It is important to recognise that the effects of climate change will be felt at the coast in the context of ongoing coastal change management work. The approaches to coastal change and process management already in place, particularly related to coastal adaptation, will continue to be built on as the impacts of climate change are better understood. These measures are described in further detail in the Governance section of this plan (section 3.6).

Plan Policies

Policy CC1

Proposals should take account of:

- how they may be impacted upon by, and respond to, climate change over their lifetime and
- how they may impact upon any climate change adaptation measures elsewhere during their lifetime

Where detrimental impacts on climate change adaptation measures are identified, evidence should be provided as to how the proposal will reduce such impacts.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas.
In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

236. This policy gives effect to the Marine Policy Statement high level principles for decision-making related to the need to account for the potential impacts of climate change adaptation.[127] Additional considerations are the need to take into account other relevant projects, programmes and plans,[128] and of other relevant matters (including those outlined in the Marine Policy Statement 2.6.8.6) . It is consistent with, and adds marine planning context to, the National Planning Policy Framework (S 99) in seeking that new development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. The combination of a low lying topography, isostatic change, a rise in sea levels and the possibility of an increase in tidal surges in the North Sea are particularly significant for the East of England. The policy will be implemented by public authorities responsible for authorising developments or management measures in the marine plan areas. CC1 should be applied in light of paragraph 236 on proportionality.

237. The Marine Policy Statement (2.6.7.5) sets out that decision-makers and proposers of marine and coastal developments should take account of climate change projections[129] and ensure that the design and operation of a given marine activity and/or proposed management measure (such as a marine protected area designation) are 'adaptation-proofed' as much as is possible to increase their resilience to the effects of climate change such as coastal change and flooding. There are a number of sources of advice available, including the Climate Change Risk Assessment, United Kingdom Climate Projections (UKCP09) and Marine Climate Change Impact Partnership reports.

238. It is useful to promote an approach to better understand the implications of and impacts upon projects of climate change over the proposed lifetime of a licensable marine activity or management measure. Consideration of implications may include examining climate change adaptation measures in places adjacent to the marine plan area as well as those wholly or partly within it.

239. Management of coastal change, particularly erosion and flood risk management, is the responsibility of the Environment Agency, Lead Local Flood Authorities and others through Shoreline Management Plans; Estuary Management Plans, local plans (including Local Flood Risk Management Strategies where adopted) and beach management plans. Consultation with these authorities on matters identified in policy CC1 should be carried out at the earliest opportunity, particularly in relation to considering how proposals can help deliver existing coastal adaptation policies.[130] Marine planning

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[127] Marine Policy Statement 2.3.2.2, bullet 9

[128] Marine Policy Statement 2.3.2.2, bullet 4

[129] Climate change projections can be found in United Kingdom Climate Projections (UKCP09) with Strategic Flood Risk Assessments produced by planning authorities providing further detail with regards to flooding in relation to climate change (Environment Agency (2013), Strategic Flood Risk Assessments - Guidance to support the National Planning Policy Framework).

[130] Authorities may advise on the involvement of other parties including Statutory Nature Conservation Bodies in relation to Marine Protected Areas .

supports climate change adaptation measures put in place by public authorities adjoining the marine plan areas.

240. Management of ecosystems can contribute as part of climate change adaptation measures too, eg through maintenance or enhancement of habitats such as saltmarsh, that provide ecosystem services such as natural coastal protection. Where detrimental impacts on the provision of such services are identified, evidence should be provided as to how the proposal will reduce such impacts. The resilience of ecosystems to the effects of climate change is given further consideration under objective 7.

Policy CC2

Proposals for development should minimise emissions of greenhouse gases as far as is appropriate. Mitigation measures will also be encouraged where emissions remain following minimising steps. Consideration[131] should also be given to emissions from other activities or users affected by the proposal[132].

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

241. This policy gives effect to the Marine Policy Statement high level principles for decision-making related to the need to consider the potential impacts of climate change mitigation[133] in the context of taking into account other relevant projects, programmes and plans,[134] and of other relevant considerations (including those contained in the Marine Policy Statement 2.6.8.6). It is consistent with, and adds marine planning context to, the National Planning Policy Framework (S 95) which says that 'to support the move to a low carbon future, local planning authorities should: plan for new development in locations and ways which reduce greenhouse gas emissions.' Responding to UN consensus on the need for action on climate change, the Climate Change Act commits the government to reduce greenhouse gas emissions. The government's United Kingdom Low Carbon Transition Plan sets out the United Kingdom's first ever comprehensive low carbon transition plan to 2020. The most recent carbon budget covering the period 2023 to 2027[135] makes the recommendation that greenhouse gas emissions are cut by 60% on 1990 levels by 2030. The policy will be implemented by the regulatory authorities

[131] In responding to this policy, it may be useful to refer to processes set out in related guidance such that issued by Department For Energy And Climate Change including "Guidance on carbon neutrality" (2009), which describes matters such as how to define the scope of emissions.

[132] For example, through displacement.

[133] Marine Policy Statement 2.3.2.2, bullet 9

[134] Marine Policy Statement 2.3.2.2, bullet 4

[135] Committee on Climate Change (2010), The Fourth Carbon Budget - Reducing emissions through the 2020s

responsible for authorising developments or management measures in the marine plan areas.

242. The approach taken by this policy to reducing emissions of greenhouse gases should account for the following in relation to the minimising and mitigating steps:

- emissions directly related to the activity proposed (including greenhouse gases directly associated with construction, operation and/or decommissioning where appropriate)
- emissions indirectly related to the activity proposed (for example, increased journey length for vessels arising from development)
- impact the activity may have on measures already in place as part of reducing greenhouse gas emissions (for example, carbon offsetting measures or incorporation of renewable energy generation)

243. Attention needs to be paid to the interaction between sectors, potentially in relation to unintended consequences on carbon emissions, such as greater travelling distances of vessels resulting in increased fuel consumption arising from placement of new marine infrastructure. This may apply offshore (eg Offshore Wind Farms) and inshore (eg to a change of land-based infrastructure). Such an approach is particularly important in the East marine plan areas where the overall volume and diversity of activity is set to increase.

244. While it is accepted that all activities will have aspects that can be related to climate change mitigation, in applying this policy, public authorities should focus on those projects that are subject to the requirements of the Environmental Impact Assessment Directive. Smaller-scale projects may have significant emissions considerations too, for example in relation to co-location of other activities; identification and need for assessment of such projects should be at the discretion of the decision-maker. Need for assessment should be based upon any estimation of possible impact provided. In any case, proposals assessed should demonstrate how impacts identified have been addressed.

3.6 Governance

Objective 10

To ensure integration with other plans, and in the regulation and management of key activities and issues, in the East marine plans, and adjacent areas.

Context

245. This objective aims to achieve integration of marine planning with other planning, regulation and management that affects the use of the marine area and its resources. It promotes co-operation between the land-based and marine planning systems to support sustainable development across the East marine plan areas and bordering areas.

246. The East Inshore and East Offshore Marine Plan Areas are becoming increasingly busy with more activities being undertaken there. As a result, co-existence (including co-location) and displacement are issues that have arisen frequently through discussions with stakeholders (see GOV2 and GOV3). There is a clear expectation in the Marine Policy Statement (2.2.1 and 2.3.15) to 'promote compatibility and reduce conflict' and to 'reduce real and potential conflict, maximise compatibility between marine activities and encourage co-existence of multiple uses.'

Signposting to existing policies and measures

Navigational safety

247. Two of the United Kingdom's busiest ports, and approximately 30% of the plan areas, are covered by shipping movement of more than 100 transits per year. Navigational safety is equally important beyond International Maritime Organization routes as well as port and harbour areas (which are addressed directly under plan policies PS1, PS3, and DD1 respectively) and has been particularly highlighted by stakeholders in the development of these marine plans. It is clear that there is a need for navigational operators,[136] those seeking to develop resources in the marine plan areas and shipping and leisure boat users to ensure that development and other activities are taken forward in such a way as to not hinder navigation. Indirect consequences for navigational safety, due to displacement of activities, are addressed under GOV3. The risk of release of pollutants as a result of collisions is addressed under ECO2.

248. Decision-makers should take into account and seek to minimise any negative impacts on shipping activity, freedom of navigation, and navigational safety and ensure that their decisions are in compliance with international maritime law.[137] Legislation and guidance of importance to maintaining safety at sea can be identified through the Maritime and Coastguard Agency. Consultations with local Harbour Authorities may usefully identify any further sub-national plans, policies and guidance that are in place to manage safety of navigation in their jurisdiction.

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[136] Maritime and Coastguard Agency, Department for Transport, Trinity House.

[137] Marine Policy Statement 3.4.7.

Coastal change management

249. Many locations in the East Inshore Maine Plan Area are at risk of coastal erosion and flooding.[138] Coastal flooding is considered one of the highest priority risks by the government[139] and inappropriate development in the East marine plan areas could increase the risk of flooding to homes and businesses. At the coast, infrastructure and coastal features are utilised and maintained appropriately, while recognising environmental and community needs, as part of managing this risk. Guiding these measures, the Environment Agency, alongside Lead Local Flood Authorities and other stakeholders, have produced a number of statutory and non-statutory management plans[140] that support England's Flood and Coastal Erosion Risk Management Strategy. These documents present a clear picture of the processes at work and the risks associated with them along the East coast. Effective Flood and Coastal Erosion Risk Management is essential for maintenance and growth of numerous marine sectors addressed in this plan, particularly those based at the coast.

250. Of particular interest on the coast are Shoreline Management Plans which are an assessment of the risks associated with coastal processes. Furthermore, Shoreline Management Plans provide high level policies that highlight the need to develop adaptation and social mitigation measures. The five Shoreline Management Plans for sections of coastline in the East inshore plan area can be viewed in figure 11. Within the SMP areas, four distinct management approaches are used (No Active Intervention; Hold the Line; Advance the Line; Managed Realignment), applied across three epochs: short (0-20 years); medium (20-50 years); long (50-100 years) term. The individual management units can be viewed on the marine planning portal.

251. During the preparation of an application for development, there is significant value in looking at these Shoreline Management Plans, and how these are reflected in the adjacent terrestrial plans, to ensure the activity does not increase the risk of coastal erosion or flooding.[141] If any impacts are identified, these documents can inform mitigation of impacts through changes to design or location, providing a basis for consultation with those stakeholders involved in agreeing suitable measures. Applicants should contact the Environment Agency and relevant local authorities to check what the risks are from coastal flooding and erosion in particular areas and what statutory or non-statutory plans are in place which will need to be taken into consideration. Compatibility and integration with Shoreline Management Plans, as well as Flood Risk Strategies[142] and Estuary Management Plans where they are adopted, is

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[138] Environment Agency Mapping, Risk of Flooding from Rivers and Sea (http://maps.environment-agency.gov.uk/wiyby/wiybyController?x=531500.0&y=181500.0&topic=floodmap&ep=map&scale=3&location=London,%20City%20of%20London&lang=_e&layerGroups=default&textonly=off)

[139] National Risk register of Civil Emergencies (2013). https://www.gov.uk/government/publications/national-risk-register-for-civil-emergencies-2013-edition

[140] Shoreline management plans and estuary management plans

[141] Marine Management Organisation (2013) Strategic Scoping Report http://www.marinemanagement.org.uk/marineplanning/key/ssr.htm

[142] Such as the Humber Flood Risk Management Strategy.

paramount to managing the risk of coastal erosion and flood risk. This approach is in keeping with the Marine Policy Statement (2.6.8.4 and 2.6.8.5) and the approach advocated within the National Planning Policy Framework (S 105) that promotes application of Integrated Coastal Zone Management.

252. This process benefits applicants in considering the impacts of their development on coastal flood management and erosion risk (and vice versa). It provides opportunities to incorporate solutions into proposals[143] at an early stage and avoids conflicting spatial use.

Cross border planning

253. The need for the Marine Management Organisation to co-ordinate its planning with countries with which the United Kingdom shares a land or sea boundary is identified within the Marine Policy Statement (1.2.3).[144] Certain international agreements also require co-ordination such as the Oslo/Paris Convention for the Protection of the Marine Environment of the North-East Atlantic (in regard to Marine Protected Areas),[145] the Environmental Impact Assessment directive and the Espoo Convention (including HM Government's associated Marine Works (Environmental Impact Assessment) Regulations). This requires Environmental Impact Assessments to be extended across borders when a planned activity may cause significant adverse transboundary impacts[146] alongside the Strategic Environmental Assessment Directive.[147] It is considered good practice to promote such co-operation in all decisions which may impact on bordering states. Furthermore, public authorities should ensure that the affected states are consulted as early in the marine plan-making process, or determination process for applications, as reasonably possible. Figure 1 indicates the bordering states for the East marine plan areas. Through the submission of information in support of applications, proposals will be expected to provide evidence of efforts undertaken to ensure compatibility and integration across the various administrations.

Integration with terrestrial planning and other plans

254. In addition to compatibility requirements set out in the Marine and Coastal Access Act (S 6 (3,9)), the Marine Policy Statement (1.3.1 and 1.3.4 – 5) notes that: 'The Marine Policy Statement and marine planning systems will sit alongside and interact with existing planning regimes across the United Kingdom. These include town and country planning and other legislation, guidance and other development plans...' and '...the United Kingdom

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[143] Proposal is defined in Ch 2, paragraph 88 and the Glossary.

[144] Countries relevant to the East Inshore and Offshore Marine Plan Areas include Norway, Denmark, Germany, Netherlands, Belgium and France.

[145] Marine Policy Statement p26 footnote 63.

[146] See Planning Inspectorate Transboundary Impacts Advice Note 12 http://infrastructure.planningportal.gov.uk/wp-content/uploads/2012/03/Advice-note-12.pdf

[147] Strategic Environmental Assessment Directive 2001/42/EC, Article 7, p14; and Strategic Environmental Assessment Directive (Environmental Assessment of plans or programmes Regs 2004).

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.' Separately, the National Planning Policy Framework (S 105) sets out that: 'In coastal areas, local planning authorities should take account of the United Kingdom Marine Policy Statement and marine plans and apply Integrated Coastal Zone Management across local authority and land/sea boundaries, ensuring integration of the terrestrial and marine planning regimes.' Taken together, this forms the basis upon which the Marine Policy Statement becomes a consideration for all public authorities not just those with responsibility for a coastline. Decisions in the marine area and on land can have an effect over a considerable distance. Onshore transmission infrastructure supporting offshore renewable energy, for example, may be sited inland a long way from the coast.

255. This makes clear the obligations on public authorities, including those responsible for the production of marine and various land-based plans, to ensure they work in harmony to deliver sustainable development in accordance with national policy.

256. As part of the marine planning process, the Marine Management Organisation has identified numerous statutory and non-statutory plans produced by public or local authorities, and other plans produced by a range of other organisations that overlap with the East Inshore and Offshore Marine Plan Areas. Such plans include Local Plans, National Park Management Plans (in the case of the East marine plan areas this was the Norfolk and Suffolk Broads), River Basin Management Plans and Shoreline Management Plans. In the majority of cases, eg local authority development plans, there is an overlap with marine plans as these authorities have jurisdiction to mean low water mark springs with marine plans taking in the intertidal area up to mean high water mark springs. Figure 12 indicates local authority boundaries. The Waste Framework Directive, National waste plan and associated local frameworks also make reference to marine waste and relevant legislation.

257. Local plan policies were assessed to understand whether they were of 'marine relevance', ie does the policy relate to those topics which, by virtue of their inclusion in the Marine Policy Statement, have been judged as being of marine relevance by the United Kingdom Government? Table 4 (below) provides a summary of findings for local planning authority development plans. It indicates those plans that include provisions that relate to the sectoral policies within the East marine plans. This can be considered as an overview of the extent to which matters relevant to the marine area are addressed in terrestrial planning. This table also signposts local planning authorities to policies within the marine plans of relevance to their planning priorities. Full details of the method used and findings for all plans analysed can be found in chapter 2 and Annex 6 respectively of the East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report 2012.

	Aquaculture	Climate change adaptation and mitigation	Carbon Capture and Storage	Oil and Gas	Renewable Energy	Fisheries	Marine aggregates	Marine dredging and disposal	Marine protected areas	Marine ecology and biodiversity	Ports and shipping	Tourism and recreation	Historic Environment
Bassetlaw										X			
Boston					X					X	X	X	
Broadland					X					X			X
Doncaster		X								X	X		X
East Cambridgeshire		X			X				X	X		X	X
East Lindsey		X			X					X		X	X
East Riding of Yorkshire		X	X	X	X		X		X	X	X	X	X
Fenland		X			X					X	X		X
Great Yarmouth					X					X	X	X	X
Huntingdonshire										X			X
Ipswich		X								X		X	X
King's Lynn and West Norfolk		X								X	X	X	
Kingston Upon Hull					X		X		X	X	X	X	X
Newark and Sherwood										X		X	X
Norfolk and Suffolk Broads		X						X		X		X	X
North East Lincolnshire		X		X	X	X			X	X	X	X	X
North Lincolnshire		X							X		X		X
North Norfolk	X	X			X				X	X		X	X
Norwich					X					X			X

Selby		X	X	X	X					X			X
South Holland											X	X	
South Norfolk					X				X	X			X
Suffolk Coastal		X								X	X	X	X
Waveney		X	X	x	X					X	X	X	X
York					X					X			

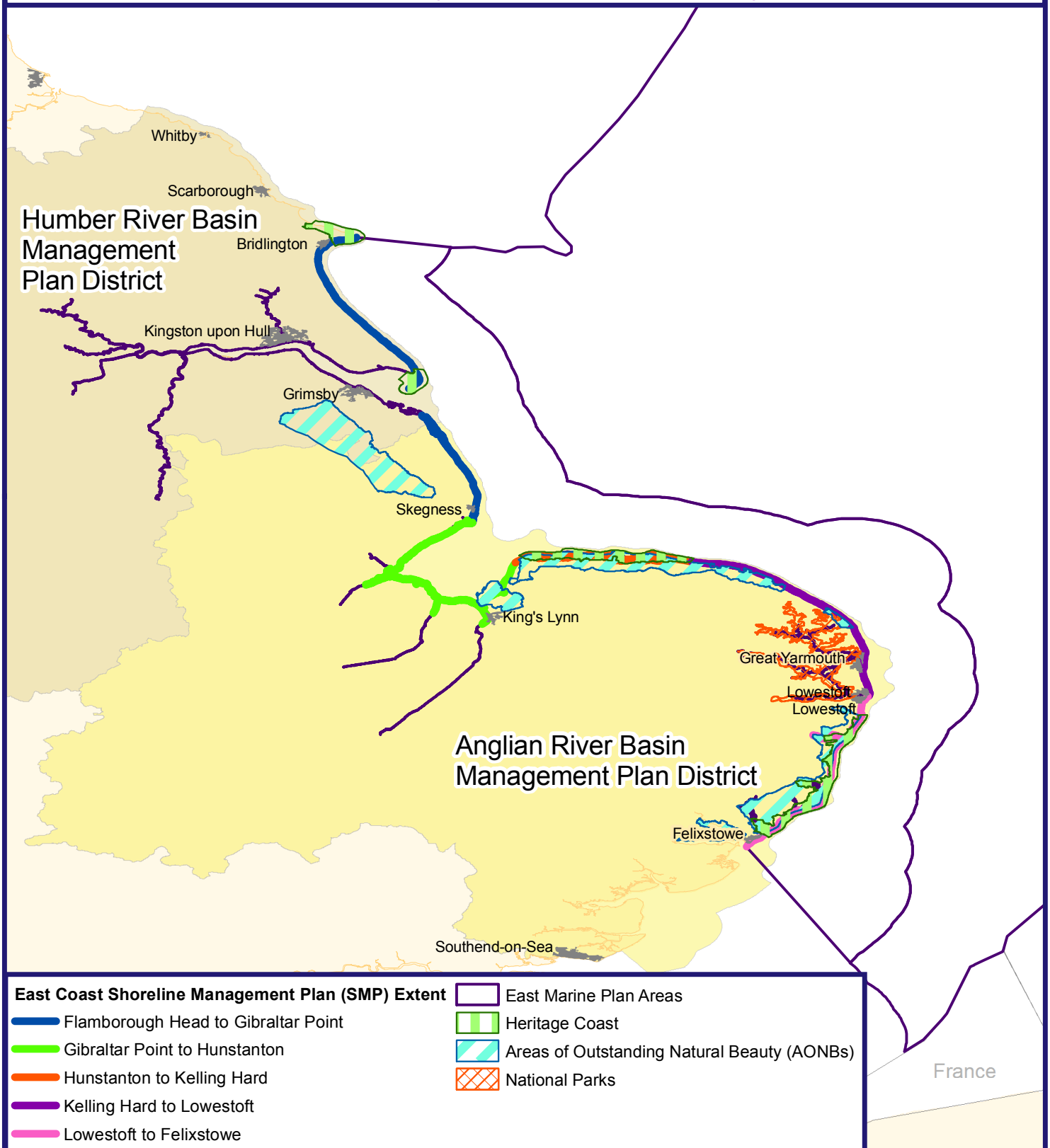
Table 4: Local planning authority plans cross-referenced with policies appearing in these marine plans

HM Government

Figure 11: Selected statutory and non-statutory management plans

February 2014

INFORMATION MAP- This map provides supporting information for section 3.6. The reader should check for any updates via the link provided in paragraph 102. This is not an exhaustive list of statutory and non-statutory management plans and should be read in conjunction with text under Objectives 6, 7 and 10.

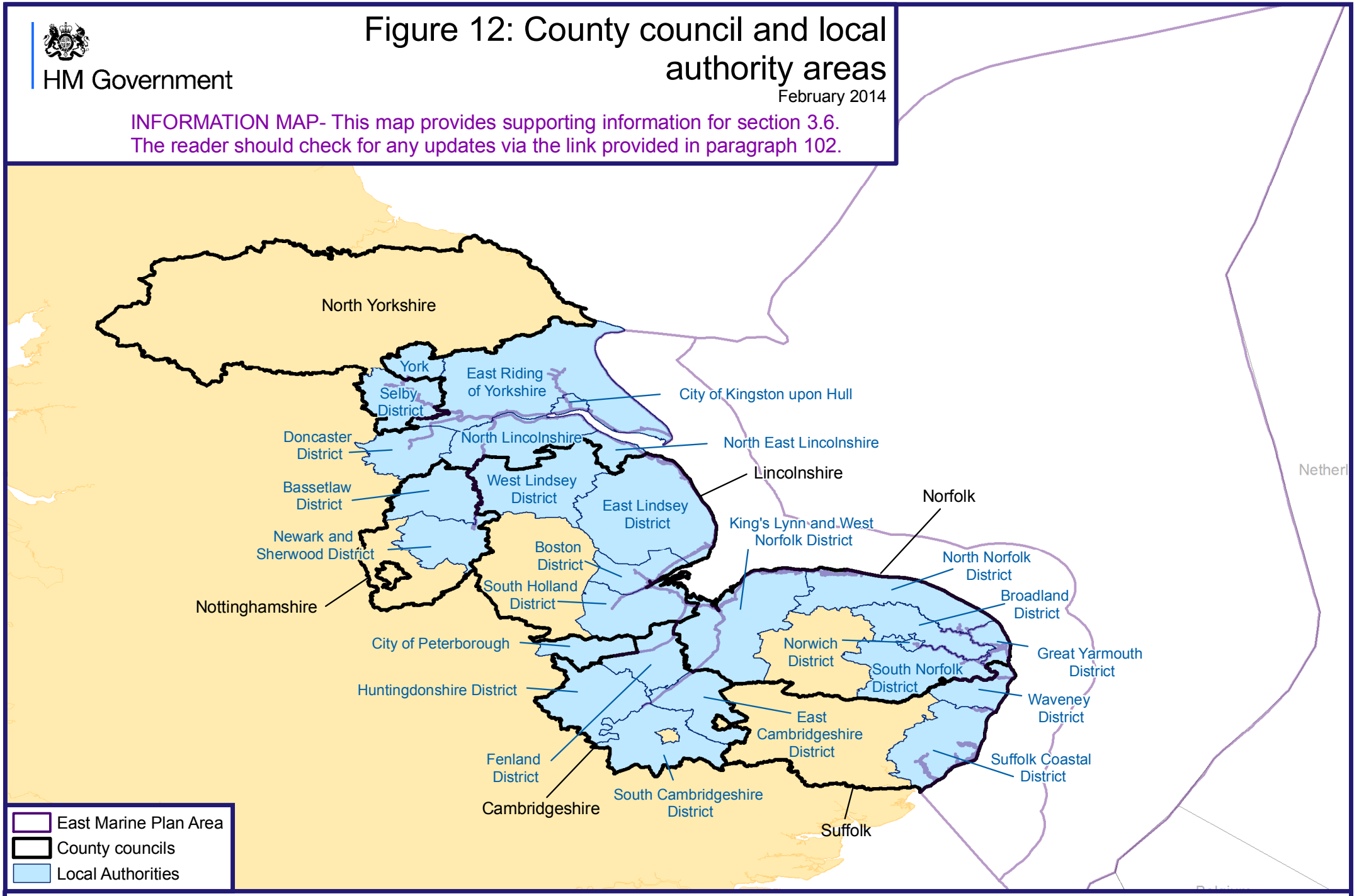


HM Government

Figure 12: County council and local authority areas

February 2014

INFORMATION MAP- This map provides supporting information for section 3.6.
The reader should check for any updates via the link provided in paragraph 102.



258. There are benefits in public authorities considering relevant plans, strategies, policies and guidance when determining applications for Nationally Significant Infrastructure Projects (under the Planning Act), other development or considering other proposed activities or management measures (such as Marine Protected Areas or Bylaws). Certain plans[148] may be material considerations to which decision-makers must have regard. Other non-statutory documents do not carry the same weight, but are nonetheless highlighted to decision-makers and those developing any proposals for the marine environment. There is not always a requirement to do so, but in the interests of delivering the Marine Policy Statement's aim to achieve Integrated Coastal Zone Management it is suggested that decision-makers may want to consider these documents, when taking decisions or developing proposals. Such documents include Shoreline Management Plans, and Estuary Management Plans. Figure 11 indicates a selection of the main non-statutory management plans in the East marine plan areas for which map information is available. Early engagement with all relevant public authorities by those developing proposals is advisable.

Plan policies specific to activities taking place both on land and at sea

Policy GOV1

Appropriate provision should be made for infrastructure on land which supports activities in the marine area and vice versa.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

259. In addition to the Marine Policy Statement, the National Planning Policy Framework (S 162) states that 'Local planning authorities should work with other authorities and providers to:

- assess the quality and capacity of infrastructure for ...energy, telecommunications, ...and its ability to meet forecast demands and
- take account of the need for strategic infrastructure including nationally significant infrastructure within their areas.'

In the event of a conflict between marine planning documents, and the National Policy Statement for Energy, the latter prevails for the purposes of

[148] These include the National Planning Policy Framework, National Policy Statements, requirements under the Planning Act 2008, Localism Act 2011, Local Development Frameworks, and, where in existence, neighbourhood or area action plans, Local Development Orders, Areas of Outstanding Natural Beauty management plans, the Broads Plan, European Marine Site management schemes, Marine Conservation Zone management plans (when produced) and River Basin Management Plans and their associated delivery plans (eg catchment management plans).

Infrastructure Planning Commission decision-making, given the national significance of energy infrastructure.

260. Many economic and social benefits of activities in the marine area only accrue when brought on land. Offshore renewable energy requires cabling and collector or convertor stations to enable it to be fed into the national grid onshore. If the proposed Marine Energy Park in Killingholme on the south bank of the Humber secures the requisite planning consents, it could be home to many wind-related businesses, which will assemble wind turbines for offshore wind farms. Ports such as Felixstowe and Lowestoft, that allow for landing of goods, have provisions for their expansion in local plans. Conversely, some developments on land require marine infrastructure (such as cables or outfall pipes) to operate. This infrastructure may be located in another marine plan area or on land that is not adjoining the East marine plan areas (eg facilities to land and process marine aggregates). Infrastructure is, therefore, essential to the realisation of such benefits.

261. It is important to promote integration between marine and land use plans in the provision of adequate infrastructure, especially where that infrastructure will predominantly support activity in the other environment (ie marine or land). Also, provision of infrastructure supporting waterborne traffic using inshore waters and inland waterways that link with the East Inshore plan area has the potential to drive sustainable development on land. This need has been considered in the development of the East Inshore and Offshore Marine Plans. GOV1 has also been developed to clarify the provisions of the Marine Policy Statement, and to provide more detail and prescription for public authorities on land and in the marine area, (when making decisions on applications for development, considering other proposed activities and measures, as well as in the development and review of plans) for such important activities for the East marine plan areas and adjacent coastal communities. This policy will be implemented by public authorities responsible for authorising such developments or activities. Public authorities should also be aware of any requirements of environmental legislation, for example compliance with the Water Framework Directive and Habitat Regulations Assessments. In accordance with the Coastal Concordat, proposals with terrestrial and marine authorisations and effects will be considered through a co-ordinated process. However, for Nationally Significant Infrastructure Projects, the developer may choose for authorisations for associated infrastructure to be considered either as part of the Planning Inspectorate Development Consent Order process or separately under the relevant legislation.

262. Public authorities must assess the potential positive and negative impacts, on both the marine and terrestrial environments, of development proposals in a collective and cumulative manner (eg the effects of a cable landfall (see CAB1 and figure 22) on flood defences, unstable cliffs, landscape and seascape). There are benefits in supporting existing and proposed activities and for associated communities, for example fishing. In accordance with the better regulation principles,[149] a proportionate level of strategic and detailed

[149] HM Treasury (2005) Reducing Administrative Burdens: Effective Inspection and Enforcement. Hampton, P.

assessment should be considered in decision-making, determined by the complexity, scale and sensitivity of the project or activity. Assessments should consider relevant factors, as determined through consultation with terrestrial planning authorities, and test different options against the objectives of relevant terrestrial and marine plans.

263. Proposals in the marine area that would significantly compromise the delivery of the objectives of terrestrial development plans are unlikely to be approved. Public authorities should also take into account proposals on land that have potential impacts on delivery of marine plan objectives.

Plan policies specific to co-existence

Policy GOV2

Opportunities for co-existence should be maximised wherever possible.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

264. A key principle of the Marine Policy Statement is to promote compatibility and reduce conflict (between activities, and also with the environment) in order to manage the use of space within the marine environment in an efficient and effective manner.[150] It states that '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 users'.[151] GOV2 has been developed to clarify the provisions of the Marine Policy Statement and to provide more detail to ensure co-existence is put into practice.

265. The East Inshore Plan Area and substantial parts of the East Offshore Plan Area are extremely busy and may become more so in the future. For example, the Humber Estuary is designated as a Special Protection Area, a Special Area of Conservation, a Site of Special Scientific Interest and RAMSAR site as well as supporting high density shipping and port activities. Aggregate extraction is concentrated in the East Offshore marine plan area, as well as Round 2 wind farms, fishing activity and oil and gas licence blocks. This is one of the busiest regions within the East marine plan areas. Potential oil and gas production combined with projected wind energy production and aggregate extraction against a backdrop of existing activities makes the Dogger Bank and East Anglian coast areas extremely busy.

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[150] Marine Policy Statement 2.2.1, 2.3.1.5, 3.8.10, 3.9.6, 3.10.5

[151] Marine Policy Statement 2.3.1.5

266. Co-existence (including activities in the same area, but vertically or laterally separated, and co-location in the same space) is particularly pertinent to the busy East marine plan areas. GOV2 will be implemented by the public authorities responsible for authorising development or activities. It is important for all relevant public authorities to ensure that the feasibility of co-existence is taken into account in formulating plans affecting the marine area (including Local Plans, Local Development Frameworks, Shoreline Management Plans and River Basin Management Plans), and when assessing new development and other activities. It is recognised there is a continuing need to better understand the potential social, economic, and environmental effects (positive and negative, direct and indirect, permanent and temporary) and the mechanisms for enabling co-existence to happen (see Objective 11).

267. Co-existence is already considered to some degree for development that would be subject to the requirements of the Environmental Impact Assessment Directive. GOV2 highlights the benefits to proponents, and the environment, of consideration of co-existence by proposals for smaller development (ie that are not subject to Environmental Impact Assessment Directive), and other decisions (such as on Marine Protected Areas , and Nationally Significant Infrastructure Projects), particularly as the East marine plan areas are so busy with development and other activities. Proposals should demonstrate the extent to which they will co-exist with other existing or authorised (but yet to be implemented) activities and how this will be achieved. A number of users of the marine area have collaborated on good practice guidelines promoting co-existence.[152]

268. In considering the activities of individual sectors, technical feasibility/opportunities and constraints analysis help to identify co-existence opportunities and provide a mechanism to inform decision-making. An example of this co-existence in practice could be the Carbon Capture and Storage sector where cables and pipelines for associated infrastructure could be installed in close proximity, to reduce the impact upon other users of the marine area (see policies CCS1 and CCS2).

[152] For example, Department for Business Enterprise and Regulatory Reform (2014); Fisheries Liaison with Offshore Wind and Wet: Recommendations for Fisheries Liaison, Best Practice Guidance for Offshore Renewables Developers; United Kingdom Cable Protection Committee (now Subsea Cables UK) (2010), Fishing Liaison Guidelines.

Plan policies specific to displacement

Policy GOV3

Proposals should demonstrate in order of preference:

a) that they will avoid displacement of other existing or authorised (but yet to be implemented) activities[153]

b) how, if there are adverse impacts resulting in displacement by the proposal, they will minimise them

c) how, if the adverse impacts resulting in displacement by the proposal, cannot be minimised, they will be mitigated against or

d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts of displacement

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

269. Marine planning seeks to manage competing demands, reduce conflict and promote compatibility in the marine area.[154] The converse of co-existence is displacement and the Marine Policy Statement (3.8.10) has a particular focus on the impacts of displacement of fishing activity and the need to avoid this. Displacement has been highlighted as a significant concern by many users of the East marine plan areas which are already busy (see GOV2) and increasingly so. The need to promote co-existence (GOV2) is essential in minimising or mitigating the negative impacts of displacement.

270. It is recognised there is a continuing need to better understand the potential social, economic, and environmental impacts (positive and negative, direct and indirect, permanent and temporary, as well as cumulative effects) of displacement. The aim is to facilitate decisions and effective management measures that avoid, minimise or mitigate negative impacts. Indirect impacts require consideration in order to minimise any resultant effects on others not directly connected with the proposal that may be put forward. Indirect impacts may include the increased level of competition for marine space from differing fishing fleets seeking to use the same area, with consequential impacts on local ports, tourism, the environment, or recreational users obliged to utilise an area of space that was previously only frequented by shipping. The current focus on cumulative effects is on those affecting the environment. However,

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[153] It may be advisable to consider applications that have been formally submitted to the relevant regulator and are awaiting determintation. Such applications would carry less weight than applications that have already been determined and authorised. How much weight is given to any undetermined application will vary on a case-by-case basis

[154] Marine Policy Statement p4; and Department for the Environment Food and Rural Affairs (2011), A description of the marine planning system for England, paragraph 1.15

achievement of sustainable development will require balanced assessment of environmental, social and economic cumulative effects. The assessment of cumulative effects and mitigation measures must be proportionate and achievable on a practical level.

271. GOV3 has, therefore, been developed to clarify the provisions of the Marine Policy Statement, complement GOV2 and to provide more detail and prescription in regard to displacement. The East marine plans promote consideration of the impacts of displacement not only in plan-making, but also in individual proposals such as Marine Protected Areas . This is to ensure that impacts are minimised, conflicts are reduced and compatibility is maximised. Benefits will be assessed in terms of economic, social and environmental effects. The requirement under d) is to provide information for consideration by the relevant public authorities. It does not indicate that approval of a proposal will follow by default. In determining proposals the public authorities will take account of a range of relevant considerations including compliance with legislation and regulations and Environmental Impact Assessment where already required.

272. Activities or measures that result in levels of displacement with adverse effects in excess of the benefits gained are unlikely to be supported. A number of other policies require an assessment of the effects of a proposal on certain sectoral activities or identified potential resources (see SOC2, SOC3, AGG3, TIDE1, PS3, CCS1, DD1, FISH1 and 2, AQ1, TR1 and TR2) to be considered as part of the plan-making or decision-making processes.

273. GOV3 will be implemented by the regulatory authorities responsible for authorising developments or activities. Those regulatory authorities will ensure that applicants submit supporting information, proportionate to the development proposed, that would illustrate any potential displacement impacts, (this may include consultation to identify displacement issues at scoping stage which some applicants are currently required to do), and suggested measures to minimise or mitigate them.

3.7 Defence

Context

274. The Ministry of Defence provides military defence and security for the people of the United Kingdom and Overseas Territories.[155] Defence makes a significant socio-economic contribution and, in some coastal locations, the Ministry of Defence is the major employer in the region.[156]

275. The Marine Policy Statement states that ‘the construction and operation of offshore marine infrastructure, installations and activities, as well as policies on conservation designations and the health of the wider environment may impact on defence interests in certain areas’ and ‘Marine activities should not prejudice the interests of defence and national security and the Ministry of

[155] Marine Policy Statement 3.2.1.

[156] Marine Policy Statement 3.2.6.

Defence should be consulted accordingly.' (Marine Policy Statement 3.2.2 and 3.2.9)

276. Any area of United Kingdom waters can be used for military defence activities and such activities differ across the marine plan areas. The East marine plan areas are specifically significant for practice of air to air combat manoeuvres, bombing, and submarine exercises off Flamborough Head. There are also a number of air bases located along the coast with associated air traffic radars.[157]

277. Issues for consideration include, but are not limited to, Danger and Exercise Areas, other training facilities primarily within the East Inshore Marine Plan Area, and potential interference from wind turbines on defence radars and some training facilities within the East Offshore Marine Plan Area (see supporting map at figure 13).

278. The Ministry of Defence is a consultee for the licensing of marine developments, to ensure offshore activities and developments do not adversely affect strategic defence interests or inhibit the use of designated Danger and Exercise Areas. The Ministry of Defence will seek mitigation measures to overcome any identified adverse effects on defence interests so that the development can proceed. The Ministry of Defence also engage in the preparation of development plans governing both on and offshore development to ensure Ministry of Defence interests are appropriately recognised and taken into account.[158]

Plan policies

Policy DEF1

Proposals in or affecting Ministry of Defence Danger and Exercise Areas should not be authorised without agreement from the Ministry of Defence.

Plan policy applies to both Inshore and Offshore Marine Plan Areas.
In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

279. This policy supports the need for defence activities to take place within the East marine plan areas for the purpose of national security. If the Ministry of Defence objects to a proposal then the development or activity will not be authorised. The aim of this policy is to avoid conflict between existing defence activities directly using the marine environment, and potential new licensable

[157] Marine Management Organisation (2011), Strategic Scoping Report for marine planning in England, p37

[158] https://www.gov.uk/MOD-safeguarding

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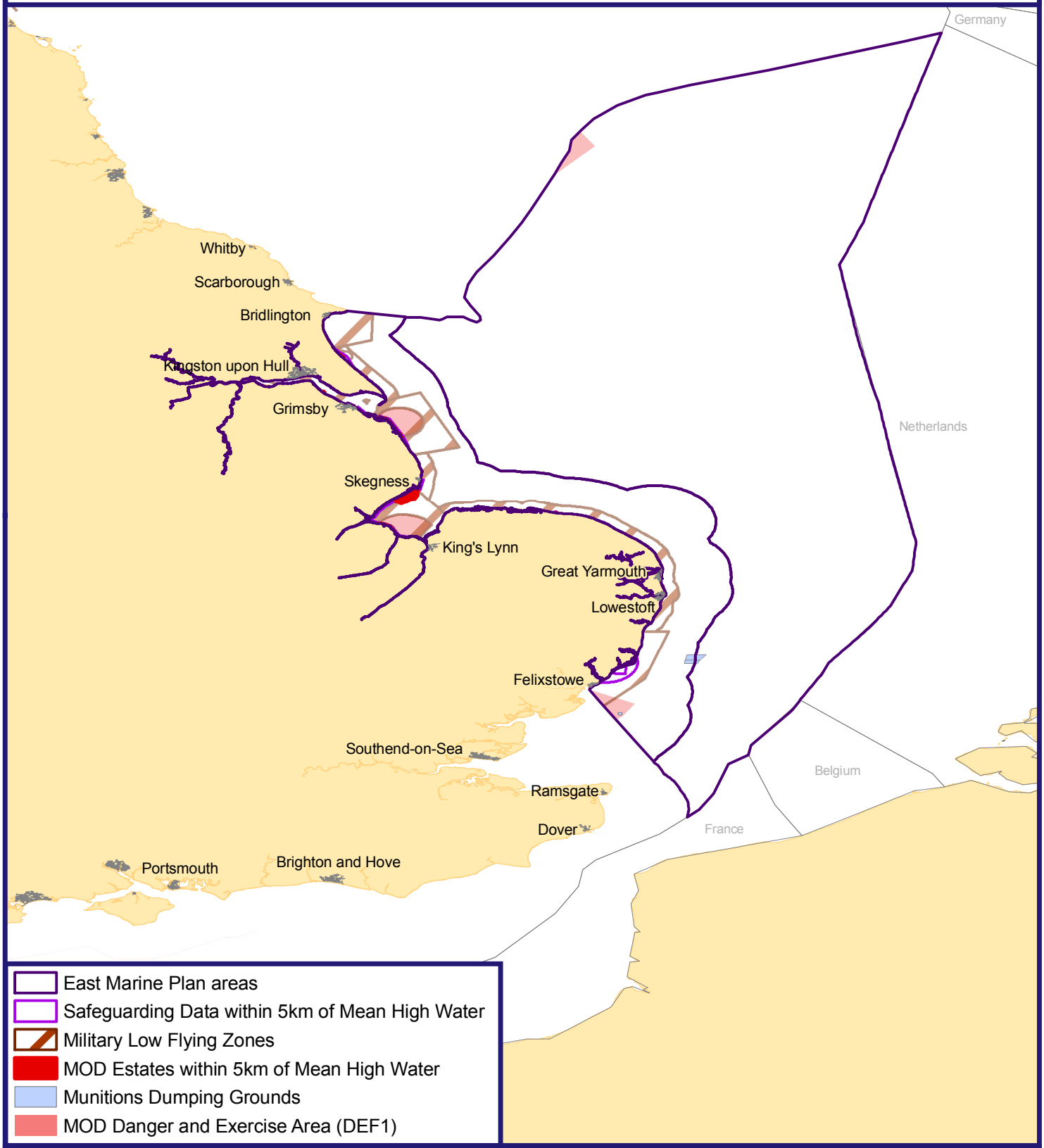
Figure 13: Defence and national security (DEF1)

February 2014

POLICY MAP- This map highlights the area where policy DEF1 applies. This area may be reviewed as necessary during the life of the Marine Plans. The reader should check for any updates via the link provided in paragraph 102.



marine activities within the East marine plan areas. The policy will be Figure implemented by the public authorities responsible for authorising proposals. This policy has been included to ensure that defence interests are not impeded given their role in the delivery of national security.

280. The Marine Policy Statement states that 'decision-makers and others should take full account of the individual and cumulative effects of marine infrastructure on both marine and land-based Ministry of Defence interests. The Ministry of Defence should be consulted in all circumstances to verify whether defence interests will be affected and ensure that national defence capabilities and interests are not compromised' (Marine Policy Statement 3.2.9). Any applications which would adversely affect defence activities would need to demonstrate that permission had been granted by the Ministry of Defence , to ensure that the impact of a proposal does not conflict with the military usage.

281. This policy adds clarity to existing national policy (National Planning Policy Framework (S 164) and the Marine Policy Statement (3.2.9)) by identifying where Ministry of Defence Danger and Exercise Areas exist within the East Inshore and East Offshore Marine Plan Areas (see figure 13). It aims to clarify the application process for public authorities and licence applicants, for early intervention, in dealing with issues or conflicts which may arise during the application process. Further to this it specifies that proposals within Danger and Exercise Areas that have not received the appropriate approval from the Ministry of Defence will not be authorised.

3.8 Oil and Gas

Context

282. Oil and gas are key parts of the energy mix in the United Kingdom, supplying around two thirds of primary energy demand in 2008,[159] as well as valuable chemicals for the manufacture of goods. Oil and gas production and processing is a significant contributor of tax revenue and is an important economic driver and provider of employment. In 2013 offshore oil and gas is the largest investor and the largest contributor to national gross value added among the industrial sectors of the economy.[160] Maximising the recovery (and transmission) of oil and gas sustainably, where it is economic to do so, is a priority for energy supply and security[161] as stated in the United Kingdom Government's Statutory Strategic Security of Supply Reports of 2010 and 2011, and is crucial to meeting our energy needs during the transition to a low-carbon economy.[162]

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159 Marine Policy Statement 3.3.7

160 Oil and Gas UK (2013) Economic Report 2013.

161 Marine Policy Statement 3.3.8

162 Department for Energy and Climate Change (2011) National Policy statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), p1, section 1.1.1

283. The East marine plan areas are the most significant for reserves of gas in English waters (they do not have any producing oil fields). The activity level and spatial footprint are greater than elsewhere in English waters, and the existing developments provide 28%[163] of total United Kingdom gas production. Looking ahead, a specific consideration for the oil and gas industry[164] is the recovery of remaining oil and gas reserves, and it is likely there are new discoveries still to be made that will need to be accessed to achieve the policy priority of 'maximising economic recovery of United Kingdom oil and gas resource sustainably',[165] new areas may also be subject to exploration and potential developments following future licensing rounds. For example the Breagh field is currently being developed in the East Offshore Marine Plan Area with new infrastructure (offshore and onshore) to link the field production to the Teesside Gas Processing Plant in the North East plan areas.

284. Hydraulic fracturing may lead to further exploitation of reserves and increases in gas production and some operations are currently ongoing in the waters around England.

285. United Kingdom -based gas production is in decline, having peaked in 1999, and Department for Energy and Climate Change projections suggest that, by 2020, 75% of the United Kingdom demand for gas will come from imports.[166] As part of the move to increasing imports, additional storage infrastructure is likely to be needed, both on land and offshore. Consequently, significant investment in new gas storage and transmission infrastructure will be required. Offshore unloading and storage, and the provision of gas import facilities, are therefore likely to be important activities to ensure security of supply as indigenous gas supplies decline.

286. Gas storage infrastructure is likely to have a greater impact as United Kingdom Continental Shelf production declines. This includes both import infrastructure and storage infrastructure,[167] such as infrastructure related to facilities which already exist in the East marine plan areas (the Bacton facility, which has infrastructure for importation of gas, and the Rough gas reservoir which is already used for the summer storage of gas from adjacent fields). Further infrastructure is likely in the East marine plan areas over the life of the marine plans (see GOV2 for more information on integration with other plans for onshore infrastructure).

287. The cessation of production from offshore fields will lead to decommissioning of facilities, and decommissioning and other legacy issues are therefore highlighted as areas that need significant attention over the period of the

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163 Marine Management Organisation (2011) Strategic Scoping Report

164 The most relevant sections in the Marine Policy Statement which address oil and gas are 3.3.7-3.3.15

165 Marine Policy Statement 3.3.8

166 Department for Energy and Climate Change (2010) UKCS Oil and Gas Production Projections https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/36646/production-projections.pdf

167 Department for Energy and Climate Change (2011) Overarching National Policy Statement for Energy (EN-1), p.38, section 3.8.9

marine plans. This represents a large technical and economic challenge for the industry as a whole. However, the problems are less significant for the gas installations in comparatively shallow waters and the decommissioning of several gas fields in the marine plan areas has already been successfully achieved.[168]

288. Around 500 installations in United Kingdom waters are expected to be decommissioned over the next three decades,[169] involving well abandonment and the decommissioning of platforms and subsea infrastructure. It is inevitable that there will be further decommissioning activity in the East marine plan areas over the life of the marine plans, though there may be reuse of some facilities for Carbon Capture and Storage and Gas Storage and Unloading.

289. Offshore oil and gas activity is now well established and subject to strict environmental regulations and considerations. More information can be found under 'existing policies and measures' in the policies relating to Objective 8, and the list of legislation and regulations found on the GOV.UK (Oil and Gas) webpages.

Plan policies

Policy OG1

Proposals within areas with existing oil and gas production should not be authorised except where compatibility with oil and gas production and infrastructure can be satisfactorily demonstrated.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

290. Oil and gas production in the East marine plan areas is currently the largest sector in terms of economic output. The spatial footprint of individual developments is relatively small, but there is exclusivity over the area occupied by the infrastructure, including statutory safety zones of 500 metres around platforms and certain subsea infrastructure, (eg subsea manifolds) and consultation requirements for areas up to nine nautical miles[170] around a platform for any activities that may interfere with helicopter approaches (such as wind turbines). The safety zones are in place for the protection of personnel, the infrastructure and other users of the sea. For existing

[168] www.oilandgasuk.co.uk/knowledgecentre/technical_perspective.cfm

[169] Marine Policy Statement 3.3.10

[170] See Civil Aviation Authority guidance note CAP764 for more details

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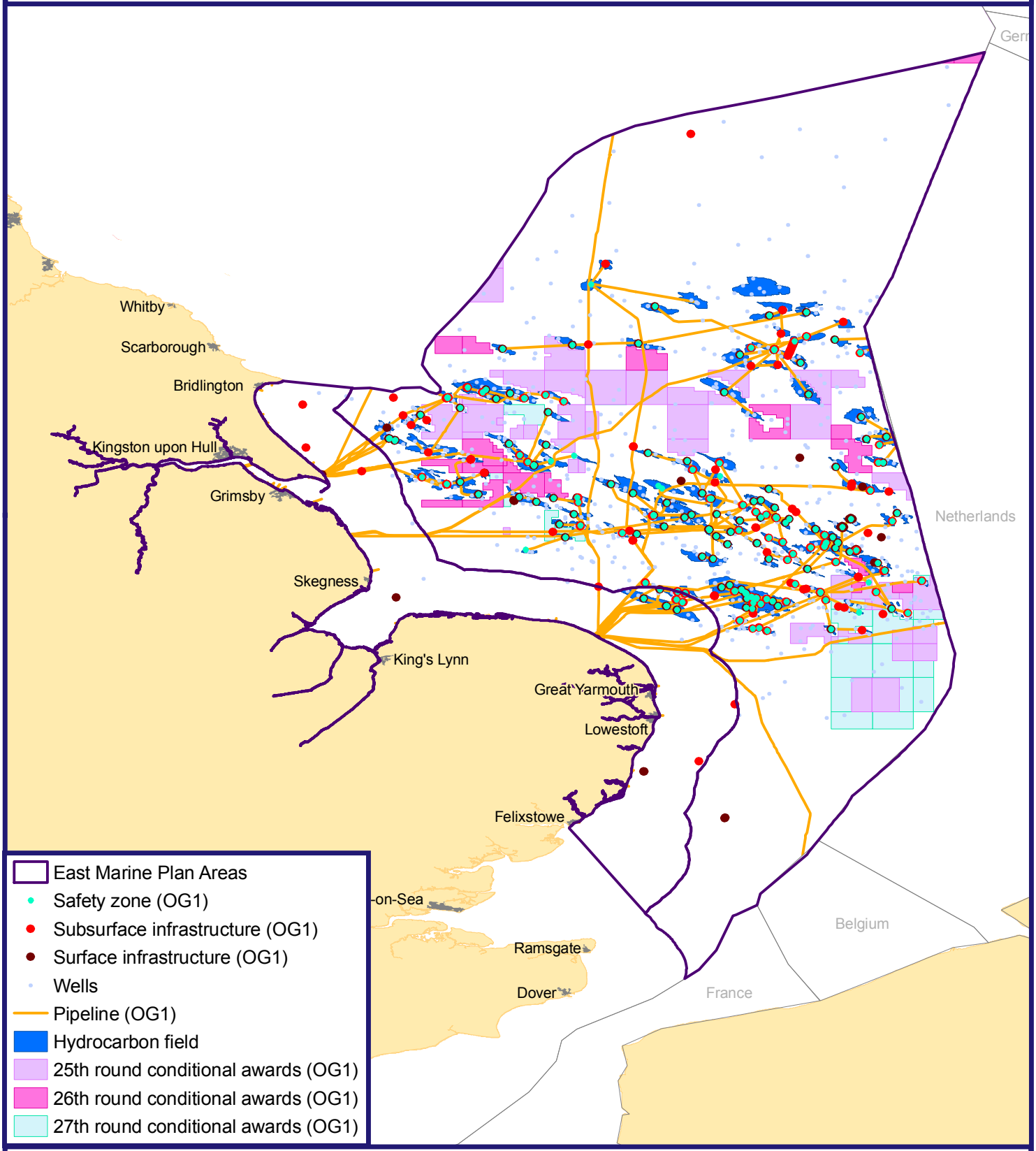
Figure 14: Existing oil and gas activity (OG1)

February 2014

POLICY MAP- This map highlights the area where policy OG1 applies. This area may be reviewed as necessary during the life of the Marine Plans. The reader should check for any updates via the link provided in paragraph 102.



infrastructure the impact of these exclusions is known and accommodated, for example it is factored into windfarm developments through discussion between licence applicants, oil and gas operators and the relevant regulators. For a map of current infrastructure relating to oil and gas, see figure 14. For more information on how maps in the marine plans will be updated and how they should be considered, please see paragraph 102.

291. Plan policy OG1 clarifies that, where existing oil and gas production and infrastructure are in place, the areas should be protected for the activities authorised under the production licence consent until the licence is surrendered, (including completion of any relevant decommissioning activity), or where agreement over co-located use can be negotiated. The policy will be implemented by the public authorities responsible for authorising the oil and gas activities and all other developments, including co-located activities.

292. In some cases, private agreements between oil and gas operators and other users are already in place. These may not be considered determinative in any proposals made in an area of existing oil and gas production activities, though they may be part of the information supporting an application.

293. This policy adds value to existing policy as it gives clarity on how national policy is applied where other activities may want to use the same space. It builds upon national policy, for example, the Marine Policy Statement (3.3.4): 'The United Kingdom's policy objective to maximise economic development of the United Kingdom's oil and gas resources' and 'Maximising the economic recovery of United Kingdom oil and gas resource sustainably is therefore a priority in the United Kingdom's energy supply and energy security strategies' (3.3.8). This policy is more specific, as it takes account of the relative importance of gas production in the East marine plan areas to the United Kingdom, reflecting national policy and current practice.

294. The responsibility for implementing policy OG1 will lie with relevant public authorities, including the Marine Management Organisation, working in conjunction with the Department for Energy and Climate Change. Monitoring of the policy effectiveness will be covered by the Department for Energy and Climate Change with assistance from the other public authorities involved.

Policy OG2

Proposals for new oil and gas activity should be supported over proposals for other development.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

295. All oil and gas activity is spatially restricted to the areas where the resource is found, or likely to be found. Although some of these are known, the total extent and recoverability of the reserves is not, therefore exploration and appraisal activity is ongoing. This creates uncertainty as to the future location and spatial extent of exploration and potential production activity. Future oil and gas activity has the potential to require access to the same area of seabed as other activities. In most cases, the consequence of this will be insignificant due to the small footprint of oil and gas production infrastructure. In some cases this may not be the case, such as where another user of the sea bed has a lease in place. Where a lease has been agreed for a co-located activity, there may be a requirement for negotiation between parties involved. More detail on how such issues may be resolved between offshore wind and oil and gas can be found elsewhere, for example in the written ministerial statement made by the Secretary of State for Energy and Climate Change to Parliament on the 12th July 2011.

296. In situations where there is potential conflict between alternative development opportunities, the relevant public authority considering the proposals would be expected to consider any impact on existing proposals or developments in its decision. Public authorities will need to look at the full range of impacts and benefits when making decisions which could affect oil and gas developments, or when considering oil and gas activities that could affect other developments.

297. Oil and gas operators can apply for seaward exploration licences to undertake seismic activity in areas of the United Kingdom Continental Shelf not covered by a seaward production licence and these can be awarded outside of Licensing Rounds. Seaward production licences, to obtain exclusive oil and gas production rights to a defined area of seabed (a block, part-block or combination of blocks) are obtained during regular licensing rounds administered by the Department for Energy and Climate Change. The award of the production licence requires the operator to undertake the work programme specified in the application, which may include drilling a well or wells to determine the hydrocarbon potential. If economic reserves are located, a field development plan must be submitted to the Department for Energy and Climate Change for approval and a Production Consent obtained. The seabed area covered by the production licence will be fairly large, to provide a reasonable chance of locating reserves, but the reserves are likely to be confined to a smaller area and the footprint of the infrastructure needed to produce the resource is small, even including exclusion areas such as safety zones. For a map of current areas offered and licensed for exploration and potential production, please see figure 14. There is a current licensing round underway, Round 28, and the outcome will be added to figure 14 when concluded. For more information on how maps in the marine plans will be updated and how they should be considered, please see paragraph 102.

298. This policy adds value by clarifying the role of public authorities and oil and gas applicants when dealing with potential future conflicts with other users of the marine area. It builds upon national policy, in a manner similar to that for plan policy OG1; see paragraph 293 for more information. This policy is more

specific as it takes account of the relative importance of gas production in the East marine plan areas to the United Kingdom, but it reflects national policy and current practice. It is more specific, because it refers to all developments and also addresses future development in a more explicit way, therefore making national policy clear for public authorities at marine plans level.

299. The responsibility for implementing policy OG1 and OG2 will lie with the Department for Energy and Climate Change working in conjunction with relevant public authorities, including the Marine Management Organisation. Monitoring of the policy effectiveness will be covered by the Department for Energy and Climate Change, as part of their current industry liaison, with assistance from the other public authorities involved.

3.9 Offshore Wind Renewable Energy Infrastructure

Context

300. The United Kingdom is legally committed to delivering 15% of its energy demand from renewable sources by 2020,[171] contributing to the government's energy security and decarbonisation objectives, including those required by the Climate Change Act 2008. The Electricity Market Reform programme sets out a package which can deliver a range of 8 – 15Gigawatts of offshore wind by 2020, with a clear pathway to around 10Gigawatts with higher levels of deployment possible if costs fall more quickly, providing a significant contribution to the renewable energy target.[172] Strategic issues in relation to the current programme of Offshore Wind Farms are considered by the Offshore Energy Strategic Environmental Assessment 2.

301. The Crown Estate owns almost the entire seabed out to 12 nautical miles,[173] and has powers to lease areas in the United Kingdom Renewable Energy Zone to generate electricity from wind. It has run a number of offshore wind leasing rounds using its powers under the Energy Act 2004. Round 1 and 2 were leased in December 2000 and July 2003 respectively with projects situated around the Greater Wash, the Thames Estuary and Liverpool Bay. In 2010 The Crown Estate awarded development rights to four Round 1 and Round 2 sites to extend their geographical areas based on survey data gathered in development of the original project. In total there are some 35 Round 1, Round 2 and extension projects with a total projected installed capacity of just under 10Gigawatts.[174] In 2009 The Crown Estate invited

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171 European Union (2009). Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009, The promotion of the use of energy from renewable sources. Available online at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:EN:PDF

172 Department for Energy and Climate Change (2011). Overarching National Policy Statement for Energy EN-1. Available online at: http://webarchive.nationalarchives.gov.uk/+/http://www.decc.gov.uk/en/content/cms/meeting_energy/consents_planning/nps_en_infra/nps_en_infra.aspx

173 The Crown Estate Act (1961). Available online here: http://www.legislation.gov.uk/ukpga/Eliz2/9-10/55/contents

174 The Crown Estate (periodically updated). Website available here: http://www.thecrownestate.co.uk/energy/offshore-wind-energy/our-portfolio/

developers to bid for exclusive rights to develop Offshore Wind Farms in nine zones around the United Kingdom. These sites make up the Round 3 wind farm zone leasing programme.[175] Developers will now define individual project boundaries that will be brought forward for agreement for lease by The Crown Estate and consent from public authorities, from within their exclusivity zones. These boundaries should be based on consideration of engineering, economic and environmental factors within the zone. This process is also known as Zone Appraisal and Planning for which The Crown Estate has produced non-statutory guidance to support developers.

302. The Crown Estate also leases areas for demonstration projects. These developments are usually small scale and aim to allow manufacturers to test and prove new wind farm technologies. The aim of these demonstration projects is to help to reduce costs in the offshore wind industry.[176]

303. More information on the leasing and consenting process for Offshore Wind Farms can be found in the National Policy Statement for energy EN-1, EN-3 and EN-5. These documents provide the primary basis for decision-making in relation to Offshore Wind Farms over 100Megawatts including assessment of impacts on biodiversity, other activities and social receptors on land and offshore.

304. The East marine plan areas currently account for 37% (or 1.7Gigawatts) of offshore wind capacity currently operational or under construction in English waters. The majority of possible capacity not yet operational or under construction but leased under Round 2 and extensions (54% or 3.4 Gigawatts), and Round 3 (76% or 24Gigawatts) will be located in the plan areas.[177] This is largely due to the availability of wind resource and suitable water depth in the East Offshore Marine Plan Area.

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[175] The Crown Estate (2012). Round 3 offshore wind site selection at national and project levels. Available online here: http://www.thecrownestate.co.uk/media/310531/round_3_offshore_wind_site_selection_at_national_and_project_levels.pdf

[176] The Crown Estate (2012), Offshore Wind Cost Reduction Pathways Study; pg59. Available online at: http://www.thecrownestate.co.uk/media/305094/Offshore%20wind%20cost%20reduction%20pathways%20study.pdf

[177] RenewableUK (regularly updated), United Kingdom Wind Energy Database – UKWED, available online at http://www.bwea.com/ukwed/offshore.asp

Plan policies

Policy WIND1

Developments requiring authorisation, that are in or could affect sites held under a lease or an agreement for lease that has been granted by The Crown Estate for development of an Offshore Wind Farm, should not be authorised unless

a) they can clearly demonstrate that they will not compromise the construction, operation, maintenance, or decommissioning of the Offshore Wind Farm

b) the lease/agreement for lease has been surrendered back to The Crown Estate and not been re-tendered

c) the lease/agreement for lease has been terminated by the Secretary of State

d) in other exceptional circumstances

This policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

305. This policy is in line with national planning policy, as set out in the National Policy Statements EN-1 (section 3.4.5), EN-3 and the Marine Policy Statement (2.6.7.6 and 3.3.19). This policy will be implemented by relevant public authorities and will bring greater certainty to applicants. It will also support Offshore Wind Farm deployment by protecting areas that have already been identified for development. This reflects the importance of the East marine plan areas for Offshore Wind Farms.

306. This policy covers lease areas granted by The Crown Estate's rounds 1, 2 and Extension leasing programmes, demonstration sites and projects brought forward from Round 3 Offshore Wind Farm zones for agreement for lease (including areas under Offshore Transmission Owner leases). See figure 15 for the current locations of these lease boundaries. The policy seeks to prevent other new development or activities that would compromise construction, operation or decommissioning of the Offshore Wind Farm. This protects the existing rights of Offshore Wind Farm leases and agreements for lease. As leases and agreements for lease will be continuously updated the process set out under paragraph 102 should be noted.

307. The protection afforded by WIND1 will be kept in place until such time as the Offshore Wind Farm has been a) constructed; b) the lease/agreement for lease is surrendered back to The Crown Estate or c) the lease has been terminated by the Secretary of State. In the circumstance of b) the relevant areas will then become available for potential alternative uses where The Crown Estate, in liaison with the Marine Management Organisation, agree that the site will not be re-tendered for Offshore Wind Farm development in the future. In the circumstance of c), WIND1 will not be relevant as soon as a

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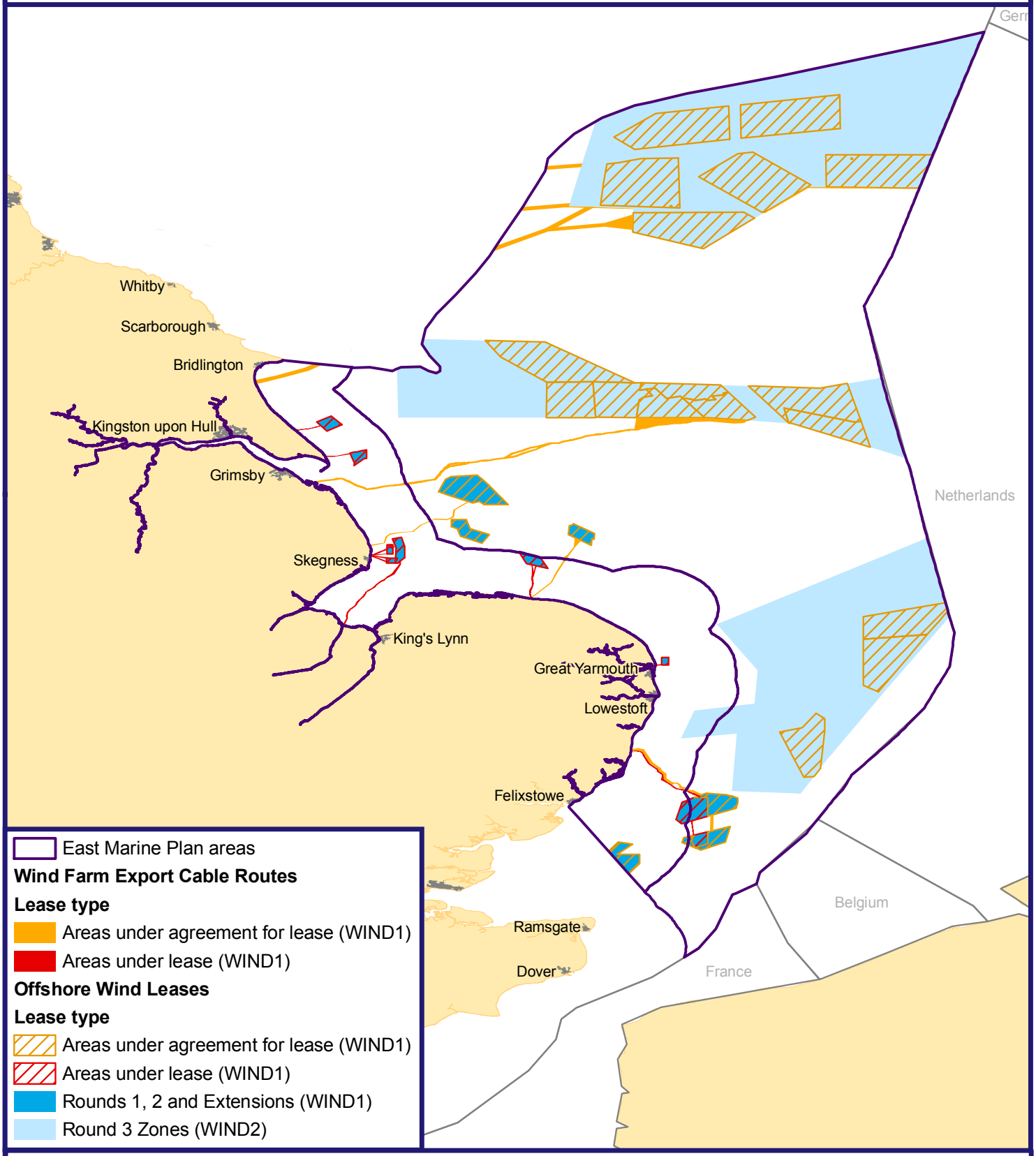
Figure 15: OWF leased areas, agreements for lease (WIND1) and areas under exclusive zone (WIND2)

February 2014

POLICY MAP- This map highlights the area where policies WIND1 and WIND2 apply. This area may be reviewed as necessary during the life of the Marine Plans. The reader should check for any updates via the link provided in paragraph 102.



lease or agreement for lease has been terminated. Examples of where a site may be surrendered back and not re-tendered include the development of oil and gas in part or all of an area covered by this policy (where negotiated in line with policy OG2) whereby some or all of the area may be surrendered.[178] The requirement under d) is to provide information for consideration by the relevant public authority; it does not indicate that approval of the proposal will follow by default. In determining proposals, the public authority will take account of a range of relevant considerations including compliance with legislation and regulations and environmental assessment.

308. The exceptional circumstances include where an Offshore Wind Farm lease holder or agreement for lease holder grants permission for another party to use that area for another (non- Offshore Wind Farm) use.

309. Offshore Wind Farm proposals will still be required to be in compliance with relevant legislation and regulations including habitat regulations assessment, Environmental Impact Assessment and National Policy Statements. Negotiation with the existing users of the areas covered by WIND1 will remain the responsibility of the lease/agreement for lease holder taking into account GOV2.

Policy WIND2

Proposals for Offshore Wind Farms inside Round 3 zones, including relevant supporting projects and infrastructure, should be supported.

This policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

310. As set out above, the Marine Policy Statement (3.3.19 and relevant policy statements[179]) identifies the important contribution to be made by Offshore Wind Farms to energy and carbon reduction objectives. The East marine plan areas are nationally significant in delivering this contribution. The Crown Estate's work to identify the Round 3 zones already takes into account, to some degree, the adverse impacts of Offshore Wind Farm development on the environment and other marine users.[180] Developers are also currently

[178] The Conservation of Habitats and Species Regulations (2010). Available online at: http://www.legislation.gov.uk/uksi/2010/490/pdfs/uksi_20100490_en.pdf

[179] Department for Energy and Climate Change (2011). Overarching National Policy Statement for Energy EN-1. Section 3.4.5. Available online at: http://webarchive.nationalarchives.gov.uk/+/http://www.decc.gov.uk/en/content/cms/meeting_energy/consents_planning/nps_en_infra/nps_en_infra.aspx

[180] The Crown Estate (2012). Round 3 offshore wind site selection at national and project levels. Available online at: http://www.thecrownestate.co.uk/media/310531/round_3_offshore_wind_site_selection_at_national_and_project_levels.pdf

undertaking a substantial amount of work to fully understand the characteristics of their zones and potential impacts that development may have which will inform Offshore Wind Farm projects being brought forward from Round 3 zones. This policy reflects the work undertaken to date and the significant investment made by all involved parties, including investment by Round 3 developers.

311. This policy will be applied by public authorities to ensure that the large potential for Offshore Wind Farms in the East marine plan areas and the ambitions of government for renewable energy are realised. The condition of this support is reliant on the development of an appropriate Zone Appraisal Planning process or an equivalent zone level assessment to inform project boundaries brought forward from within the Round 3 zones. Proposals should draw on the findings of these assessments and should demonstrate how other activities and the environment have been taken account of in proposals as well as taking into account GOV2. Offshore Wind Farm proposals will still be required to be in compliance with relevant legislation and regulations including habitat regulations assessment, Environmental Impact Assessment and National Policy Statements.

312. This policy signals that public authorities will look favourably upon development of Offshore Wind Farms and any supporting projects, including associated infrastructure, inside Round 3 wind farm zones where conditions are met (see figure 15 for locations of the Round 3 wind farm zones).

313. Other policies should be taken into account when applying the support outlined in WIND2. This includes where OG2 is applicable which would take precedence over WIND2. Once an agreement for lease has been granted by The Crown Estate then these areas will be covered by WIND1. This policy enables development of offshore wind in Round 3 wind farm zones in preference to other conflicting activities but does not preclude co-location of Offshore Wind Farms with other activities in accordance with GOV3. The policy will be applied by public authorities determining proposals for non-Offshore Wind Farm developments or activities within Round 3 wind farm zones as well as public authorities that license Offshore Wind Farm and supporting projects brought forward from Round 3 wind farm zones. These authorities should work in conjunction with the offshore wind farm developer, the Department for Energy and Climate Change's Secretary of State (who will determine Offshore Wind Farm proposals over the 100Megawatts threshold)[181] and/or the National Infrastructure Directorate.

314. Topics examined under the Zone Appraisal Planning process should be considered at a zonal level before designating project boundaries or areas for potential development. Any equivalent assessment should consider these factors. The zone level assessment will not negate the need to produce project level assessments.

[181] Planning Act 2008 http://www.legislation.gov.uk/ukpga/2008/29/section/15

3.10 Tidal Stream and Wave

Context

315. The United Kingdom is a world leader in developing wave and tidal stream resource with harvesting devices potentially providing 27Gigawatts of energy by 2050 under a high development projection.[182] The Department for Energy and Climate Change's National Policy Statement EN-1 recognises that 'there are now full scale [wave and tidal stream energy] prototypes working towards array scale and pre-commercial deployment. However many of the technologies for making use of the wave resource and tidal currents are still developing'. The Department for Energy and Climate Change have set up a United Kingdom Marine Energy Programme that aims to enhance the development and deployment of commercial scale wave and tidal energy developments.[183] The Carbon Trust[184] has recently estimated that the global market for marine renewables could be worth up to £340 billion to the United Kingdom with employment opportunities for thousands of people. Wave and tidal energy systems have the potential to be a significant part of this.

316. The Crown Estate has completed an assessment of the United Kingdom's wave and tidal stream energy resources[185] which has identified the conditions required to exploit wave, tidal range and tidal stream resource at a commercial scale based on best knowledge. These conditions are based on seabed depth and wave and tidal stream resource data. This analysis identified areas of tidal stream resource off the coast of Norfolk and to the north of the Humber Estuary. Wave energy resource is minimal in the East marine plan area and therefore does not warrant a dedicated or stand-alone policy.

317. Generation of energy from tidal range, the hydrostatic head between high and low tides, has not been considered in these marine plans due to the level of complexity of potential impacts. In addition the uncertainty of plans to develop tidal range installations means that consideration at a strategic scale is not possible. The Crown Estate has produced an assessment of 'key resource areas' in United Kingdom waters.[186]

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[182] Department for Energy and Climate Change (2011). United Kingdom Renewable Energy Roadmap. Available online: http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/renewable-energy/2167-uk-renewable-energy-roadmap.pdf

[183] Department for Energy and Climate Change Marine Energy Programme website: http://www.decc.gov.uk/en/content/cms/meeting_energy/wave_tidal/uk_marine_ener/uk_marine_ener.aspx

[184] The Carbon Trust (2011) Accelerating Marine Energy. The potential for cost reduction – insights from the Carbon Trust Marine Accelerator. Available at: www.carbontrust.com/media/5675/ctc797.pdf

[185] The Crown Estate (2012). United Kingdom Wave and Tidal Key Resource Areas Project. Available online at: http://www.thecrownestate.co.uk/media/355255/uk-wave-and-tidal-key-resource-areas-project.pdf

[186] The Crown Estate (2012). United Kingdom Wave and Tidal Key Resource Areas Project. Available online at: http://www.thecrownestate.co.uk/media/355255/uk-wave-and-tidal-key-resource-areas-project.pdf

Plan policy

Policy TIDE1

In defined areas of identified tidal stream resource (see figure 16), proposals should demonstrate, in order of preference:

a) that they will not compromise potential future development of a tidal stream project

b) how, if there are any adverse impacts on potential tidal stream deployment, they will minimise them

c) how, if the adverse impacts cannot be minimised, they will be mitigated

d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts

This policy applies to the Inshore and Offshore Marine Plan Areas.
In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

318. Tidal stream energy can only be harvested in a limited number of areas in English waters due to the geographical features required to create tidal currents sufficient to drive tidal stream devices. Sites of resource are generally situated around headlands and channels around the coastline.
These areas require protection from other new developments and activities which could prevent the exploitation of tidal stream resources in the future. The need to protect areas of potential resource is recognised in the Marine Policy Statement (3.3.21) which states 'it is important for marine planning to take account of appropriate locations for such developments [tidal stream and wave] alongside more established uses of marine space'. This is echoed in the National Policy Statement EN-1(S 3.3.10) which says 'As part of the United Kingdom's need to diversify and decarbonise electricity generation, the Government is committed to increasing dramatically the amount of renewable generation capacity (Section 3.4). In the short to medium term, much of this new capacity is likely to be onshore and offshore wind, but increasingly it may include plant powered by the combustion of biomass, waste, or the generation of electricity from wave and tidal power.'

319. The method of defining the area relevant to TIDE1 was supplied by The Crown Estate through their key resource area work.[187] The output describes areas of tidal stream resource and is based on seabed elevation and presence of tidal stream resource over a certain threshold. These technical parameters are based on an emerging understanding of tidal stream technologies and will continue to evolve. Areas shown in white are waters that are outside the East

[187] The Crown Estate (2012). United Kingdom Wave and Tidal Key Resource Areas Project. Available online at: http://www.thecrownestate.co.uk/media/355255/uk-wave-and-tidal-key-resource-areas-project.pdf

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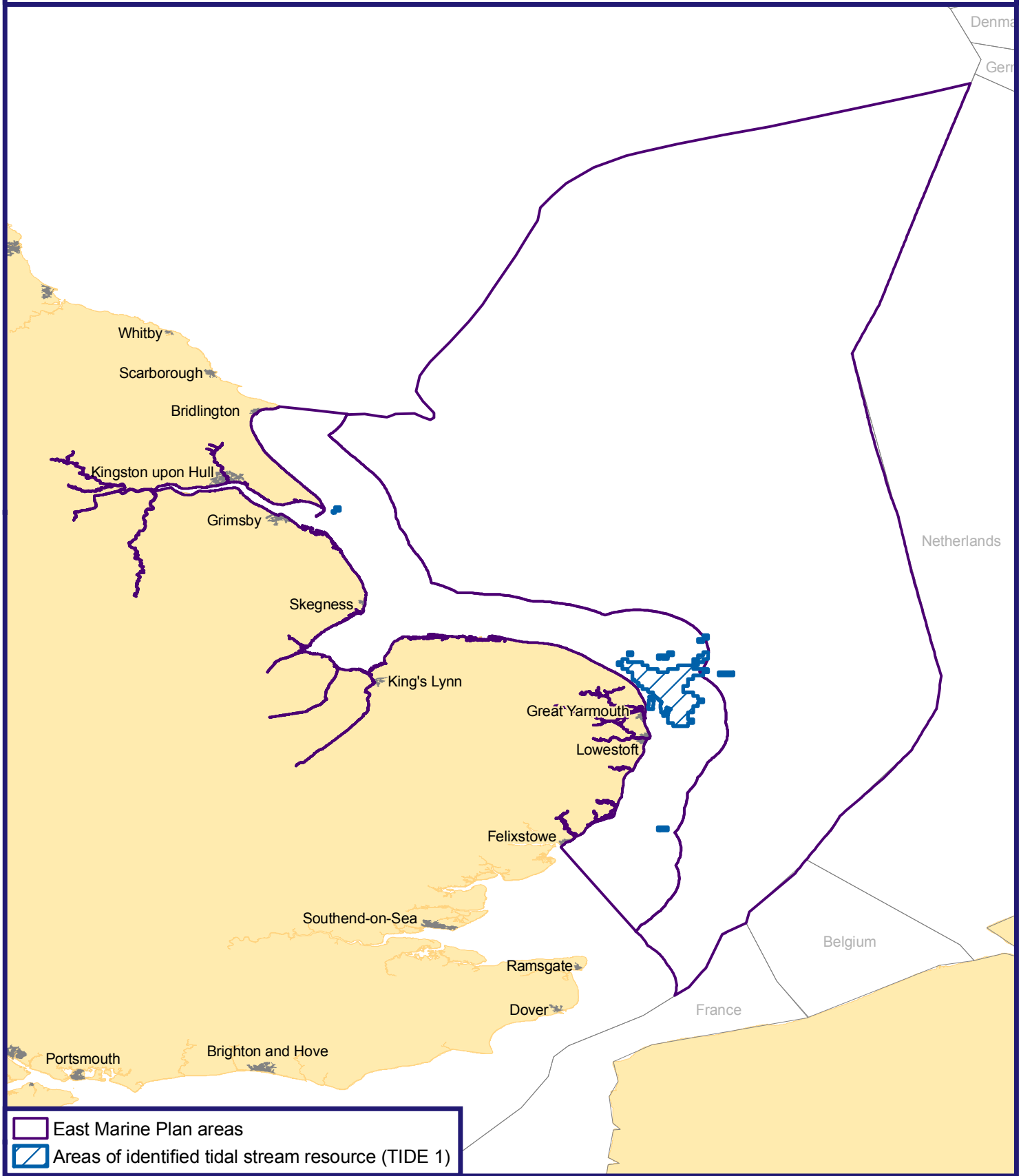
Figure 16: Areas of identified tidal stream resource (TIDE1)

February 2014

POLICY MAP- This map highlights the area where policy TIDE1 applies. This area may be reviewed as necessary during the life of the Marine Plans. The reader should check for any updates via the link provided in paragraph 102.



Inshore and East Offshore Marine Plan Areas or where the analysis shows that no developable tidal stream resource is present. Note that in producing the identified areas of tidal stream resource no consideration of other existing users, interests and sensitivities has been undertaken. Assessment of these factors is the responsibility of the proponent of tidal stream development when proposals are brought forward, however co-existence should be promoted by public authorities through GOV2.

320. TIDE1 will be implemented by public authorities that authorise relevant development or activities. It applies the intent set out in national policy (see paragraph 315) to identified locations in the East Inshore area by protecting them from other new activities or development, both inside and outside identified areas that could impact upon the ability to realise tidal stream energy in the future. Based on estimates from the Key Resource Areas Project, the East marine plan areas hold approximately 2Gigawatts of potential tidal energy with the rest of English waters holding approximately 11Gigawatts. Therefore the East Marine plan areas have an important role to play in the development of tidal stream energy in England.

321. The requirement under d) is to provide information for consideration by the relevant public authorities, it should not be taken in any way or of itself to indicate that approval of the proposal will follow by default. In deciding on the proposal, the public authorities will take account of a range of relevant considerations including compliance with legislation, regulations, habitat regulations assessment and Environmental Impact Assessment.

322. New development or activities that could have potential adverse impacts on tidal stream development in these areas include placement of hard infrastructure at any point through the water column, on or under the seabed and that will be in place for more than five years. Types of infrastructure include breakwaters, quays, jetties, causeways etc. Types of activities that will prevent leasing of areas for tidal stream deployment may include aggregate extraction and establishment of shipping routes.

323. Given the uncertainty in defining the areas of potential tidal stream resource and the potential requirements for developing devices in these areas, criteria are set out in TIDE1 by which proponents can make a case for other new developments and activities. Proponents of other development should discuss arrangements with relevant public authorities and others, such as The Crown Estate, in the pre-application phase of the consenting process. Appropriate mitigation or minimisation would have to be discussed with tidal stream project developers, The Crown Estate and the public authorities to ensure a suitable solution is found (this could also include trade bodies). Negotiations with existing users of areas of identified tidal stream resource and temporally variable activities such as fishing will remain the responsibility of the applicant as projects are brought forward. Project level assessments will still be required. Such assessments could helpfully be informed by the Appropriate Assessment Information Report accompanying these plans that sets out regularly used or previously proposed mitigation measures relating to this sector. Paragraph 102 of the plan sets out arrangements for the update of the area covered by TIDE1 as new information becomes available.

3.11 Carbon Capture and Storage

Context

324. The United Kingdom offshore area is considered to be one of the most promising locations anywhere in the world to permanently store carbon dioxide (Marine Policy Statement 3.3.31). Carbon Capture and Storage is regarded as a key abatement technology for limiting the impact of climate change, including the impact on the marine environment. The Carbon Capture and Storage Roadmap identifies possible deployment rates for Carbon Capture and Storage, and estimates commercial benefits of £3 – 6.5 billion a year by the late 2020s as well as supporting circa 100,000 jobs by 2030. These figures are similar to estimates in the Marine Policy Statement (3.3.34). Carbon Capture and Storage will be important for both the power and industrial sectors. Many industrial sectors have no other option for emission reductions aside from Carbon Capture and Storage, as their carbon dioxide is both process and fuel generated.

325. The overarching National Policy Statement for Energy EN-1 states that 'all commercial scale (at or over 300 Megawatts) combustion power stations (including gas, coal, oil or biomass) have to be constructed carbon capture ready' and that 'new coal-fired power stations are required to demonstrate Carbon Capture and Storage on at least 300 Megawatts of the proposed generating capacity'. It should be noted that combustion and nuclear power stations may want to utilise coastal or estuarine sites within the East inshore plan area to make use of once through[188] water cooling systems for efficiency and economic purposes.

326. The East marine plan areas afford a significant opportunity for the industry due to the large number of saline aquifers within the Bunter sandstone formation. Saline aquifers are estimated as having around 85% of the United Kingdom's potential storage capacity.[189] Also, there are significant active and inactive hydrocarbon fields that could be used for storage. In addition, several clusters of industrial facilities emitting large amounts of carbon dioxide occur along England's East coast.

327. The key issue with respect to Carbon Capture and Storage in the East marine plan areas is to help enable the broadly recognised opportunity to establish the sector. An assessment of the optimum sites for future expansion of the industry is required (see implementation and monitoring action 2). A study by the Energy Technologies Institute has mapped potential storage sites, adding relative confidence levels for storage potential. The Crown Estate and British Geological Survey have produced a database which has been developed from the Energy Technologies Institute study mapping potential storage sites.[190]

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[188] World Nuclear Association - http://www.world-nuclear.org/info/Current-and-Future-Generation/Cooling-Power-Plants/

[189] Department of Energy and Climate Change (2012), Carbon Capture and Storage Roadmap, Storage strategy

[190] www.co2stored.co.uk/

Plan policies

Policy CCS1

Within defined areas of potential carbon dioxide storage,[191] (mapped in figure 17) proposals should demonstrate in order of preference:

a) that they will not prevent carbon dioxide storage

b) how, if there are adverse impacts on carbon dioxide storage, they will minimise them

c) how, if the adverse impacts cannot be minimised, they will be mitigated

d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

328. The Marine Policy Statement (3.3.31 and 3.3.34) states that '...storage in the United Kingdom will take place almost exclusively offshore...,' highlighting the importance of storage in the marine area. The United Kingdom marine area is of strategic importance internationally, due to the high concentration of potential storage sites. The Marine Policy Statement outlines a desire for ...the United Kingdom to demonstrate leadership in deploying greenhouse gas emission mitigation techniques...' on an international level. Carbon Capture and Storage has an important role in mitigating carbon dioxide emissions from energy generation and in reducing acidification of the marine environment. The Marine Policy Statement states that 'virtually all fossil fuel generation will eventually need to be fitted with technology that captures carbon dioxide...' and that Carbon Capture and Storage will enable 'fossil fuel energy generation to be part of the United Kingdom's low carbon, secure energy future.' Further justification for CCS1 comes from the overarching National Policy Statement (section 3.6.4 - 3.6.8) for Energy EN-1. Potential revenue and employment benefits are covered in paragraph 324 above.

329. The East marine plan areas represent a significant proportion of England's storage potential for Carbon Capture and Storage. It is therefore essential to provide an appropriate plan policy that ensures that national policy and commitments are put into practice in the marine plan areas. Policy CCS1 is included to help ensure that sufficient storage sites are available for Carbon Capture and Storage over the long-term in view of the large number of such sites, on a national and international scale. Carbon Capture and Storage is spatially restricted to where storage locations occur.

[191] This includes saline aquifers and suitable hydrocarbon fields

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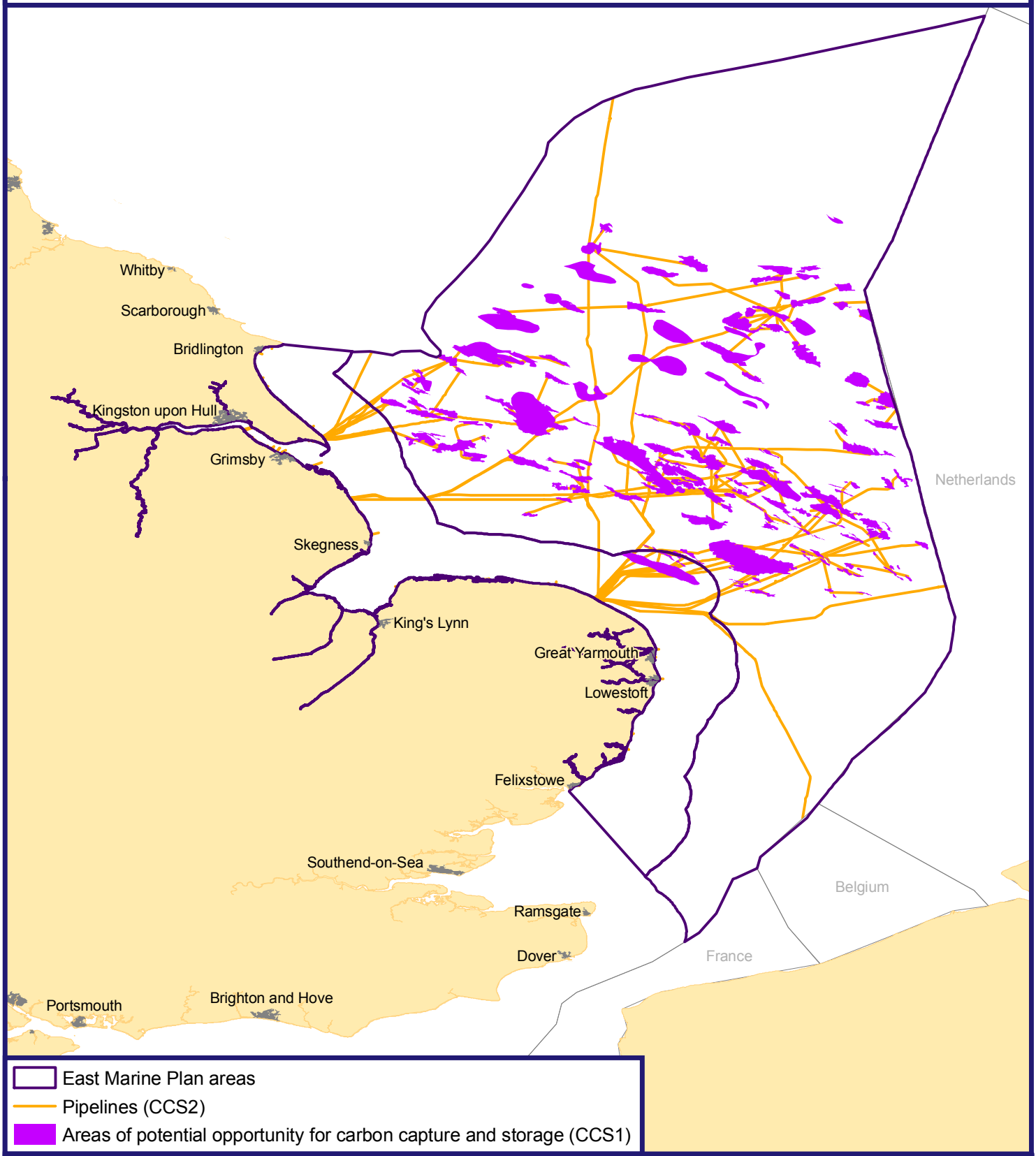
Figure 17: Potential opportunity and infrastructure for carbon capture and storage (CCS1 and CCS2)

February 2014

POLICY MAP- This map highlights the area where policies CCS1 and CCS2 apply. This area may be reviewed as necessary during the life of the Marine Plans. The reader should check for any updates via the link provided in paragraph 102.



330. Ways in which applicants may satisfy a) include providing data that shows the area is not a suitable storage site or providing evidence that their operation will be compatible with storage activity. Given the uncertainty that applies to likely storage sites and the large number of them, the policy makes substantial allowance for the possibility of other, competing development to proceed under particular circumstances.

331. Circumstances under which b) might be satisfied could include showing that the footprint of the proposal relative to the storage footprint on the seabed is insignificant or de minimis.

332. Circumstances under which c) might be satisfied could include moving the proposal from a more to less favourable area for Carbon Capture and Storage, or proposing co-ordination that can avoid any conflict, eg storage can take place before a new development or vice-versa.

333. Circumstances under which d) might be satisfied could include:

- demonstrating the importance of the proposal to meet other objectives or relevant departmental policies in the marine plans or other material considerations
- that there are no or limited alternative locations, that alternative locations present other or similar conflicts
- or that avoiding the location is unreasonable (for example, in terms of cost)

334. The requirement under d) is to provide information for consideration by the relevant public authority; it does not indicate that approval of the proposal will follow by default. In determining proposals, the public authorities will take account of a range of relevant considerations including compliance with legislation and regulations and environmental assessment.

335. The assessments could also include any likely impacts of the development on existing or potential Carbon Capture and Storage supporting infrastructure, including pipelines, cables, wellheads and monitoring equipment. Developments or activities that do not penetrate or have little or no impact on the geological structure of the seabed are less likely to impact on carbon dioxide storage prospects.

336. The information on location of potential storage sites (saline aquifers and oil and gas fields) is based on a number of publically available reports including, 'A Carbon Capture and Storage Network for Yorkshire and Humber', and other reports produced by organisations such as the British Geological Survey.[192]

[192] Industrial carbon dioxide emissions and carbon dioxide storage potential in the United Kingdom, British Geological Survey, 2006 http://nora.nerc.ac.uk/4837/

Policy CCS2

Carbon Capture and Storage proposals should demonstrate that consideration has been given to the re-use of existing oil and gas infrastructure rather than the installation of new infrastructure (either in depleted fields or in active fields via enhanced hydrocarbon recovery).

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

337. The Marine Policy Statement (3.3.33) states that 'there are also possibilities to re-use existing infrastructure' to provide access to storage sites. As detailed in the justification text for policy GOV2, the Marine Policy Statement encourages co-location of activities. The Marine Policy Statement and overarching National Policy Statement for Energy EN-1 give high estimates of the future growth and Gross Value Added of the Carbon Capture and Storage sector nationally. It also states that 'initially, attention is likely to focus on depleted oil and gas fields'.

338. Public authorities for Carbon Capture and Storage include; the Department for Energy and Climate Change under the Energy Act 2008 and Storage of Carbon Dioxide (Licensing etc.) Regulations 2010, the Marine Management Organisation under the Marine and Coastal Access Act 2009 and the Planning Inspectorate under the Planning Act. These authorities should ensure that Carbon Capture and Storage projects consider the potential for infrastructure co-location and re-use as early as possible. Such consideration could include an assessment of other infrastructure within the vicinity of the project and analysis of the routeing options in terms of cost, and minimising disruption to other users and the environment. If existing infrastructure is unable to be used for a potential development then this should be detailed within the proposal. Local authorities may also have a role and the governance policy (GOV1) under objective 10 highlights the need for the onshore infrastructure requirements of marine activities to be considered by them in producing land based plans. Policy GOV2 is relevant to the implementation of CCS2.

339. The East marine plan areas have significant carbon dioxide storage potential with existing and planned infrastructure suitable for co-location and re-use, such as pipelines. The East marine plan areas are the focus of initial commercial Carbon Capture and Storage interest. The most relevant map (figure 14) for consideration in terms of co-location opportunities is that of existing oil and gas activity (OG1).

340. The Marine Policy Statement (3.3.33) identifies the potential to 'combine permanent storage of carbon dioxide with the enhanced production of hydrocarbons.' Enhanced hydrocarbon recovery is likely to require less new infrastructure than using entirely unexploited storage sites. Also, it has the

benefit of increasing hydrocarbon production alongside carbon dioxide storage. Policy CCS2 seeks to ensure that the use of hydrocarbon fields for the storage of carbon dioxide is promoted where possible, maximising storage nationally.

341. Where the Marine Policy Statement states the possibility for re-using existing infrastructure, CCS2 promotes it. The justification for this approach is given in the text above.

3.12 Ports and Shipping

Context

342. As set out in the Marine Policy Statement (3.4.1), ports and shipping are critical to the effective movement of cargo and people, and form an essential part of the United Kingdom and global economies. Combined, shipping[193] and ports[194] have been estimated to make a £13 billion value added contribution to United Kingdom Gross Domestic Product. The United Kingdom's busiest port cluster in 2011[195] was Grimsby and Immingham in the East Inshore Plan area handling 12% of the United Kingdom's traffic, with Felixstowe, adjacent to the marine plan areas' southern boundary, the largest container port handling 1.98 million containers. Marine plans aim to ensure safe and commercially viable navigation in the seas as well as in the ports and their approaches, consistent with the National Planning Policy Framework and National Policy Statement for Ports. It should also be recognised that ports have a crucial role to play in developing fields of energy production, particularly offshore wind energy and biomass. Developments underway or in progress related to these activities include Felixstowe South, Great Yarmouth Outer Harbour, Green Port Hull, and the Able Marine Energy Park in North Lincolnshire. Such developments are supported by Local Authorities and Local Enterprise Partnerships through measures such as Enterprise Zones and Local Development Orders. Further developments are cited in annex six of the Evidence and Issues report.

343. Ports in the East Inshore Marine Plan Area rely heavily on trade with Europe, servicing vessels that ply 'short-sea' routes. While the future of waterborne trade is, to an extent, subject to market forces, engagement with relevant port and shipping regulators, representative bodies and operators indicates that port locations and trade patterns are expected to remain similar to those used currently, with growth being facilitated through use of larger vessels. The United Kingdom government and European Commission,[196] together with a number of individual ports, and local authorities, are seeking to facilitate 'coastal' (United Kingdom) and 'short-sea' (European) shipping as part of

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[193] Oxford Economics for Maritime United Kingdom (2011, based on 2009 data) The economic impact of the United Kingdom Shipping Industry

[194] Oxford Economics for Maritime United Kingdom (2011, based on 2009 data) The economic impact of the United Kingdom Ports Industry

[195] Department for Transport Port Freight Statistics: Provisional Annual 2011 http://webarchive.nationalarchives.gov.uk/20120926002851/http://www.dft.gov.uk/statistics/releases/port-freight-statistics-2011-annual-provisional//

[196] European Commission (2011) Roadmap to a Single European Transport Area

encouraging a modal shift from use of road to waterborne freight. This provides the benefits of reducing carbon emissions from freight transport and freeing up road and rail capacity,[197] supporting the climate change objective in these marine plans and national policy drivers (section 3.9).The marine plans are therefore focussed on identifying how important navigable waters can be maintained as a vital feature of the marine plan areas, as well as providing for changing vessel sizes using United Kingdom ports in future, consistent with the Marine Policy Statement (3.4.7) .

344. In the East marine plan areas there are increasing levels of activity encroaching on navigable space (for example, offshore wind farms), making it ever more important to indicate the area essential for navigation so that this is considered from the outset by public authorities and applicants. The East Inshore Plan Area is home to a number of ports that are of national strategic importance to the United Kingdom and these ports, as well as the importers and exporters that rely upon them, need safe navigational access to remain available with capacity to accommodate growth.

345. Note that 'proposals' as referred to in the policies PS1, PS2, and PS3 are taken to include those matters set out in the introductory sections of chapter 3.

346. There are a number of other plan policies that are particularly relevant to decision-making related to ports and shipping, including:

a) in assessing navigation, provisions set out relating to assessment of recreational activities in TR2

b) acknowledging the potential impact that ports can have on heritage assets, provisions set out in SOC2

c) acknowledging the potential impact of port development on the marine environment, provision set out in ECO1, ECO2, and MPA1

d) consideration of shipping in assessing greenhouse gas emissions against CC2

Signposting to existing policies and measures

347. Given that the East marine plan areas support a substantial amount of shipping activity and nationally significant ports, it is important to recognise the prevailing international regulatory framework that shipping operates under. With shipping characterised by its multi-national nature, regulations are agreed at an international level so as to ensure successful operation throughout the waters of the world. International regulation of shipping is complemented in the waters of individual states by management of activities in such a way as to fully consider shipping as a factor in resource use. The following sets out a number of prevailing regulations and considerations in the context of the East marine plan areas.

[197] In line with Department for Communities and Local Government (2012), National Planning Policy Framework. Section 30

348. The United Kingdom is a party to the United Nations Convention on the Law of the Sea and, accordingly, vessels in waters over which the United Kingdom exercises jurisdiction enjoy the navigational freedoms set out in the United Nations Convention on the Law of the Sea.[198] The United Kingdom is also a signatory of the Safety Of Life At Sea Convention requiring vessel traffic routeing, reporting and vessel traffic services where appropriate, and describing the need for international co-operation where changes affect neighbouring Coastal States (eg in East Offshore plan area). Vessels in these waters are also required to obey the International Regulations for preventing Collisions at Sea. Another important factor aiding safety at sea is an ability to avoid bad weather, something addressed via recommendations set out in a related International Maritime Organization resolution.

349. Navigational freedoms set out in the United Nations Convention on the Law of the Seaas well as related measures such as availability of a bad weather routeing are, however, constrained by physical features where fixed infrastructure gives vessels cause to alter course to avoid collision. Such infrastructure represents a substantive contributor to encroachment upon navigable space. It is clear that the most considerable change in use in the East marine plan areas over the next 20 years will be the development of offshore wind farms (Offshore Wind Farms). Shipping is unable to co-locate with Offshore Wind Farms without appropriate consideration and negotiation. Discussions take place between mariners, their agencies and Offshore Wind Farm developers to ensure navigational safety whilst meeting development targets. Changes to shipping activity are likely as a result of fully developed Offshore Wind Farm zones and particularly so in the case of Round 2 (and related extensions) and Round 3 wind farm zone projects due to their size and locations. While negotiations are ongoing related to navigation considerations including the identification of navigable channels, seaways or routes through the Round 3 wind farm zones; maps supporting the marine plans in this and other sections indicate shipping activity and areas where development will occur in the future, and therefore where future changes in vessel movements can be expected. Where corridors, seaways or routes are identified, these will be indicated in reviews of marine plans and subsequent revisions.

350. There are areas where shipping activity is constrained by characteristics of the East marine plan areas, resulting in a range of areas of particular importance to navigation. This includes anchorage areas defined both by the operational activity of ports and by seabed characteristics that make for good holding ground (anchorage areas are indicated in the relevant United Kingdom Hydrographic Office Admiralty charts and publications). Seabed dynamics mean that sediment movement results in changing water depths that can be a controlling factor in prescribing port access that in turn limits navigation options for vessels. Accommodation of important navigation considerations such as these should be factored into assessments of proposals that may have a subsequent impact upon shipping activity being able to adapt to these changing characteristics.

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198 The United Nations Convention on the Law of the Sea, Part VII, Articles 17, 38, 45 and 58(1)

351. These marine plans set out provisions to protect strategic shipping routes but this does not negate the need for project level assessments in line with the Maritime and Coastguard Agency Marine Guidance Note on Offshore Renewable Energy Installations.[199]

352. Issues relevant to ports and shipping include maintenance dredging and disposal. More detail on these matters can be found in section 3.13. Displacement, which is an identified issue impacting on navigation, is addressed via existing policies and measures described under plan objective 10.

Plan policies

Policy PS1

Proposals that require static sea surface infrastructure or that significantly reduce under-keel clearance should not be authorised in International Maritime Organization designated routes.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

353. The Marine Policy Statement states that 'marine plan authorities and decision-makers should take into account and seek to minimise any negative impacts on shipping activity, freedom of navigation and navigational safety and ensure that their decisions are in compliance with international maritime law' (Marine Policy Statement 3.4.7 and 2.3.1.1). The National Policy Statement (S 2.6.161) for Renewable Energy Infrastructure states that a Nationally Significant Infrastructure Projects should not be '... grant[ed] development consent in relation to the construction or extension of an offshore wind farm... [if] interference with the use of recognised sea lanes essential to international navigation is likely to be caused by the development'.

354. The East marine plan areas incorporate policies that are subject to international maritime law and articulate an approach that ensures international obligations are met with regards to maintaining particular navigational requirements. Figure 18 shows where International Maritime Organization designated routes and traffic management measures apply. Policy PS3 specifies that developments should not be authorised where use of International Maritime Organization routes may be compromised. This reflects both the appropriate weight given to commitments made by the United Kingdom to preserving internationally important navigation routes and current practice whereby developments and/or management measures that may

[199] Maritime and Coastguard Agency (2008), Guidance on United Kingdom Navigational Practice, Safety and Emergency Response Issues (MGN 371)

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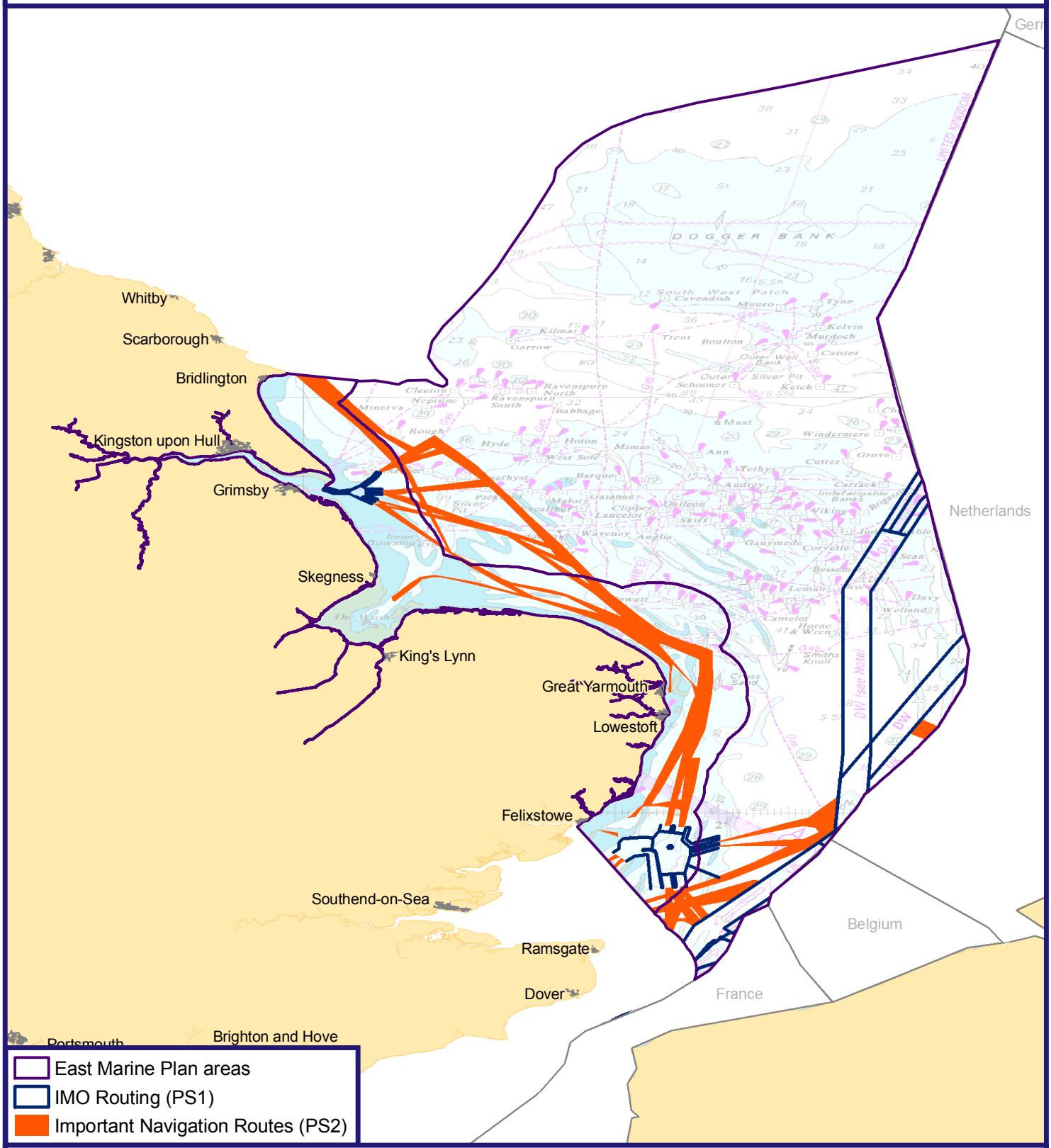
Figure 18: IMO designated routes (PS1) and important navigation routes (PS2)

February 2014

POLICY MAP- This map highlights the area where policies PS1 and PS2 apply. This area may be reviewed as necessary during the life of the Marine Plans. The reader should check for any updates via the link provided in paragraph 102.



impact upon use of International Maritime Organization routes are very rarely proposed.

355. PS1 recognises existing designations for navigation whilst acknowledging the ability to co-locate with many sea-bed related and non-permanent activities. International Maritime Organization routes, as referred to here, are established to maintain navigational safety in busy areas or due to prevailing hydrographic features. In applying this policy, 'significant' reduction of under-keel clearance should be defined by the Maritime and Coastguard Agency upon request of applicants at scoping phase of development proposal preparation. The policy will be implemented by the regulatory authorities responsible for authorising developments or management measures requiring static, sea surface infrastructure that may significantly reduce under-keel clearance in International Maritime Organization designated routes.

356. While it is possible that mid-water structures may impose restrictions on navigation, development of such structures within International Maritime Organization routes[200] in the East marine plan areas has not been identified. The policy does not preclude non-permanent static sea-surface infrastructure such as jack-up vessels, subject to prevailing operational requirements including relevant notifications to mariners being issued to ensure safe operation. The policy does not discount International Maritime Organization - adopted ships' routeing and reporting systems changing in the future through appropriate international agreement.

Policy PS2

Proposals that require static sea surface infrastructure that encroaches upon important navigation routes (see figure 18) should not be authorised unless there are exceptional circumstances. Proposals should:

a) be compatible with the need to maintain space for safe navigation, avoiding adverse economic impact[201]

b) anticipate and provide for future safe navigational requirements where evidence and/or stakeholder input allows and

c) account for impacts upon navigation in-combination with other existing and proposed activities[202]

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

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[200] East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report, http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

[201] Such as creating need for diversion.

[202] Activities to be accounted for may include but not be limited to offshore oil and gas, aggregate extraction, dredging (capital and / or maintenance), fishing, recreational craft, and Marine Protected Areas.

Justification/Explanation

357. PS2 provides additional detail to the Marine Policy Statement (3.4.7) on the importance of minimising negative impacts on shipping activity, protecting the economic interests of ports and shipping and the United Kingdom economy overall, and affording protection to the areas used by high intensities of traffic (Marine Policy Statement 3.4.2).[203] This also gives effect to provisions in the National Planning Policy Framework (S 37) aimed at encouraging sustainable transport.

358. The East marine plan areas are home to nationally significant levels of coastal, short-sea and international shipping. As other activities seek to capitalise on the resources of the area, these should be carried out in such a way as to afford protection of safe and competitive shipping, particularly where important routes can be described. Responding to this, PS2 will be implemented by the regulatory authorities responsible for authorising applications requiring static sea surface infrastructure that may encroach upon important navigation routes as indicated in figure 18.

359. Given the prevailing national and marine plan area context, important navigation routes will be protected for navigation purposes unless conditions are met as set out in PS2. It should be demonstrated that the outcomes of consultation with harbour and other navigation authorities,[204] public authorities[205] and commercial shipping[206] have informed the application proposed. This requires insight from navigation and shipping representatives to be gained that materially informs proposals where development that might impede navigation or expected growth in navigation in the future. This approach recognises the ability to co-locate with sea-bed located and non-permanent activities.

360. Detailed context behind the development of policy map figure 18 is set out in the following text and this is supported by spatial information within indicative map figure 19 (note explanatory text in chapter 3 setting out the role of these different types of map). Information provided in relation to navigation approaches should be accounted for in reference to PS3.

361. Importantly, the context in figure 19 includes identified Scheduled Services that have been identified through close working with ports and shipping representatives and cross-referenced with Automatic Identification System data. While the majority of scheduled services are identified through the approach taken to identifying important navigation routes for PS2, these scheduled services represent routeing information that is of considerable importance in maintaining the viability of specific services. This information should not be considered definitive and additional information related to figure

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[203] The Marine Policy Statement makes reference to 'lifeline ferry services' and these would also be provided for under this policy. However, no such services have come to light in the course of engaging stakeholders in relation to ports and shipping maters in the East plan areas.

[204] Including but not limited to Trinity House http://www.trinityhouse.co.uk/

[205] Including but not limited to the Maritime and Coastguard Agency http://www.dft.gov.uk/mca/

[206] Including but not limited to the Chamber of Shipping http://www.british-shipping.org/home/

19 will be updated via online marine planning resources such as the marine planning portal.

362. Where proposals are progressing, a multi-sectoral approach to resolving navigation issues where they have been identified on a case-by-case basis, such as with regards to Round 3 Offshore Wind Farms, is most appropriate. There is also a need to consider possible cumulative effects that may arise as a result of growing numbers of Offshore Wind Farm projects due to be developed over time. A number of standing bodies, including the Department for Transport chaired Nautical and Offshore Renewable Energy Liaison group, provide a forum for developing a response to the needs of navigation in light of the need for Offshore Wind Farms to deliver renewable energy targets. Such bodies are informed by ongoing research commissioned by relevant parties such as The Crown Estate. The map in figure 18 indicates traffic patterns in the East Inshore and East Offshore Marine Plan Areas and reflects those areas that accommodate over 1000 vessel transits per year.[207] The policy applies where 90% of traffic occurs (areas indicated). PS2 begins on the landward side at the boundaries of harbour administrative areas and/or traffic management areas, and will not include routes that pass through existing or proposed Offshore Wind Farms.

363. Figure 18, provided with policy PS2, has limitations. While it can reflect well established areas of importance to shipping, there are other areas not indicated on the map that are important because they are part of short sea routes. This is because the routes in question, such as Hull – Rotterdam, pass through Round 3 wind farm zones that have yet to be fully planned in terms of the location of projects within the zones. Because the position of wind farm projects in Round 3 wind farm zones are currently unknown, alterations in the patterns of shipping arising in and around them are also unknown. As a result of recognising only those routes that will not be interrupted by Round 3 wind farm zones, a greater area of coastal shipping is afforded considerable protection in comparison to short sea shipping. The consequences of this are that a number of the routes that are important to ports in the East Inshore Marine Plan Area, and of strategic importance to the United Kingdom, are not currently recognised in the map related to PS2. As development plans for Round 3 wind farm zones become clearer, mapping supporting PS2 will be updated.

364. The Marine Management Organisation's shipping density data is based upon Anatec's Ship Routes database represented over a 0.5km by 0.5km grid. Attributable data includes the estimated number of ships passing through the cell per year and the breakdown of shipping by vessel type (cargo, tanker, ferry and offshore service). The data is modelled in part from logging Automatic Identification System data which is based on Very High Frequency radio signals and shows the location and vessel type. Very High Frequency radio signals are limited to being collected within 30 nautical miles of any

[207] This measure of intensity is a number derived by the Marine Management Organisation classifying Automatic Identification Systems data that can be viewed here: http://planningportal.marinemanagement.org.uk/#. Applies to vessels of 300gt and over using Automatic Identification System with others such as fishing vessels, yachts and those less than 300gt not included.

receiver. Outside these limits the Automatic Identification System data will be under represented eg oil and gas installations in the North Sea. Third party organisations such as Anatec collect data in these areas.

365. The other source of information that Anatec uses to build this model (informing figure 18) is estimation using known ship routeing frequencies which Anatec collects in their 'Ship Routes' database. The data inshore and around oil and gas infrastructure (Anatec has Automatic Identification System receivers logging traffic) will be far more reliable than offshore locations which will be purely estimates based on common ship routeing. When calculating ship density, the movements of 'non-routine traffic' such as fishing vessels, military vessels, tugs, dredgers and recreational craft are excluded. It should be noted that irrespective of the map provided, each proposal will be treated on its own merits, with measures such as navigational risk assessments undertaken as required, taking into account commercial and recreational traffic. The figure of 1000 vessels per year disguises the risks that arise from issues such as complex crossing and overtaking situations, and restriction to sea room to manoeuvre as required by the International Regulations for the Prevention of Collision at Sea. Figures used to derive this map are from the United Kingdom Maritime and Coastguard Agency Automatic Identification System data and only includes vessels over 300 Gross Tonnes where Automatic Identification System is operating. Important navigation routes will be re-examined as part of the review of marine plans, with the intention being to update the map at figure 18.

366. An example of an authorisation made in exceptional circumstances may be Nationally Significant Infrastructure Projects.[208]

Policy PS3

Proposals should demonstrate, in order of preference:

a) that they will not interfere with current activity and future opportunity for expansion of ports and harbours[209]

b) how, if the proposal may interfere with current activity and future opportunities for expansion, they will minimise this

c) how, if the interference cannot be minimised, it will be mitigated

d) the case for proceeding if it is not possible to minimise or mitigate the interference

Plan policy applies to the Inshore Marine Plan Area.
In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

[208] As defined in the Planning Act.

[209] In identifying current activity and future opportunity for port or harbour expansion, it is important that applicants demonstrate that ports and harbours' reasoned representations be accounted for in proposals.

Justification/Explanation

367. This policy gives effect to the need to minimise negative impacts on shipping activity, freedom of navigation and navigational safety, as well as protecting the efficiency and resilience of continuing port operations, and further port development.[210] It also complements the National Policy Statement for Ports, setting the provisions in place for port growth in the context of the management and development of other activities. Indication of where this policy should be applied in the East Inshore marine plan area is provided in figure 19, though this should not be considered definitive. The policy will be implemented by the regulatory authorities responsible for authorising applications located below mean high water springs, to consider if applications may interfere with future opportunity for port and harbour growth. United Kingdom ports compete with each other, as well as with neighbours in continental Europe, and this competition drives efficiencies and lowers costs for industry and consumers, contributing to the competitiveness of the United Kingdom economy as a result.[211] This policy is not intended to influence factors related to competition between ports and should not result in consideration related to competition being factored in to decision-making on the basis of these marine plans.

368. There are numerous ports and harbours across the East Inshore marine plan areas ranging from strategically important industrial clusters like Grimsby and Immingham, to operations based in Areas of Outstanding Natural Beauty such as the Port of Wells that support a range of activities including recreation, fishing and Offshore Wind Farms . Felixstowe is an example of a port adjacent to, and with a key interest in access through, the East Inshore plan area (indications of this include related navigational dredging set out in figure 20). In most cases, ports and harbours are seeking to grow in future in relation to the number of vessels and/or the size of vessels utilising them. Therefore, the need for capacity to accommodate these craft will rise. Ports and shipping growth is responsive to global markets and as such the extent of such growth is difficult to predict. In that context this policy provides clarity on the importance of protecting the economic interest of ports and seeks to prevent encroachment through development or other activities around ports and harbours that may restrict the ability to respond to future growth opportunities. Note that proposals in the case of this policy are consistent with paragraph 88 of this document.

369. In understanding where future port or harbour use may need to be accommodated, developments and other activities in and around ports and harbours must have regard to access and approach channels into ports (see figure 19). Where a specific port or harbour is not included in figure 19, figure 20 shows existing licensed dredging and disposal areas, which may be used to indicate where future capital dredging may occur. This approach provides a good starting point for assessment, as activity related to port and harbour development such as accommodating larger vessels is likely to manifest itself as additional works around existing features.

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[210] Marine Policy Statement 3.4.7.

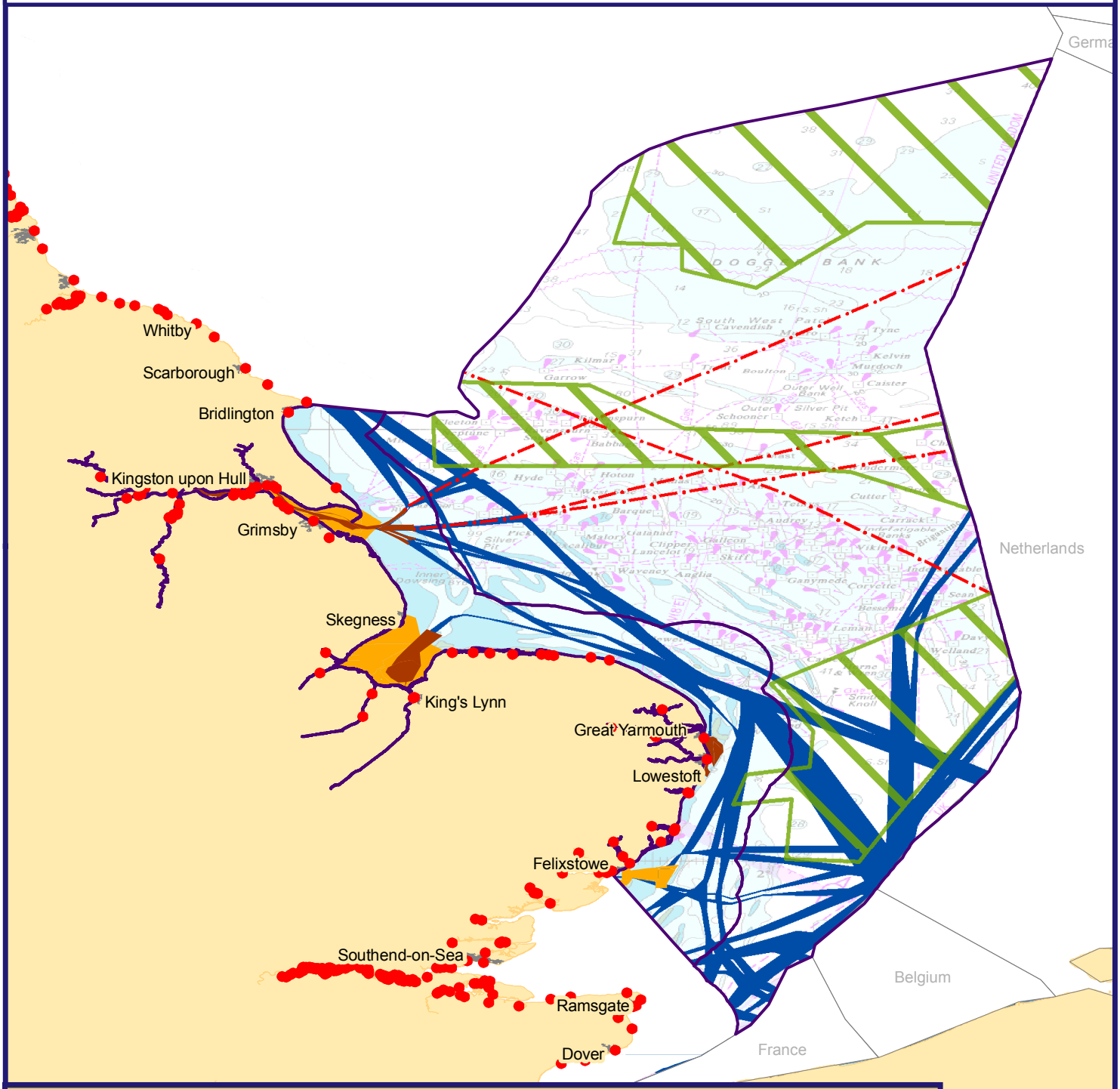
[211] Department for Transport (2012), National Policy Statement for Ports

HM Government

Figure 19: Ports and shipping context

Ferbruary 2014

INDICATIVE MAP- This is an indicative map in support of policies PS1, PS2 and PS3. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.



370. Figure 19 should not be considered in isolation and any interpretation should be subject to review with neighbouring port or harbour authorities to ensure navigation channels are considered in their entirety. This is necessary as navigation channels are composed of areas maintained by licensed processes and those maintained by natural processes, and it may be that those areas maintained by natural processes may be subject to capital and then maintenance dredging in the future as port requirements are identified. Where they exist, port master plans and their descriptions of future development should also be referred to.

371. In identifying current activity and future opportunity for port or harbour expansion, it is important that applicants demonstrate that ports and harbours' representations are considered in proposals. Such representations should include the matters listed in these plans but may also include other considerations that may be important where relevant, for example anchorages.

372. This policy applies to proposals that may alter the prevailing characteristics in Statutory Harbour Authority areas but may apply more widely, so active identification of ports and harbours that may be affected by proposals and early engagement with them, is encouraged.

373. Having considered a), b), and c), where d) is demonstrated, an example of an authorisation may include those made in exceptional circumstances such as Nationally Significant Infrastructure Projects [212] (subject to normal planning and consent processes). The requirement under d) to provide information for consideration by the relevant public authority does not indicate that approval of the proposal will follow by default. In determining proposals, the public authority will take account of a range of relevant considerations including compliance with legislation and regulations and environmental assessment.

3.13 Dredging and Disposal

Context

374. The Marine Policy Statement (3.4.1) states ‘ports are an essential part of the United Kingdom 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 United Kingdom and in the context of the global economy’ and that (3.6.3) ‘dredging is an enabling activity which is essential to the functioning of ports and marinas’. Continued navigational access to ports and harbours would not be achieved without maintenance dredging, whilst capital dredging enables new activities to proceed by creating new, deeper and wider channels, and berths. Capital dredging has great significance within the East Inshore Plan Area, due to port expansion developments such as Green Port on the Humber.

[212] As defined in the Planning Act.

375. There are a substantial number of existing maintenance dredging and disposal licenses within the marine plan areas. These are mainly focused within the East Inshore Plan Area. A map showing licensed areas can be found at figure 20. Dredging activities play a vital role in both maintaining and expanding the socio-economic benefits that port development attracts through both direct and indirect job creation. This activity also supports terrestrial infrastructure as well as imports, exports and tourism. When considered alongside port expansion proposals and the growth in offshore renewable energy developments, there is scope for expansion for the sector.

376. Harbour authorities' statutory powers to dredge and to dispose of dredged materials in tidal waters are subject to consent. A licence to dispose of dredged spoil at sea must be obtained from the Marine Management Organisation. Exceptions exist under the Marine Licensing (Exempted Activities) Order 2011(SI 2011/409). Where The Crown Estate, or another party, own the bed of the harbour their permission for dredging operations is also likely to be needed. As of 2014[213] all maintenance and navigational dredging requires consent through a marine licence unless it is specifically exempted.[214]

377. The Marine Policy Statement (3.6.8) states that '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'.[215] Where possible, dredged material should be reused or recycled before choosing to dispose at sea. Schemes for such re-use include replenishment of mudflats providing habitat and feeding grounds for wildlife, and recharging of barrier beaches for coastal defence.[216] Approved marine licences may stipulate this as a condition, and this is signposted in accordance with the Oslo/Paris Convention for the Protection of the Marine Environment of the North East Atlantic Guidance and the Waste Framework Directive. The amount of dredged material disposed at sea each year from the United Kingdom has been relatively consistent since 1985.[217]

378. Subject to a relevant screening exercise, capital dredging and the disposal of spoil within one nautical mile of the coast may require a full Environmental Impact Assessment, including the likely effects on protected European sites or species, and will be tested under the Water Framework Directive.[218] Where appropriate, maintenance dredging activities should be assessed using the Maintenance Dredging Protocol. Dredging proposals should be considered in line with any cumulative impacts which may affect the ecosystem of the East marine plan areas (see also plan policy ECO1).

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213 Marine and Coastal Access Act Transitional processes order 2012 (http://www.legislation.gov.uk/uksi/2012/698/contents/made)

214 Including the Marine and Coastal Access Act s. 75

215 http://www.defra.gov.uk/environment/waste/legislation/waste-hierarchy/

216 2008/98/EC of the European parliament and of the council of 19 November 2008 on waste and repealing http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:312:0003:0030:EN:pdf

217 Marine Policy Statement 3.6.2

218 Environment Agency (2000) www.environment-agency.gov.uk/research/planning/33362.aspx

379. Increased shipping activity and larger vessels are likely to result in applications to dredge deeper, wider and more frequently. This will have a direct effect on the amount of disposal material to be managed at sea and a possible increase in the number of disposal licence applications within the East marine plan areas.

Plan Policy

Policy DD1

Proposals within or adjacent to licensed dredging and disposal areas should demonstrate, in order of preference

a) that they will not adversely impact dredging and disposal activities

b) how, if there are adverse impacts on dredging and disposal, they will minimise these

c) how, if the adverse impacts cannot be minimised they will be mitigated

d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts

Plan policy applies to the Inshore Marine Plan Area.
In reading this policy, please note the introduction at the start of chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

380. This plan policy aims to protect dredging and disposal activities, in or adjacent to licensed dredging and disposal areas, against other new proposals, eg cables or built infrastructure, that would compromise the continued access to ports and harbours for the shipping industry. The policy will be implemented by the regulatory authorities responsible for authorising such proposals. This is considered a crucial means to maintain the access to ports and harbours and to meet various objectives within the marine plans.

381. Risks associated with dredging are controlled in such a way as to mitigate potential environmental damage from the activity. Dredging activities are subject to monitoring requirements proportionate to the level of risk associated with the activity taking place.

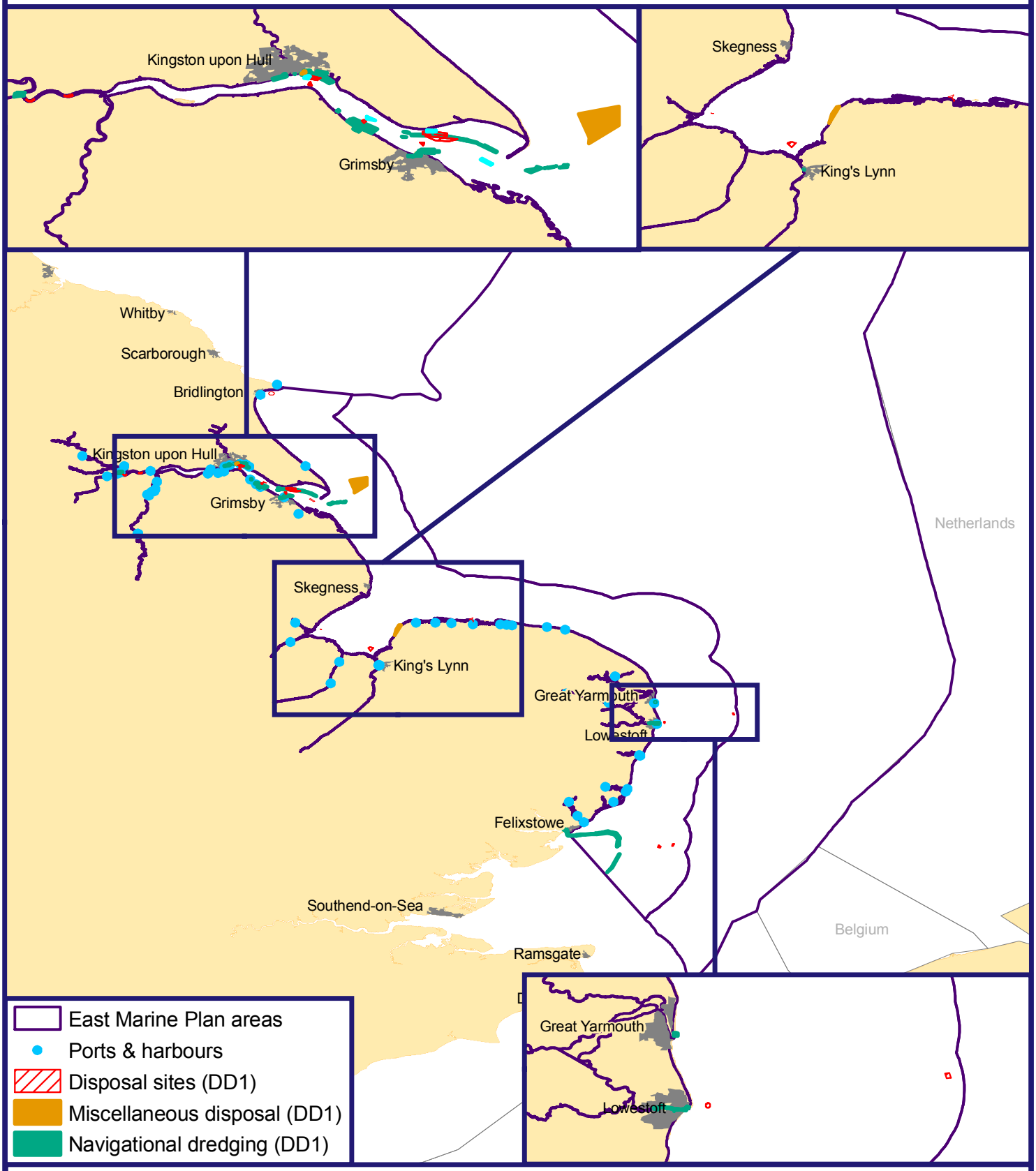
382. The requirement under d) is to provide information for consideration by the relevant public authorities. It does not indicate that approval of the proposal will follow by default. In determining proposals, public authorities will take account of a range of relevant considerations including compliance with legislation and regulations detailed in the maintenance dredging protocol and from the applicable environmental impact assessment. Such authorisation could include applications for projects considered to be in the national interest, eg major infrastructure projects including new power stations (subject to normal planning and consent processes).

HM Government

Figure 20: Licensed dredging and disposal areas (DD1)

February 2014

POLICY MAP- This map highlights the area where policy DD1 applies. This area may be reviewed as necessary during the life of the Marine Plans. The reader should check for any updates via the link provided in paragraph 102.



383. Other exceptional circumstances could include where the dredging company that holds the lease allows another party to use that area either for dredging or disposal or other uses. Changes to the lease would be subject to agreement with the lease holder.

384. This policy adds clarity to existing national policy by identifying where dredging and disposal areas exist within the East Inshore and East Offshore Marine Plan Areas. A map showing licensed areas can be found at figure 20. It aims to clarify the application process for decision-makers and licence applicants, for early intervention, in dealing with issues or conflicts which may arise during the application process. Public authorities in particular will need to ensure that applicants submit supporting information, proportionate to any development proposed, that would illustrate any potential impacts (this may include consultation to identify issues at scoping stage), and suggest measures to minimise or mitigate them.

3.14 Aggregates

Context

385. Marine aggregates play an important role in supply of aggregates nationally. Demand is predominantly for use in construction projects, with associated benefits such as investment and jobs, and the contribution to the economy both in the United Kingdom and in Europe. The Evidence and Issues report (chapter 4.5) considers the wide ranging economic benefits and future projections for the industry in detail as well as the type of projects that marine aggregates support.

386. The East marine plan areas typically account for over half of the total extraction of marine aggregates (by weight) at a national level. Almost half of the national commercial extraction licences are also located in the East marine plan areas. Marine plan area sourced aggregates accrue economic benefits at a national level, although these are particularly pronounced in London and the south east. There has also been local demand for sand for beach recharge between Mablethorpe and Skegness and Happisburgh and Winterton within the East Inshore Marine Plan Area. There are a substantial number of existing licensed areas for aggregate extraction in the marine plan areas, many of which are due for renewal by 2017, with 14 licence areas requiring renewal by the end of 2014. There are also a number of ‘exploration’ areas.

387. A joint initiative between The Crown Estate and members of the British Marine Aggregate Producers Association aims to minimise the area of seabed licensed and area of seabed dredged. This reduces the spatial impact of the activity, and the potential for conflict with others as a result. This has been supported by the introduction of active dredge area zones and Regional Active Dredge Area charts[219] that are produced bi-annually. In all cases, compliance is ensured through electronic monitoring systems that are required to be in operation on all marine aggregate dredgers.

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[219] http://www.bmapa.org/issues/other_sea_users.php

388. The requirements of other marine users are considered throughout licensed operations, for example a Code of Practice has been established by the industry in conjunction with Marine Management Organisation and The Crown Estate to facilitate liaison and communication with fisheries interests while dredging operations are taking place.[220]

389. Marine aggregate extraction can only occur where commercially viable deposits of sand and gravel occur. In turn, the distribution of these deposits is dependent on the spatially discrete areas where they were formed by geological processes. British Geological Survey identified areas of high resource potential[221] for future marine aggregate supply within the East marine plan areas beyond existing licensed and exploration areas. This provides an indication of the likely optimum location for aggregate extraction over the life of the marine plans (see figure 21).

Signposting to existing policy and measures

390. The Marine Policy Statement (3.5.5) states: 'marine plan authorities should as a minimum make provision[222] within marine plans for a level of supply of marine sand and gravel that ensures that marine aggregates (along with other sources of aggregates, including recyclates) contribute to the overarching government objective of securing an adequate and continuing supply to the United Kingdom market, taking into consideration the potential long-term requirement for marine-won sand and gravel.' Public authorities should ensure that marine extracted aggregate supplies continue to contribute to the overall level of minerals supply within England, given the contribution that aggregates make to the national economy, as emphasised in the National Planning Policy Framework and existing national guidelines[223] on expected demand for aggregate minerals.[224]

391. Both renewal of existing licences and applications for new licences are likely to be subject to regulatory and non-regulatory requirements. This includes carrying out an Environmental Impact Assessment and, where relevant, Coastal Impact Studies are undertaken to support aggregate dredging applications. Where aggregate extraction proposals occur within 1nautical mile from the coast, a Water Framework Directive compliance assessment will be required.

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220 See http://www.bmapa.org/documents/marine_aggregate_fisheries_liaison_310712.pdf

221 Study to be released by British Geological Survey in due course. http://www.thecrownestate.co.uk/media/340963/BGS%20east%20coast%20report.pdf

222 Department for Communities and local Government (2012), National and Regional Guidelines for aggregate provision in England 2005 – 2020, Annex A

223 Department for Communities and Local Government (2012), Guidance on the Managed Aggregate Supply System

224 The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) http://www.legislation.gov.uk/uksi/2007/1518/made

Plan policies

392. The plan policies below apply the intent set out in national policy taking account of the regional and national importance of the East Inshore and Offshore Marine Plan Areas for marine aggregate supply, and of the spatially discrete areas in which commercially viable deposits of sand and gravel are found. The policies start with the most well established areas of interest and move on to less well established future activity with an associated decrease in the level of protection afforded. The nature of the evidence base and management of the marine resource mean that it is difficult to derive a policy that is the same as the 'allocation' given in mineral policies in some terrestrial development plans. AGG1 does provide a strong level of protection that is as analogous to such terrestrial plan policies as can be justified.

Policy AGG1

Proposals in areas where a licence for extraction of aggregates has been granted or formally applied for should not be authorised unless there are exceptional circumstances.

Plan policy applies to the Inshore and Offshore Marine Plan Areas.
In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

393. A range of public authorities are relevant to ensuring the plan policy is met, particularly public authorities that make relevant authorisations (including the Marine Management Organisation as public authority for aggregate licences) and The Crown Estate.

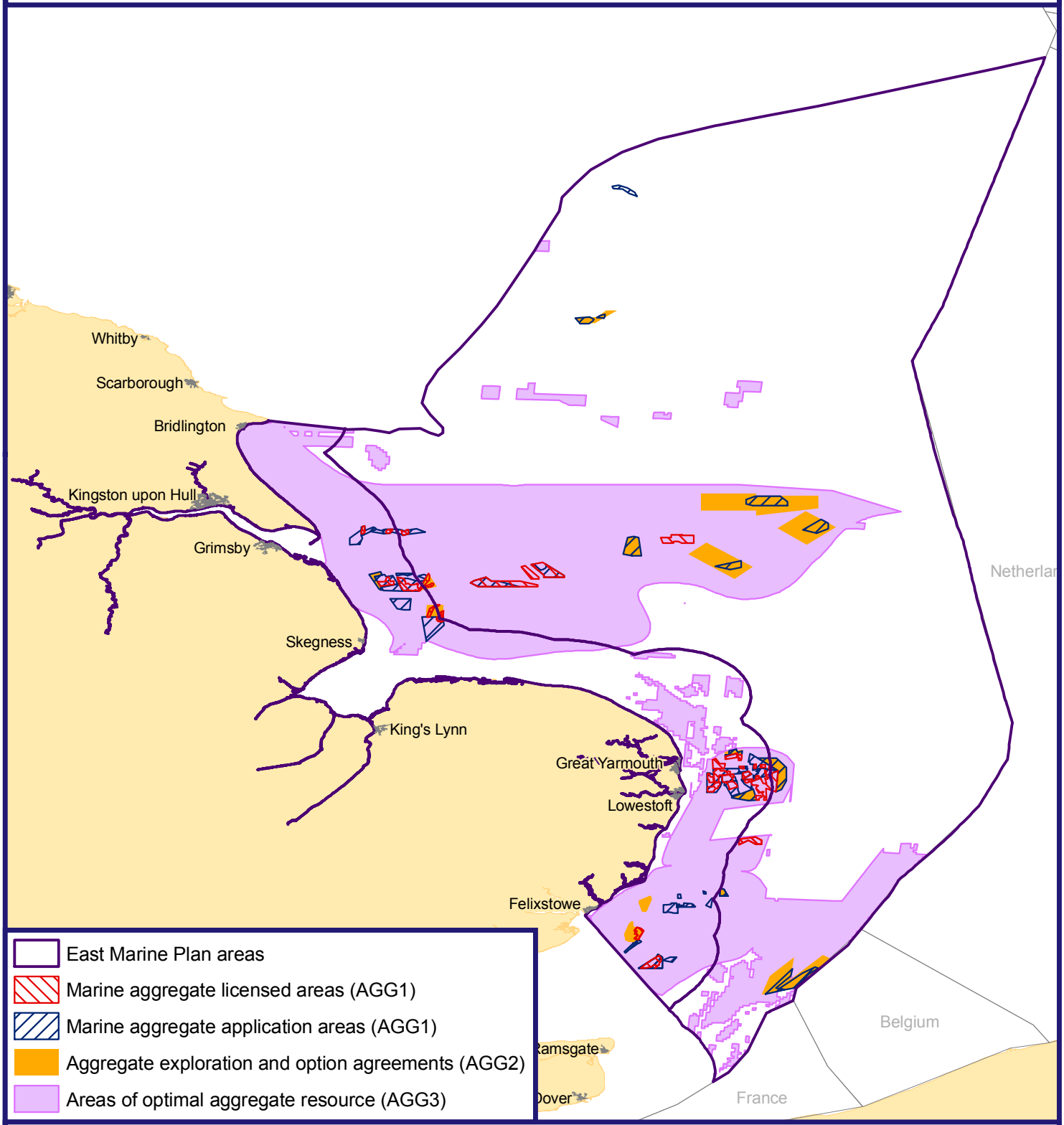
394. Licensed areas to which the policy applies in the East Inshore and East Offshore Marine Plan Areas are shown in figure 21. The Marine Management Organisation also provides a public register of aggregate licence applications that have been formally received. This policy protects licensed areas (existing and new once identified at the application stage) against other new proposed development or activities, eg cables, built infrastructure, whether in or adjacent to the area, that would compromise aggregate extraction operations. This is to reflect the work by all involved parties, including investment by the applicant, to obtain a licence or reach the point of application for an aggregate extraction licence. It encompasses any agreement between The Crown Estate and dredging companies to give exclusive rights to seek permission for extraction of sand and/or gravel for a defined term. This is considered a crucial means to maintain supply of aggregate and meet various objectives within the marine plans, supporting land based sustainable development. It also helps to provide confidence to the industry to meet the demands of changing markets. Where a marine licence is issued, operators are required to commence works within five years of the date of issue, subject to the completion of any pre-dredge surveys required, otherwise the licence will lapse.

HM Government

Figure 21: Marine aggregate application and licensed areas (AGG1), exploration and option agreements (AGG2) and areas of optimal aggregate resource (AGG3)

February 2014

POLICY MAP- This map highlights the area where policies AGG1, AGG2 and AGG3 apply. This area may be reviewed as necessary during the life of the Marine Plans. The reader should check for any updates via the link provided in paragraph 102.



395. Existing licences for aggregate extraction are subject to renewal. Assuming that there are commercially viable deposits remaining, it is expected that such licences would be renewed subject to successfully completing the necessary regulatory processes, eg Environmental Impact Assessment.

396. The exceptional circumstances are: i) where the aggregates company that holds the lease allows another party to use that area either for aggregate extraction or another use; ii) where it is determined that the location should be licensed (by the Department for Energy and Climate Change) for oil or gas development (see also plan policies OG1 and OG2). Changes to the lease would be subject to agreement with the lease holder.

397. All licences (new or renewal) are subject to project-level assessments including Environmental Impact Assessment or Coastal Impact Study (where relevant) and subsequent conditions (see Marine Policy Statement 3.5.6, and more detailed guidance provided by Marine Management Organisation).[225]

Policy AGG2

Proposals within an area subject to an Exploration and Option Agreement with The Crown Estate[226] should not be supported unless it is demonstrated that the other development or activity is compatible with aggregate extraction or there are exceptional circumstances.

Plan policy applies to the Inshore and Offshore Marine Plan Areas.
In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies. This policy will apply to the point where a production licence is applied for (after which policy AGG1 applies).

Justification/Explanation

398. 'Exploration area' includes what The Crown Estate refers to as the act of investigating, through survey techniques, for commercially viable aggregate resources within a defined area of seabed, and is subject to the exclusive option agreement outlined above. This policy signals to those applying for an authorisation for a new development or activity that prevents future extraction of aggregates in exploration areas that it is likely to be looked on unfavourably once an area is awarded 'rights' by The Crown Estate and identified on a map by the Marine Management Organisation (see figure 21). The exploration area will be updated as soon as possible after new data is provided. It is expected that proponents of new development or activities will consult with the relevant aggregate company and others such as The Crown Estate, to determine compatibility and to satisfy the public authorities that the policy is met. Early

[225] http://www.marinemanagement.org.uk/licensing/marine/activities/dredging.htm http://www.marinemanagement.org.uk/licensing/documents/guidance/03.pdf

[226] Details of tender rounds available at http://www.thecrownestate.co.uk/marine/aggregates/working-with-us/tender-rounds/

consultation should help to avoid a conflict arising after either the aggregate company or non-aggregate proponent have made investment in the location – ie increasing investor certainty at an early stage.

399. A range of parties are involved in ensuring the plan policy is met including public authorities that make relevant authorisations, the Marine Management Organisation (as public authority for aggregate licences) and The Crown Estate.

400. Aggregate exploration occurs within a defined area of search which is expected to yield a production agreement covering a smaller spatial area. It is crucial that exploration areas have a level of protection, indicated by this policy to ensure that the smaller (in area) production agreements can be derived. Applications for authorisation of other development or activities, within an exploration area for aggregates, should clearly demonstrate that they are not compromising access to, or the licensed extraction of, aggregate resource. Examples where this is likely to be the case include increased shipping traffic arising from a port development. One possible interaction that may merit further consideration is the designation of new anchorage areas within harbour jurisdictions. Whilst this has not been identified as an issue in the East Inshore Marine Plan Area, consultation between harbour authorities and existing aggregate rights holders is encouraged to facilitate co-ordination and avoid spatial conflict between these activities in the future.

401. The exceptional circumstances are: i) where the aggregates company that holds the agreement allows another party to use that area either for aggregate extraction or another use; ii) where it is determined that the location should be licensed (by the Department for Energy and Climate Change) for oil or gas development (see also plan policies OG1 and OG2).

402. Exploration and follow up activities are subject to various conditions. The area to which this policy applies will change, as exploration rights are surrendered over time to make way for production agreements. Where exploration areas are considered unsuitable for aggregate extraction and an operator's rights are relinquished, they fall outside of the scope of this policy.

Policy AGG3

Within defined areas of high potential aggregate resource, proposals should demonstrate in order of preference:

a) that they will not, prevent aggregate extraction

b) how, if there are adverse impacts on aggregate extraction, they will minimise these

c) how, if the adverse impacts cannot be minimised, they will be mitigated

d) the case for proceeding with the application if it is not possible to minimise or mitigate the adverse impacts

Plan policy applies to the Inshore and Offshore Marine Plan Areas.

In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

403. The Marine Policy Statement (3.5.6) states that, amongst other considerations, marine plan authorities and decision-makers should: '...take into account the need to safeguard [aggregate] reserves for future extraction'. Policy AGG3 applies the Marine Policy Statement taking account of the regional and national importance of the East Inshore and East Offshore Marine Plan Areas for marine aggregate supply and of the spatially discrete areas in which commercially viable deposits of sand and gravel are found. The policy is intended to enable public authorities to consider how proposals (for a definition of proposals see paragraph 88) for marine development and activities within areas of high potential aggregate resource, as defined by British Geological Survey, may impact the ability to access commercially viable marine sand and gravel resources in the future. This will help to secure access to sufficient supply of aggregate resources. Application of the policy should take account of other policies, eg OG2. Other considerations set out in national policy include the need to base decisions on sustainability criteria;[227] and plan policy BIO1 should be considered given the importance of sand and gravel habitats.

404. The areas defined as high potential aggregate resource are based on mapping undertaken by British Geological Survey [228] on behalf of The Crown Estate and identify the locations with the greatest potential for aggregate resource, taking into account the geological processes that created them. In turn, these areas identify where future exploration is most likely to occur, with the exclusion of Round 3 wind energy zones (in accordance with plan policy WIND2). See the resulting map in figure 21. Estimates of the new spatial footprint required to meet projected demand for marine aggregates indicate that less than 5% of the area shown in figure 21 would be needed for aggregate production.[229]

405. A range of public authorities are relevant to ensuring the plan policy is met, particularly those making relevant authorisations (including the Marine Management Organisation as public authority for aggregate licences) and The Crown Estate.

406. The policy does not apply to other activities that are already licensed including where those activities may exclude new aggregate extraction, eg protected cable corridors and existing aggregate licence areas; such locations are not shown in figure 21. In the longer term, the area may encompass locations with potential aggregate resource that are currently excluded due to existing

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[227] Marine Policy Statement 3.5.6.

[228] The Mineral Resources of the East Inshore and East Offshore Marine Plan Areas, Southern North Sea http://www.thecrownestate.co.uk/media/340963/BGS%20east%20coast%20report.pdf

[229] East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report, Chapter 4.15 http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

proposals, eg oil and gas installations and associated exclusion zones, when they come to the end of their life and are decommissioned.

407. Applications to authorise alternative activities should demonstrate that no viable sand and gravel resources are present, or where they are, that any new proposals within these defined areas will not prevent the ability to extract the resource in the future. It is expected that proponents of other development or activities would consult with others, such as The Crown Estate, aggregate companies, and regulators, in addressing a), b), c) or d). The requirement under d) is to provide information for consideration by the relevant public authority. It does not indicate that approval of the proposal will follow by default. In determining proposals, the public authority will take account of a range of relevant considerations including compliance with legislation and regulations and environmental assessment.

408. Where a development comes to the end of its lifecycle and requires decommissioning (the removal of existing hard infrastructure), potential for future aggregate extraction should be demonstrated in the decommissioning plan.

409. In AGG3, ways in which applicants may satisfy a) include providing data that shows the area does not contain aggregates or providing evidence that their operation will be compatible with extraction activity. Given the uncertainty that applies to some of the mapped areas and the size of the ‘area of search’, the policy makes substantial allowance for the possibility of other, competing development to proceed under particular circumstances; as such, it is a less protective policy than AGG1 or AGG2. Circumstances under which b) might be satisfied could include showing that the footprint of the proposal relative to the available aggregate in that location is de minimis. Circumstances under which c) might be satisfied could include moving the proposal from a more to less favourable area for aggregates, or proposing that prior extraction of aggregates before development is feasible. Circumstances under which d) might be satisfied could include demonstrating the importance of the proposal to meet other objectives or policies in the marine plans or other material considerations, that there are no or limited alternative locations, that alternative locations present other or similar conflicts, or that avoiding the location is unreasonable (for example, in terms of cost).

3.15 Subsea Cabling

Context

410. As stated in the Marine Policy Statement (3.7.1), ‘submarine cables are part of the backbone of the world's power, information and international telecommunications infrastructure, and are socially and economically crucial to the United Kingdom. Submarine telecommunication cables carry over 95% of the world's international traffic including telephone, internet and data, as well as many services for the United Kingdom's local communities, major utilities and industries. The transatlantic cables landing in the United Kingdom carry more than 70% of Europe’s transatlantic internet traffic.’ Alongside this,

electricity power cables will support 18Gigawatts of offshore windfarms by 2020.[230]

411. There is likely to be significant additional subsea cable installation to support the sector's expanding activity (both power and telecommunications) to service renewable energy development in the East marine plan areas and increases in broadband use across the United Kingdom. The East marine plan areas contain 19% of English submarine cables, second only in importance to the South West Marine Plan Areas.[231] Subsea cables deliver the benefits of any Offshore Wind Farm activity, future renewables activity, offshore power grid, interconnectors, communication and broadband provision. They also include interconnectors between the United Kingdom and Europe. Future improvement could be severely limited if these aspects are not properly considered in planning and decision-making.

412. Subsea cable types are subject to differing controls in legislation depending on what the cables are for and where the cables are to be located. All cables are subject to licensing controls where they are within the 12 nautical mile United Kingdom territorial waters. Outside of the 12 mile limit telecommunications cables are exempt from licensing, but cables associated with exploration or exploitation of natural resources within the United Kingdom Renewable Energy Zone remain subject to licensing control. Subsea cables are generally buried where seabed conditions are suitable, but this is not always practical or possible and therefore not all cables can be buried. Where this is the case, alternative 'protection' measures may be deployed, such as split pipe, grout bags, rock placement, or mattressing, taking account of the circumstances of individual cases including normal depth limitations.[232] These measures are required to protect telecommunications cables in order to reduce the risk of telecommunications unavailability of service. A break in service can have a significant impact upon the financial trading industry and other internet based businesses with considerable implications for the economy. Given their critical nature to the United Kingdom, electricity power cables also need similar protection measures to ensure the safety and security of the supply grid.[233]

413. The East marine plans recognise that the growth in other sectors, as well as within the cabling industry, increases the risk of potential damage to subsea cables (telecommunications, interconnector and renewable energy power cables) so marine users and public authorities need to know how this risk can be minimised. The Evidence and Issues Report 2012 identified a number of sectors that could conflict with submarine cables. Consideration will need to be given to activities outside of areas where cables are currently laid that may prevent any expansion of cable networks in the future, as well as the cumulative effects of these activities on cabling installation. This is likely to be

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[230] Renewable Energy Roadmap

[231] Strategic Scoping Report for marine planning in England

[232] Where using diver applied measures – up to 10-15m water depth, beyond that depth protection measures could take the form of rock placement or mattress application or similar measures which are applied without the use of divers.

[233] North Sea Countries Offshore Grid Initiative is in the process of considering the best way forward for a long term solution to connections in the North Sea. http://www.benelux.int/NSCOGI/

especially pronounced in the inshore area due to the number of activities occurring, and potential conflict regarding landfall sites – which would also impact on the planned location within the marine area. In the future, defining zones for cables (both electricity cables from interconnectors, Offshore Wind Farm and communications) may be a useful approach for all developers and public authorities, to reduce installation and maintenance interference by other users, and should be considered as part of any revisions to the marine plans.

414. Landfall sites and access to them are a key issue for the subsea cables sector. This issue however, does not just apply to this sector but much more widely to a range of activities. This is dealt with through the governance objective (10) which aims to ensure that provision is made for onshore infrastructure (see policy GOV1) for the subsea cables sector amongst others.

415. In the future, any possible cable zones would require further assessment, such as to avoid sensitive seabed habitats, the limited locations of suitable power grid or telecommunications connections (landfall points) as well as considering other socio-economic constraints and other aspects as identified in the Marine Policy Statement (3.7.4). Considerations for landfall sites should include the technical opportunity for cable installation, any existing cable activity (see figure 22 and figure 15)[234] and any existing infrastructure[235] on land. The Coastal Concordat principles should help public authorities to manage such matters. See also paragraph 5 in this document and the governance section. Pending such assessment an appropriate policy with a map showing the location of cable zones could be included in future iterations of the marine plans. The Marine Management Organisation's Socio-Economic Study can help cable owners and infrastructure licence applicants understand the characteristics of different communities and what may drive demands for infrastructure in the future. In particular it could indicate where demands for broadband or other telecommunications services may be required, and assist in consideration of the impacts on the communities and other sectors.

Signposting to existing policies and measures

416. In addition to the Marine Policy Statement paragraphs already highlighted and the National Planning Policy Framework text below (paragraph 418), guidance released in summer 2012 and agreed by industry as current best practice in relation to cable proximity and maintenance in relation to Offshore Wind Farm, has been endorsed by government departments with an interest in cables, and other agencies including the Marine Management Organisation. The Crown Estate study[236] supports industry best practice,[237] finding that the single most important factor in reaching a successful outcome for any cable project is early

[234] See also figure 13: Offshore Wind Farms leased area, agreements for lease and areas under exclusive zone for the locations of leased areas for wind energy development.

[235] Existing power infrastructure is shown in the National Grid's Ten Year Electricity Statement http://www.nationalgrid.com/uk/electricity/ten-year-statement/.partiularly Appendix A

[236] http://www.thecrownestate.co.uk/marine/cables-and-pipelines/studies-and-guidance/ Submarine cables and offshore renewable energy installations proximity study

[237] http://www.ukcpc.org.uk/guidelinesForm.asp?y=DocumentTxt ASC&Id=123

and open engagement between key stakeholders, and consideration of this guidance.

Plan policy

Policy CAB1

Preference should be given to proposals for cable installation where the method of installation is burial. Where burial is not achievable, decisions should take account of protection measures for the cable that may be proposed by the applicant.

Policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction at the start of chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

417. The Marine Policy Statement (3.7) indicates the importance of the sector, the impacts it may have and the circumstances under which cables may be buried or not. The policy will be implemented by the public authorities responsible for authorising such activity. A key concern is damage to cables from other activities. The Marine Policy Statement (3.7.4) states that 'through the marine planning process, marine plan authorities should help facilitate the co-ordination of marine activities, a better understanding among relevant industries and the communication of guidelines to ensure both the safety of these installations and safe access to them for maintenance purposes'.

418. The National Planning Policy Framework (S 162) states that 'local planning authorities should work with other authorities and providers to:

- Assess the quality and capacity of infrastructure for ...energy, telecommunications, ...and its ability to meet forecast demands and
- Take account of the need for strategic infrastructure including nationally significant infrastructure within their areas.'

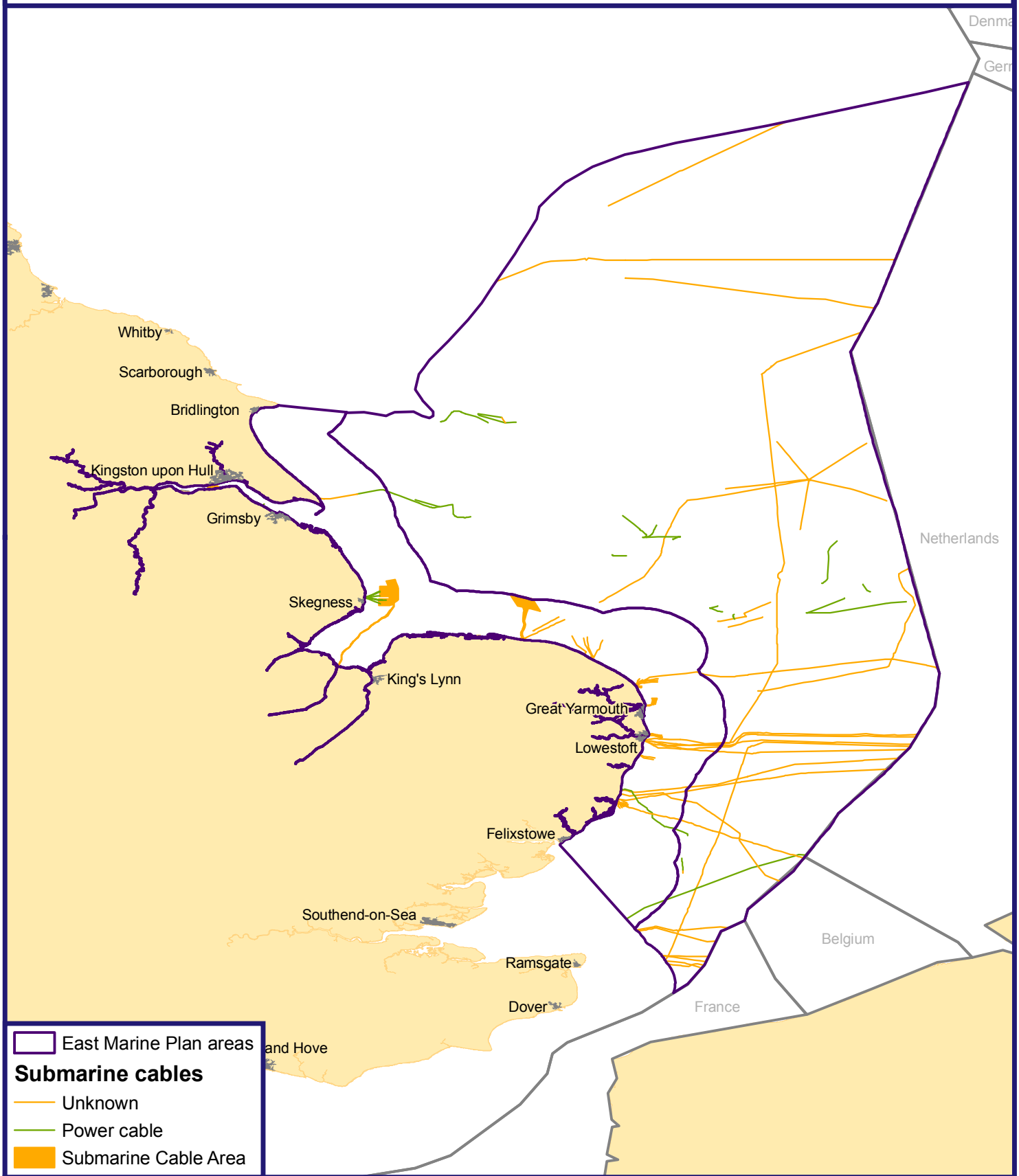
419. The prevalent view from stakeholders throughout the marine planning process is that cable burial, where possible, is preferred in order to minimise impact and protect cables. This has the additional benefit of increasing co-location and co-existence opportunities eg; fishing, shipping and recreation (leisure boating). Therefore, a policy in preference of cable burial seeks to meet the needs of the sector whilst maximising the potential opportunity for other uses of the marine plan areas. Where cable burial is to be undertaken, the installation is to be compliant with all applicable legislation. Burial is reliant on compliance with management measures of any designated conservation sites. This is aligned also with the Safety Of Life At Sea aims.

HM Government

Figure 22: Submarine telecommunication and power cables

February 2014

INFORMATION MAP- This map provides supporting information for section 3.15. The reader should check for any updates via the link provided in paragraph 102.



420. Where burial is not possible or practical, public authorities should take account of any protection measures for the cable that may be proposed and the circumstances of the individual case (ie any present project level assessment) in determining the licence. In making decisions, public authorities should note that not all protection measures are appropriate or possible in all circumstances, and may be affected by various project factors, for example; cable purpose, type, length, operational installation or maintenance costs.

421. Public authorities should look to ensure that adverse impacts upon cable operations are in the first instance avoided. Where this is not possible, such impacts should be minimised through any mitigation proposals. Mitigation proposals will vary with cable type and purpose, as does any applicable legislation. Where appropriate and required by relevant legislation, proposals should also consider other interests such as likely sector activity or applicable environmental constraints (ie based on the proposed activity, associated risks, and consequences). The role and scope of the marine plans and how these policies are applied should be considered when making these decisions (see paragraph 82 onwards).

422. Cable owners should also take note that navigation lanes and deep water channels should be kept free of cabling in order to allow for maintenance dredging (see plan policies GOV1, DD1 and PS2). An associated increase in cabling from Offshore Wind Farm development may have implications for navigation channels where cables come to shore. Ports and marinas should be kept free of cabling where possible to allow for future development including capital dredging as set out in policies PS2 and TR2.

3.16 Fisheries

Context

423. The Marine Policy Statement explicitly expresses support for the fishing sector, and is aware of many issues that the industry faces such as displacement, seeking solutions such as co-location of activity wherever possible. The Marine Policy Statement states that 'the United Kingdom has a long history of fishing in both inshore and offshore waters which the United Kingdom administrations wish to see continue' (Marine Policy Statement 3.8.1). The term 'fishing activity' (as used in FISH1 below), includes any activity undertaken by licensed, commercial fishing vessels.

424. In the East Inshore and East Offshore Marine Plan Areas fishing takes many forms, with some types reliant on particular grounds that are fished seasonally and others being nomadic in nature. The mobility of the fishing sector is dependent on stock behaviour and migratory patterns together with any individual vessel or crew logistical limitations, such as the size of vessel and its capacity to remain at sea overnight, or for numerous days or weeks.

425. Off the Suffolk coast there are predominantly inshore fisheries based on small concentrations of vessels under ten metres in length operating from several locations using a variety of fishing gear and methods to target different

species (for example bass in summer and cod and rays in winter). Around Norfolk smaller vessels target mainly crab and lobster offshore whilst activity in the Wash is focussed on shellfish – primarily cockle, mussel and brown shrimp. There are a mix of smaller vessels inshore and much larger vessels operating offshore working out of Grimsby and Hull, together with a clustering of locally significant processing facilities in King's Lynn, Boston and Cromer, that offer economic and social benefits in terms of numbers employed onshore well beyond those active within the sector at sea. Activity off the Holderness coast up to Flamborough supports a large number of vessels, particularly in the shellfish sector, although other species are targeted. Bridlington is host to the most significant[238] shell-fishery in the United Kingdom and is the most significant lobster fishery in Europe. Onshore activities associated with fisheries include important market, processing and infrastructure facilities. Locations include Grimsby and Lowestoft where these activities have greater local significance than fishing activity alone.

426. Fishing also provides additional benefits including contributing an important source of protein which can be part of a healthy diet[239] (see SOC1) and contributing to food security. It is also recognised that the fishing industry is an important part of the character of many coastal towns;[240] a factor which is further addressed under SOC3.

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427. The installation of structures within the marine area may bring about changes to the local habitat, which in turn can contribute towards the enhancement of the existing environment/habitat. However these enhancements may not be immediate and may accrue over a period of time, which in itself may be significant; these changes and any arising benefits have to be viewed against any adverse impact that may arise as part of their installation.

428. Note that issuing a general licence to fish may be considered as a 'proposal' under the Marine and Coastal Access Act (S 58(1)). However, where an individual wishes to act in accordance with the terms of an existing licence or other consent , that individual would not be required to inform or seek any additional permission from a public authority (where consistent with current practice). This means that a fisher who elects to fish a new area that is consistent with the conditions of their general licence to fish, is not caught by the term 'proposal' as used in the East marine plans. Bringing forward a fisheries management measure such as a bylaw falls under either section 58(1) or 58(3) of the Marine and Coastal Access Act depending on whether the measure is to do with an authorisation and enforcement decision or not. However in either case, there will be other existing legislative and management requirements that determine the decision and which may carry greater weight than the plan policies.

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238 In terms of value of landings.

239 Marine Policy Statement 3.8.1

240 Natural England (2011) Seascape Characterisation around the English Coast (Marine Plan Areas 3 and 4 and Part of Area 6 Pilot Study) Available online at: http://publications.naturalengland.org.uk/publication/2736726?category=10006

Signposting to existing policy and measures

429. The Common Fisheries Policy provides the main framework for the management of fisheries in European Union waters. It is supported by national and locally applied legislation including bylaws delivered through the Inshore Fisheries Conservation Authorities and others. The Common Fisheries Policy has now been revised[241] and its implementation should contribute to the delivery of the effective management of our seas and be integrated into wider marine policy including marine nature conservation.

430. Fish stocks are principally managed by the Marine Management Organisation, with Inshore Fisheries and Conservation Authorities sharing the role between 0 – 6 nautical miles. Management measures include setting quota limits[242] and effort/ technical control measures. Quotas (or total allowable catches) are set annually for over 130 fish stocks, by taking account of various factors including the latest scientific advice on the condition of the stocks. Due to the annual variability of stock condition, stock management requires a degree of temporal flexibility. For this reason, reactive, annual management measures (such as quotas) are considered a more appropriate mechanism than marine planning to manage fish stocks.

431. On the 14 August 2012, the Department for the Environment, Food and Rural Affairs announced a revised approach to managing fishing activities within European Marine Sites. The Marine Management Organisation has been working closely with the Inshore Fisheries Conservation Authorities, the Department for the Environment, Food and Rural Affairs, Statutory Nature Conservation Bodies, Non-Governmental Organisations and the fishing industry to prioritise high-risk fishing activities on sensitive features.[243] Management measures have been put in place to protect the features most at risk, (reef, maerl and seagrass, listed as 'red' in the risk matrix), at the end of 2013 to avoid the deterioration of Annex I features in line with obligations under Article 6(2) of the Habitats Directive. Risks rated as either amber or green (medium or low risk) will have a site-level assessment to assess whether management of an activity is required to conserve site features. These assessments will be consistent with the provisions of Article 6(3) of the Habitats Directive and will be implemented in 2016.

432. It is envisaged that the Marine Management Organisation will work together with key partners to increase the understanding of the sensitivity of different habitats to different fishing gear types. Potential management measures for Marine Conservation Zones by all public authorities responsible will also need to assess the impacts of fishing. It is proposed by the Marine Management Organisation that the development of future fisheries management measures for European Marine Sites and Marine Conservation Zones will be based on a regional approach to allow for the consideration of all sites and restrictions in a

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241 European Commission (2009) Green Paper on the Reform of the Common Fisheries policy http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0163:FIN:EN:PDF

242 http://www.marinemanagement.org.uk/fisheries/management/quotas_how.htm

243 http://www.marinemanagement.org.uk/protecting/conservation/ems_fisheries.htm

particular region at the same time. This will help to assess potential cumulative displacement of fishing and cumulative impacts across multiple sites.

Evidence

433. The current data available on fisheries is varied and unfortunately does not provide a complete view of fishing activity with a high degree of accuracy. Data showing the activity of under ten metre vessels in the inshore area is particularly limited, yet these make up a large proportion of the fleet. Work is underway to establish an improved evidence base of fishing activity, together with other sectors, in order to address these limitations.

434. The lack of uniformity and stakeholder consensus regarding fisheries data combined with the difficulties in predicting the future of fisheries, makes formulating prescriptive marine plan policies for this sector a challenge. The Marine Management Organisation will continue to work closely with the fishing sector to assess how this challenge might be addressed in the future.

435. Significant issues identified through the Evidence and Issues Report included avoiding displacement wherever possible, environmental impact, navigational safety and access to onshore facilities. Possibilities for the co-location of fisheries with other sectors are highlighted within GOV2 under objective 10, together with a cross-sectoral policy on displacement (GOV3), with access to infrastructure addressed in GOV1. In addition to these, there are two plan policies specific to the sector addressing the significant issues of access to fishing grounds and protection of spawning and nursery areas. The environmental impact of certain fishing gears on sensitive habitats is highlighted above under ‘signposting existing policies and measures’.

436. Further information on data and evidence regarding fishing activity can be found in the Evidence and Issues Report and information on how figures 23 – 26 were derived can be found on the Marine Management Organisation website.[244] Further information on evidence gathering in relation to the development of current and future marine plans can be found under Objective 11 in chapter 2.

[244] Please see the published map annex

Plan policies

Policy FISH1

Within areas of fishing activity, proposals should demonstrate in order of preference:

a) that they will not prevent fishing activities on, or access to, fishing grounds

b) how, if there are adverse impacts on the ability to undertake fishing activities or access to fishing grounds, they will minimise them

c) how, if the adverse impacts cannot be minimised, they will be mitigated

d) the case for proceeding with their proposal if it is not possible to minimise or mitigate the adverse impacts

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

This plan policy supports fishing activity by avoiding adverse impacts resulting from development and activities in the East marine plan areas. The policy will be implemented by the public authorities responsible for authorising such developments or activities. Fishing grounds in the East marine plan areas are considered to play an important role in the delivery of a variety of marine food sources. The East marine plan areas contain some of the most important shellfish grounds in England making a significant, direct, economic contribution with much of its catch including crab, lobster, cockles and prawns exported to other markets both in Europe and beyond. Associated with this are a number of land-based catch processing and handling facilities throughout the East marine plan areas dealing with finfish and shellfish both caught within the marine plan areas, such as at King's Lynn and that landed from further afield, such as in Grimsby. These facilities offer significant employment opportunities within their locality and beyond.

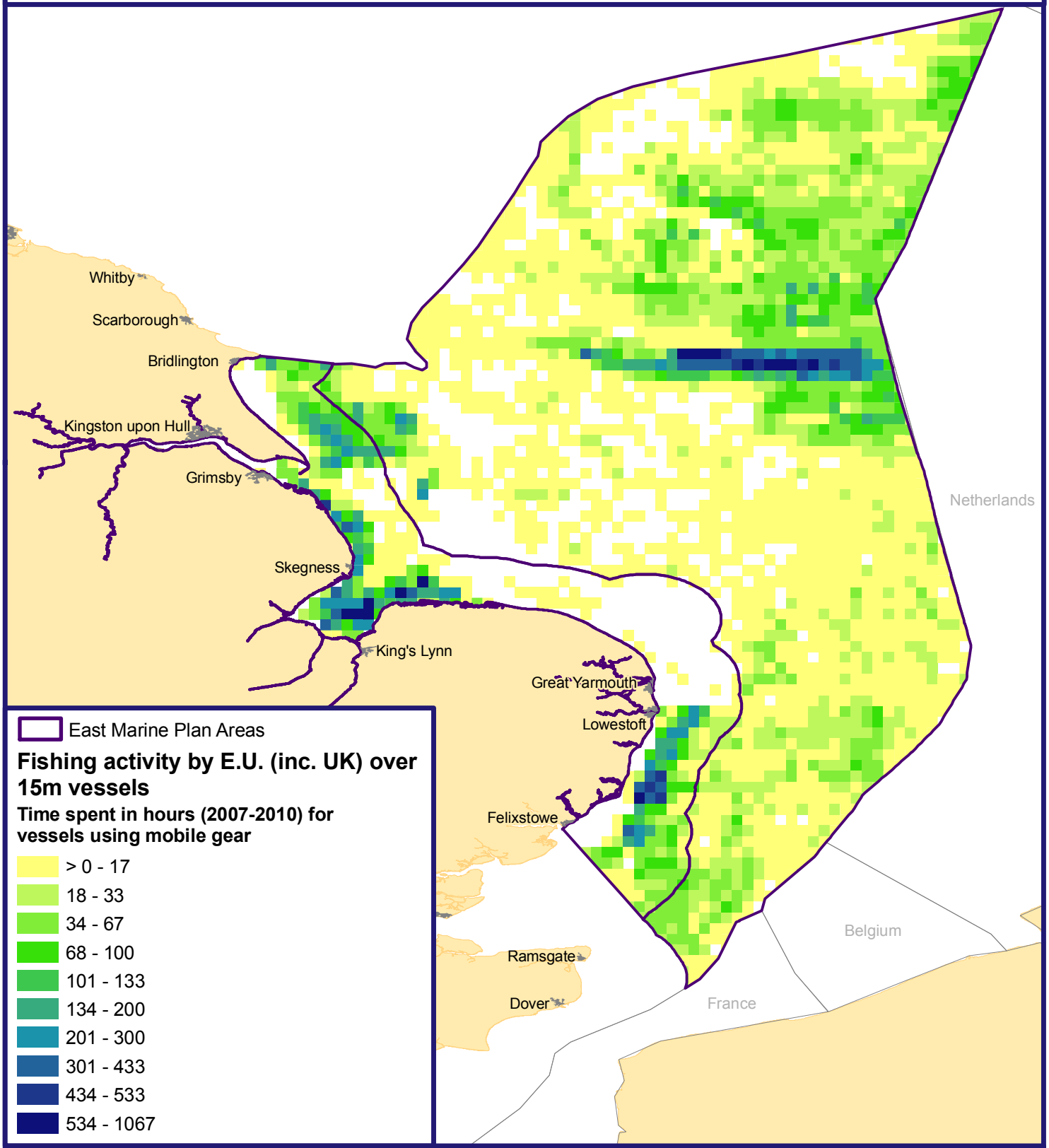
437. This policy focuses specifically on the access to fishing grounds. It seeks to support the fishing sector's ability to undertake its activities and requires proposals to demonstrate where any impacts to fishing activity may occur and how they have been dealt with. Where these issues cannot be resolved they would be detailed with an explanation as to why they cannot be overcome and any mitigation measures, thereby allowing decision-makers to assess the impacts to fishing activity posed by any development, with the aim to support fishing activity and co-location in accordance with the aspirations of the Marine Policy Statement . The requirement under d) in policy FISH1 is to provide information for consideration by the relevant public authority. It does not indicate that approval of the proposal will follow by default. In deciding on the proposal, the public authority will take account of a range of relevant considerations including compliance with legislation and regulations and potential impacts highlighted in project level assessments.

HM Government

Figure 23: MMO fishing activity by E.U. (inc.UK) over 15-metre vessels (time spent in hours 2007-2010 - mobile gears)

February 2014

INDICATIVE MAP- This is an indicative map in support of policy FISH1. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.



HM Government

Figure 24: MCZ Fishermap project combined gear fishing intensity

February 2014

INDICATIVE MAP- This is an indicative map in support of policy FISH1. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.

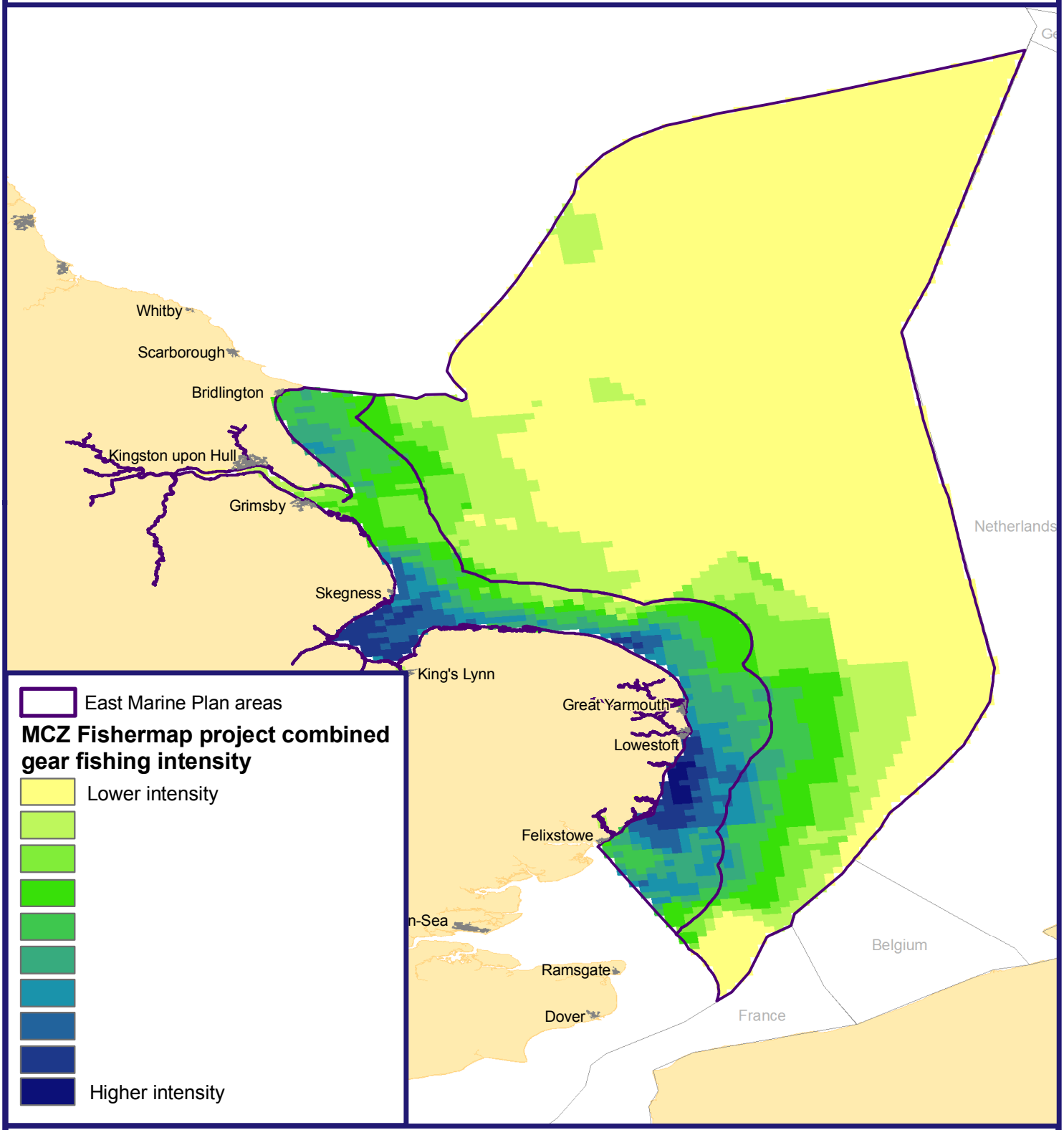


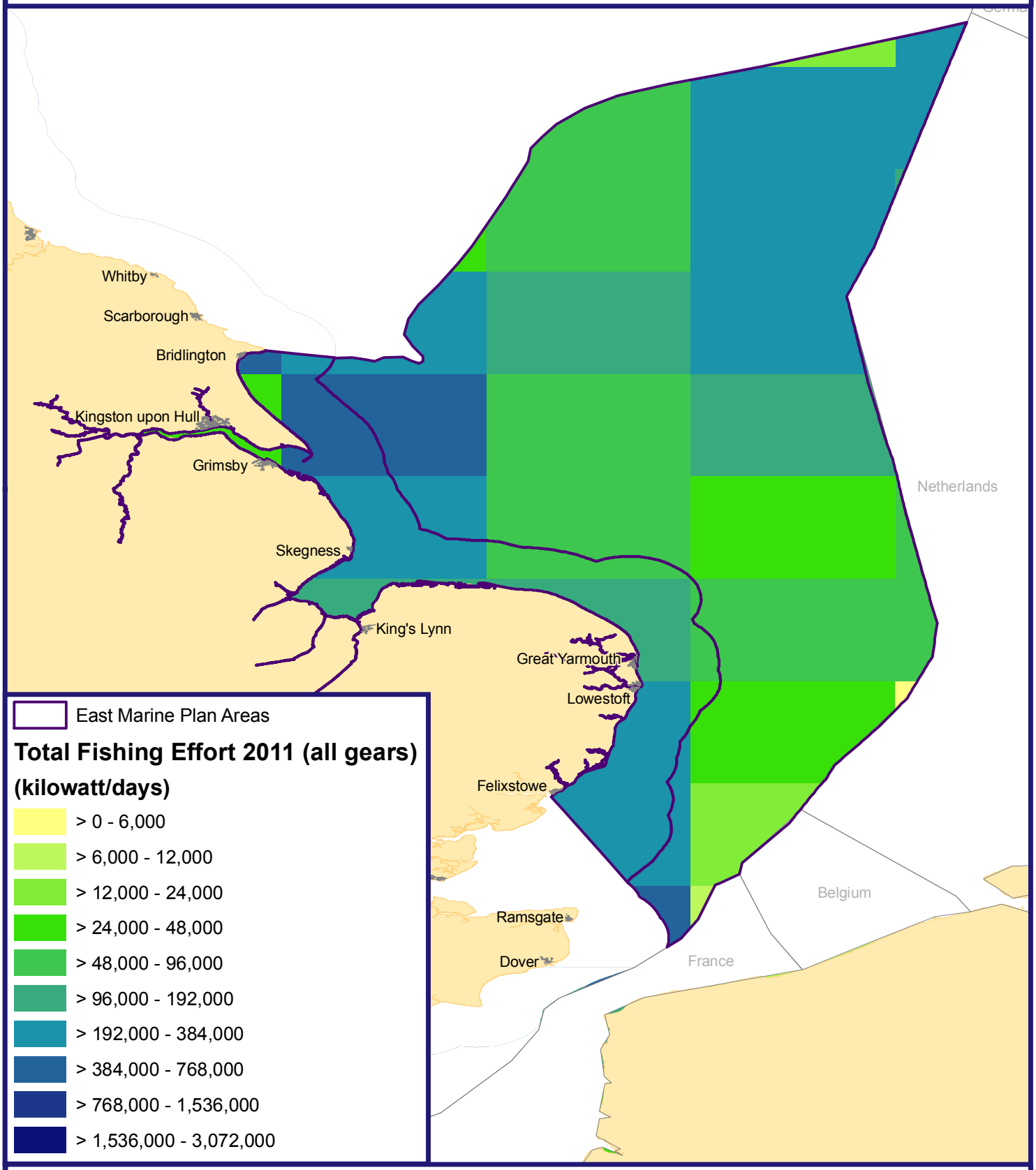
 Figure 24 has combined together six maps showing different gears: pots and traps, nets, mobile pelagic gear, hook and line, dredging gear and mobile demersal gear. Please visit the marine planning portal to view maps of individual gears (http://planningportal.marinemanagement.org.uk).

HM Government

Figure 25: Total Fishing Effort 2011 (Fisheries Activity Database- all gears)

February 2014

INDICATIVE MAP- This is an indicative map in support of policy FISH1. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.



438. FISH1 applies to the whole of the plan areas both inshore and offshore. The indicative maps included at figures 23, 24, 25 give an illustration of some of the known areas of fishing activity within the plan areas. Due to the variation in fishing activity, seasonality and technologies deployed (including the use of fishing vessel telemetry systems) these alone cannot provide a complete illustration of all fishing activity at all times. Proponents will need to liaise with the fishing sector locally to fully appreciate the level of activity.[245]

439. As outlined in the context above there is significant variety and volume of activity in the East marine plan areas that is predicted to increase over the lifetime of the marine plans, particularly in terms of marine renewables and other offshore installations. The Marine Policy Statement (3.8.1, 3.8.2, and 2.3.1.5) makes clear that the process of marine planning will 'enable the co-existence of compatible activities wherever possible', and supports the reduction of real and potential conflict as well as maximising compatibility and encouraging co-existence of activities. Co-existence is addressed further under GOV2. Also in applying this policy, consideration will need to be given to the potential for the displacement of fishing activity. See also GOV3.

440. Public authorities will need to ensure that supporting information is submitted, proportionate to any proposal, illustrating any potential impacts (this may include consultation to identify issues at scoping stage) and suggested measures to minimise, or if impacts cannot be minimised, mitigate them. Consultees could include such organisations as:

- Inshore Fisheries and Conservation Authorities
- Centre for Environment, Fisheries and Aquaculture Science
- National Federation of Fishermen's Organisations
- New Under Tens Fishermen's Association or the
- North Sea Advisory Council

441. Therefore in applying this policy consideration will need to be given to the potential for the displacement of fishing activity. See also GOV3.

[245] See 'BERR (2008) Recommendations for Fisheries Liaison: Best Practice guidance for offshore renewables developers; UKOAA (2006) Code of Practice on Interaction with Static Gear Fisheries)' and the 'Fishing Liaison with Offshore Wind and Wet Renewables' for best practice guidelines.

Policy FISH2

Proposals should demonstrate, in order of preference:

a) that they will not have an adverse impact upon spawning and nursery areas and any associated habitat

b) how, if there are adverse impacts upon the spawning and nursery areas and any associated habitat, they will minimise them

c) how, if the adverse impacts cannot be minimised they will be mitigated

d) the case for proceeding with their proposals if it is not possible to minimise or mitigate the adverse impacts

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

442. The Marine Policy Statement (3.8.6) states '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'. Stakeholders from the fisheries sector have strongly expressed the need to support the recovery of fish stocks through all possible means, in order to ensure the sustainable future of the industry. A sustainable fishing industry relies upon fish spawning and nursery areas to support stock recruitment and these spawning and nursery areas need protection from adverse impact that may result from development or activity. Concerns exist as to the potential for new activities to have adverse effects on stock recruitment and the associated fishing grounds through development. FISH2 seeks to contribute to the aims of the Marine Policy Statement (3.8.1) in supporting the long term existence of the sector through support of stock recruitment. In applying policy FISH2, proposals should consider their potential to have an adverse impact on spawning and nursery grounds (including any adverse impact on the ability of species to access these grounds).

443. Over half of the East marine plan areas (56%) is defined as high intensity spawning areas for plaice, over a third high intensity spawning areas for sandeels and whiting with over 11% a high intensity nursery ground for cod.[246]

444. The 'indicative' map shown in figure 26 highlights some known spawning and nursery grounds in the East plan areas and should be viewed alongside the policy text. However, the map does not show all the species relevant to this policy due to limited evidence. Spawning and nursery areas for all finfish and shellfish species should be considered during project level assessments. The data shown in figure 26 is of a coarse resolution and data collected at a

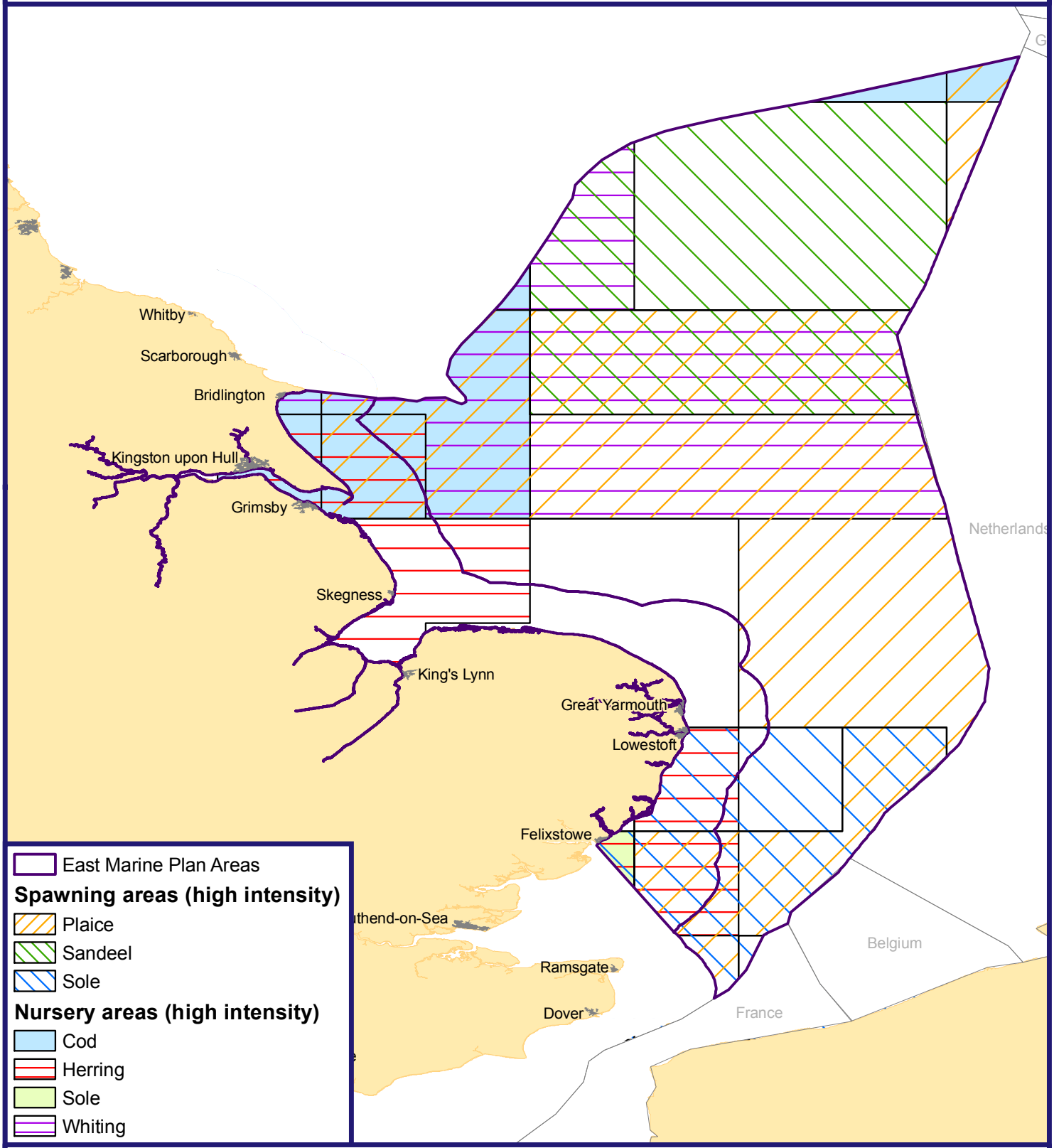
[246] East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report, Chapter 4.8 http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

HM Government

Figure 26: Known high intensity fish spawning and fish nursery grounds

February 2014

INDICATIVE MAP- This is an indicative map in support of policies FISH2 and BIO1. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.



project level to support Environmental Impact Assessments will be current and at a more appropriate resolution to accurately assess any project's impact on nursery and spawning grounds. Information on the location of areas closed due to a high abundance of juvenile fish (either seasonal or 'real-time' closures) can be found on the Marine Management Organisation's website.[247]

445. Public authorities will need to ensure that supporting information is submitted, proportionate to any proposal, illustrating any potential impacts (this may include consultation to identify issues at scoping stage) and suggested measures to minimise or mitigate them.

446. The requirement under d) is to provide information for consideration by the relevant public authority. It does not indicate that approval of the proposal will follow by default. In deciding on the proposal, the public authority will take account of a range of relevant considerations including compliance with legislation and regulations and potential impacts highlighted in project level assessments.

3.17 Aquaculture

Context

447. Aquaculture is a growing industry[248] predicted to expand in the United Kingdom. It has been identified as a key area for development through its potential to contribute to the sustainability and security of the United Kingdom food supply which, in turn, may encourage growth in small and medium enterprises supporting the industry. This is emphasised in the recent consultation on developing aquaculture in England[249] and reforms to the Common Fisheries Policy. These reforms highlight European and national governments' desire to promote the sustainable growth of the sector.

448. In 2010 the East Inshore Marine Plan Area accounted for around 40% of English shellfish production via aquaculture and 51% of English mussel production via aquaculture. Of the total area in England covered by waters where shellfish are harvested, the East Inshore Marine Plan Area included approximately 9%[250] of these, giving an indication of the high intensity of the activity at a local level. There are nationally significant private, Regulated and Several fisheries (mussel, oyster and cockle) within the Wash and along the North Norfolk coast. The East Inshore Marine Plan Area has the potential to make a significant contribution to the growth of aquaculture in English waters given the large estuaries and sheltered sites.

449. To establish a shellfish aquaculture facility in marine waters, the following consents must be obtained: land use consent from The Crown Estate or other

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247 http://www.marinemanagement.org.uk/fisheries/monitoring/closures.htm

248 http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

249 Planning for Sustainable Growth in the English Aquaculture Industry (draft).

250 East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report, page 159 http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

land owner, local authority permissions (food hygiene and safety), and potentially a marine licence from the Marine Management Organisation if the facility will impact navigation or could be construed as an artificial reef. If the applicant for the aquaculture facility wishes to apply for a Several Order they should contact the Department for the Environment, Food and Rural Affairs (or their local Inshore Fisheries and Conservation Authority, if this authority holds a Hybrid Order). For finfish developments a marine licence from the Marine Management Organisation would be required and construction works would be subject to Environmental Assessment Regulations Discharge consents, administered by the Environment Agency under the Environmental Permitting Regulations taking into account the European Commission Water Framework Directive.

450. The main issue with respect to aquaculture in the East marine plan areas is to help enable the broadly recognised opportunity for growth in the sector and to ensure this growth is sustainable. An assessment of the optimum sites for future expansion of the industry was identified as a requirement (commenced by the Marine Management Organisation with published report Marine Management Organisation 1040) along with further research into the possibility for co-location of aquaculture with other activities, and carrying capacity of areas for aquaculture. Recent research into co-location includes a live trial at North Hoyle wind farm off North Wales[251] and carrying capacity is being investigated at an international scale by the European Union.[252] This research need is recognised in the Marine Management Organisation's Strategic Evidence Plan under the fisheries section and under objective 11. Research needs include further data on all forms of aquaculture – shellfish, finfish and novel forms as defined in the Marine Policy Statement (3.9.1 and 3.9.3). A Centre for the Environment Fisheries and Aquaculture Science report, 'Bivalve Cultivation – criteria for selecting a site'[253] gives an indication of the optimum conditions for various cultured shellfish species. Potential shellfish developers can use this information to assist in selecting a suitable site.

451. The control of pollution within Water Framework Directive Protected Areas (previously Designated Shellfish Waters) and shellfish harvesting waters[254] is important to allow the continuing existence and future sustainable expansion of inshore aquaculture facilities. Designated Shellfish Waters were replaced by Water Framework Directive Protected Areas in December 2013 when the EC Shellfish Waters Directive was subsumed into the Water Framework Directive. This change does not affect the level of protection that the waters are afforded. If an aquaculture development outside of one nautical mile is proposed, it would need to take into account the Marine Strategy Framework Directive.

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251 www.shellfish.org.uk/files/7599EFF%20Co-Location%20Project%20December%20202012%20meeting%20report%20FINAL.pdf

252 http://ec.europa.eu/fisheries/aquaculture/official_documents/com_2013_229.en.pdf and http://fao.org/docrep/017/i3099e/i3099e00/htm

253 See table 2 on page 28.

254 The European Union Food Hygiene Regulations (regulations 852/853/854) relating to Shellfish Harvesting Waters - http://www.legislation.gov.uk/uksi/2006/14/contents/made

Signposting to existing policies and measures

452. The following highlights national policy from the Marine Policy Statement and other East marine plan policies to ensure that they are taken into account by public authorities.

453. The Marine Policy Statement (3.9.1, 3.9.2 and 3.9.6) is supportive of the aquaculture industry. In considering the benefits of encouraging the development of 'efficient, competitive and sustainable' aquaculture, it is not thought necessary to have a plan policy that protects current sites from conflicting activities. This is due to the mechanisms for protection already afforded such as designated shellfish waters, shellfish harvesting waters, seabed leases and private and Several Order fisheries. The Marine Policy Statement states the need for consideration of the: 'significant opportunities for co-existence of aquaculture and other marine activities...' (Marine Policy Statement 3.9.6). Policy GOV2 seeks that co-location opportunities should be maximised, where possible.

454. Marine aquaculture commonly requires bespoke land infrastructure to support it, such as purification and processing facilities as well as storage areas and transport infrastructure. These needs are not unique to aquaculture, and the governance policy (GOV1) under objective 10 covers the need for onshore infrastructure requirements of new and existing marine activities.

Plan Policies

Policy AQ1

Within sustainable aquaculture development sites (identified through research), proposals should demonstrate in order of preference:

a) that they will avoid adverse impacts on future aquaculture development by altering the sea bed or water column in ways which would cause adverse impacts to aquaculture productivity or potential

b) how, if there are adverse impacts on aquaculture development, they can be minimised

c) how, if the adverse impacts cannot be minimised they will be mitigated

d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

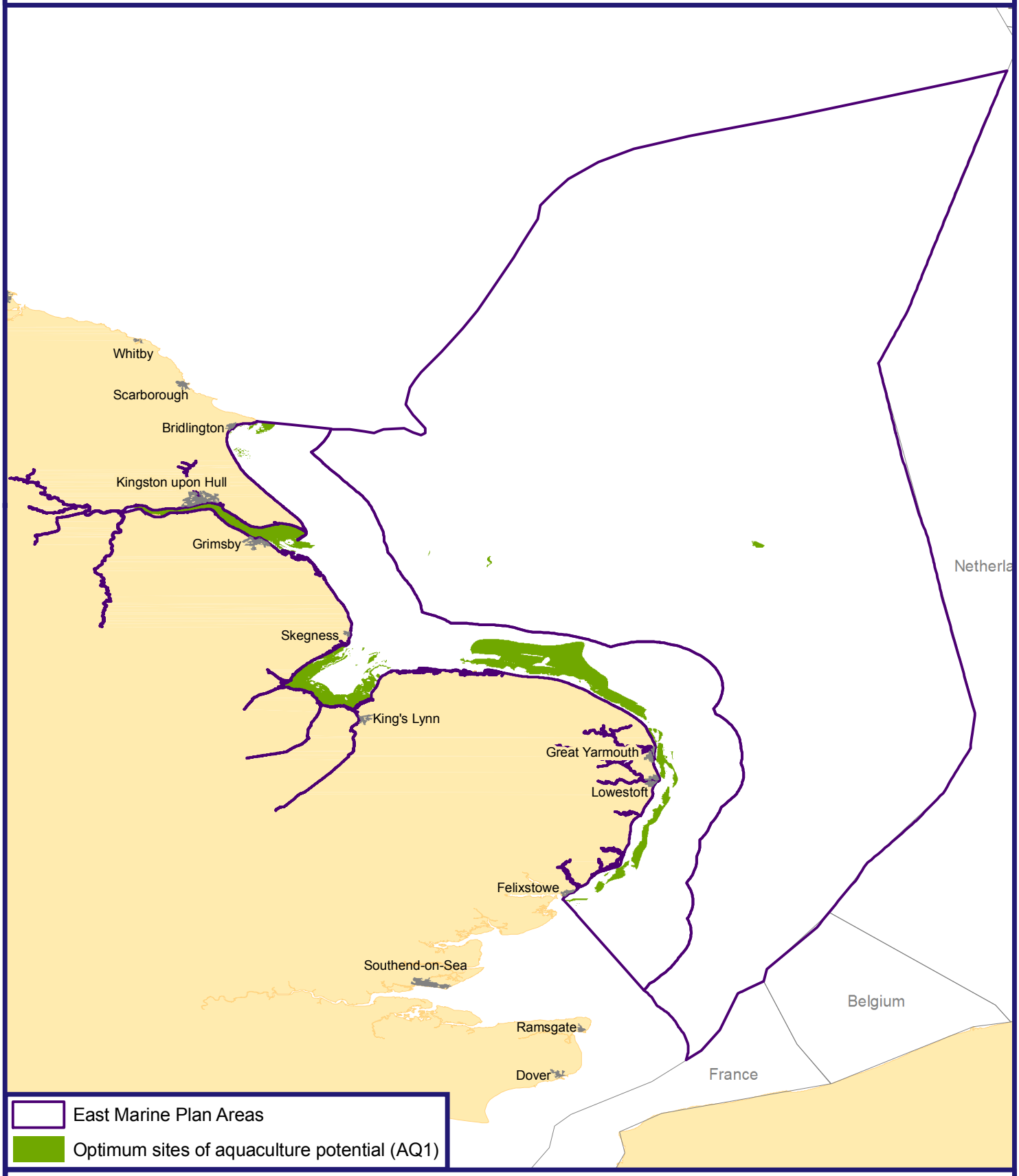
455. Policy AQ1 seeks to protect opportunities for aquaculture, as they are identified through research and evaluation. Research has the potential to

HM Government

Figure 27: Optimum sites of aquaculture potential (AQ1)

February 2014

POLICY MAP- This map highlights the area where policy AQ1 applies. This area may be reviewed as necessary during the life of the Marine Plans. The reader should check for any updates via the link provided in paragraph 102.



define which sites within the East plan areas may be preferred for aquaculture. See also objective 11.

456. Figure 27 shows the current sites identified through research deemed suitable for aquaculture development. These are the areas to which policy AQ1 applies.

457. The East Inshore Marine Plan Area is highly important to current aquaculture, and both the East Inshore and Offshore Plan Areas have potential for development of new activity. The Marine Policy Statement (3.9.6 and 3.9.7) highlights the potential benefits of aquaculture, in existing areas, and aspirations for sustainable growth of the industry in possible future locations. Policy AQ1 does not preclude other developments or activities, including current aquaculture. Rather, it applies the intent of the national policy to ensure consideration is given to how other proposals may impact access to and use of areas suitable for future aquaculture development.[255] It also aims to identify optimum locations for aquaculture development, through research,[256] to 'seek information on possible future aquaculture operations in areas not previously used...' (Marine Policy Statement 3.9.7).

458. Policy AQ1 is designed to enable aquaculture, be it for shellfish, finfish, novel forms such as algae cultivation, or re-stocking wild populations of species such as lobster using hatchery reared animals, to continue or to realise new opportunities, subject to meeting legislative requirements and other plan policies.

459. The policy requires any proposals to demonstrate using best evidence available[257] where adverse impacts to aquaculture activities may occur and how these impacts can be avoided. Where avoidance is not possible an explanation as to why the impacts cannot be overcome and possible minimisation, or mitigation, measures should be provided, allowing decision-makers to assess (as part of the application process) the adverse impacts to aquaculture posed by the development. This is already a consideration where an application relates to an area within the extent of a Several Order.[258] The applicant is required to consider whether their proposal would affect the ability of the site to continue to support aquaculture activity.

460. It is expected that proponents of development or activities would early in the project scoping stage consult with others such as The Crown Estate, Inshore Fisheries Conservation Authorities, Marine Management Organisation and other regulators including Natural England and the Environment Agency in

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[255] Examples of wider considerations can be taken from a report produced by Ian Laing of the Centre for the Environment, Fisheries and Aquaculture Science 'Bivalve Cultivation, criteria for selecting a site', produced in 2000.

[256] http://www.marinemanagement.org.uk/evidence/index.htm

[257] Current evidence gives a broad scale overview of areas seen as having potential for future aquaculture developments, as more detailed evidence is produced it is inferred that the information contained within a proposal will reflect this.

[258] Several Orders protect the rights of the holder to undertake aquaculture of the named shellfish species present in the area, even if the species are not currently being exploited. Several Orders cover the vast majority of shellfish lays that are located within the area managed by the Crown Estate.

addressing a), b), c) or d), to determine whether there are aquaculture developments in the area. The marine plans, together with wider published aquaculture research (including research[259] completed under the Marine Management Organisation's Strategic Evidence Plan) will help to identify current aquaculture waters and suitability of areas for future aquaculture development.

461. Given the uncertainty that applies to the location of future aquaculture developments, the policy makes substantial allowance for the possibility of other, competing developments to proceed under particular circumstances. Circumstances under which a) might be satisfied include using information provided through research completed under the Marine Management Organisation's Strategic Evidence Plan to show that the area of interest is unsuitable for aquaculture (see figure 27).

462. Circumstances under which b) might be satisfied could include; moving the proposal to a less favourable area for aquaculture (based on best available evidence), or proposing co-location of aquaculture with the proposed activity. In respect of c) mitigation will be addressed at the project level. The requirement under d) is to provide information for consideration by the relevant public authority. It does not indicate that approval of a proposal will follow by default. In determining the proposal public authorities will take account of a range of relevant considerations including:

- compliance with legislation and regulations demonstrating the importance of the development to meet other objectives or policies in national policy statements and the marine plans, while meeting environmental requirements
- that there are no or limited alternative locations
- or that alternative locations present other or similar conflicts

3.18 Tourism and Recreation

Context

463. Tourism[260] and recreation[261] are recognised as important contributors to the local economy and as sources of income for coastal communities. The recreational boating industry alone was estimated to contribute £1.042 billion to the United Kingdom economy in 2009/10 with tourism one of the top three national growth sectors.[262] Tourism and recreation also provides many social

[259] http://www.marinemanagement.org.uk/evidence/index.htm
[260] Tourism is defined by the World Tourism Organization as comprising the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes. This definition has been adopted by the United Kingdom Government
[261] In this context tourism and recreation activities include but are not limited to; surfing, diving, sea angling, boating, swimming, boat-trips, accommodation and food outlets, bird watching, and other beach activities.
[262] Marine Policy Statement 3.11.1.

benefits for communities such as improved health (mental and physical) and well-being, greater social cohesion, [263] [264] and the creation of jobs.

464. The East marine plan areas are becoming increasingly busy with activities putting pressure on the space available for marine recreation. There are many marinas, training and racing areas in the East marine plan areas[265] and wildlife watching is becoming an increasingly popular activity for visitors to the East of England.[266] In Suffolk, the coast is an important factor for people in deciding to visit an area[267] and 69% of people in Waveney visit local beaches[268] so coastal tourism is popular alongside recreation. Recreational opportunities attract tourism and so the clear link between the two may mean challenges arise in the future to both maintain the current standard, and diversify the type and location of opportunities, which is an aspiration of the industry and many local authorities.

465. It is important to recognise that, apart from recreational sailing, the majority of tourism and recreation activities occur on the coastline and in the inshore area eg surfing.[269] Therefore this sector is spatially constrained. Tourism and recreation rely on the preservation of the historic environment and heritage assets, a healthy marine environment including good water quality, clean beaches, abundant wildlife and a healthy ecosystem to attract people.

466. Issues identified through the development of the East marine plans include the potential for displacement of tourism and recreation due to increases in new activities and the cumulative effect of other activities.

467. In order to sustain the contribution to the economy and to ensure that opportunities for growth and enhancement in tourism and recreation are maintained, marine plans must ensure that other sectors do not have a detrimental effect on the tourism and recreation sector. This can be achieved by:

- guiding industry to specific locations
- guiding industry to designs which will avoid or minimise impacts
- offering mitigation of these impacts where they cannot be avoided and

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[263] Wheeler, B. W., M. White, *et al.* (2012). "Does living by the coast improve health and wellbeing?" Health & Place 18(5): 1198-1201.

[264] Depledge, M. H. and W. J. Bird (2009). "The Blue Gym: Health and wellbeing from our coasts." Marine Pollution Bulletin 58(7): 947-948.

[265] East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report, Fig 4.24 http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

[266] East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report, Page 176 http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

[267] www.choosesuffolk.com/tourismpartnership/pageDownloads/65566654Suffolk%20Visitor%20Survey%20Report%20Draft.pdf

[268] www.waveney.gov.uk/site/scripts/news_article.php?newsID=214

[269] Please see the marine planning portal for more information about surfing and other recreational activities in the East Inshore Marine Plan Area.

- reflecting the aspirations of terrestrial plans for this sector

Signposting to existing policies and measures

Water Quality

468. A clean and healthy marine environment, including healthy beaches and good water quality, are important to tourism and recreation. There are a number of existing measures to support improvements to bathing water quality through the Water Framework Directive, the Marine Strategy Framework Directive and Bathing Water Directive, that should be taken account of in relation to their impact on tourism and recreation by decision-makers in assessing proposals. The Marine Strategy Framework Directive overlaps with the Water Framework Directive (within one nautical mile) therefore the Marine Strategy Framework Directive will adopt the Water Framework Directive standards for ecological and chemical water quality.

Plan policies

Policy TR1

Proposals for development should demonstrate that during construction and operation, in order of preference:

a) they will not adversely impact tourism and recreation activities

b) how, if there are adverse impacts on tourism and recreation activities, they will minimise them

c) how, if the adverse impacts cannot be minimised, they will be mitigated

d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

469. The Marine Policy Statement (3.11.1 and 3.11.2) recognises the importance of tourism and recreation to the national economy. It also recognises the considerable amount of income it brings to coastal towns, supporting quality of life and providing health and well-being benefits. The National Policy Statement (S 5.9.7) for Energy also states that applicants should assess 'the effects during construction of the project' and this should include the 'visibility and conspicuousness of the project during construction'. This is particularly relevant as the character and environment is an important factor in tourism and recreation. Please also see Social and Cultural section 3.3.

470. There are many communities adjacent to the East marine plan areas with a strong connection to tourism and recreation such as Bridlington, Cromer, Great Yarmouth and Cleethorpes.[270] Although 'many seaside towns have developed cultural facilities to attract visitors all year round... some marine activities will of necessity be restricted by the weather and many family holidays are taken during the summer school holidays' (Marine Policy Statement 3.11.3).This indicates that this sector is seasonally constrained and so any further disruption could have adverse impacts on tourism and recreation.

471. This policy recognises the importance of tourism and recreation in the East Inshore and East Offshore Marine Plan Areas and seeks to minimise adverse impacts of development on tourism and recreation. This mirrors the terrestrial planning system which provides detailed, local considerations that need to be addressed when planning a new development. For example, the Suffolk Coastal Local Development Framework outlines a minimum list of local issues which need to be adequately considered for nuclear power station development which include (but are not limited to): the economic impacts on tourism, during and after construction and coastal access.[271] This example is very specific to one activity in one area. There are many activities in the marine area that could impact on tourism and recreation activities, therefore it is not possible to provide more detailed criteria for this policy.

472. This policy should ensure that the impacts of construction and operation on tourism and recreation are either avoided, minimised or mitigated. It will be implemented by the public authorities responsible for authorising such developments. This could mean consideration of:

- construction being undertaken during the low season (autumn/winter) with consideration for over wintering mobile species (birds etc)
- the impacts to amenity through noise or light disturbance and the effect this will have on tourism, recreation and coastal communities
- the impacts to water quality and the local marine environment
- any navigational constraints for recreational activities which include the use of personal water craft
- seascape (please refer to the seascape section – character and visual resource – for more information)
- any impacts on inshore fishing and the strong links it has with many popular coastal resorts

[270] Marine Management Organisation (2011), Socio-Economic Study http://www.marinemanagement.org.uk/marineplanning/key/se.htm

[271] Suffolk Coastal District Council (July 2013). Core Strategy and Development Management Policies. SP 13 http://www.suffolkcoastal.gov.uk/yourdistrict/planning/review/corestrategy/

473. Any land-based impacts, eg increase in traffic due to materials being brought to site over land are considered through the terrestrial consents process.

474. The requirement under d) is to provide information for consideration by the relevant public authority. It does not indicate that approval of the proposal will follow by default. In determining proposals, the public authority will take account of a range of relevant considerations including compliance with legislation and regulations and environmental assessment.

475. All of the above points are already considered through the Environmental Impact Assessment process or as best practice. These are listed as examples of the types of issues that should be considered and addressed in the application.

Policy TR2

Proposals that require static objects in the East marine plan areas, should demonstrate, in order of preference:

a) that they will not adversely impact on recreational boating routes

b) how, if there are adverse impacts on recreational boating routes, they will minimise them

c) how, if the adverse impacts cannot be minimised, they will be mitigated

d) the case for proceeding with the proposal if it is not possible to minimise or mitigate the adverse impacts

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

476. The marine planning process will, amongst other aims, manage competing demands on the marine area and enable the co-existence of compatible activities where possible.[272] The Marine Policy Statement (3.11.1 and 3.11.6) emphasises the estimated economic contribution of recreational boating to the United Kingdom economy as well as highlighting the indirect benefits for coastal towns. It also states that in weighing up considerations, it is important to engage with the many different stakeholders related to tourism and recreation.

477. Static objects can pose a risk to vessels and may include objects both on and under the water as well as on the seabed. They could also restrict navigation routes for recreational boating. In the East marine plan areas there are many

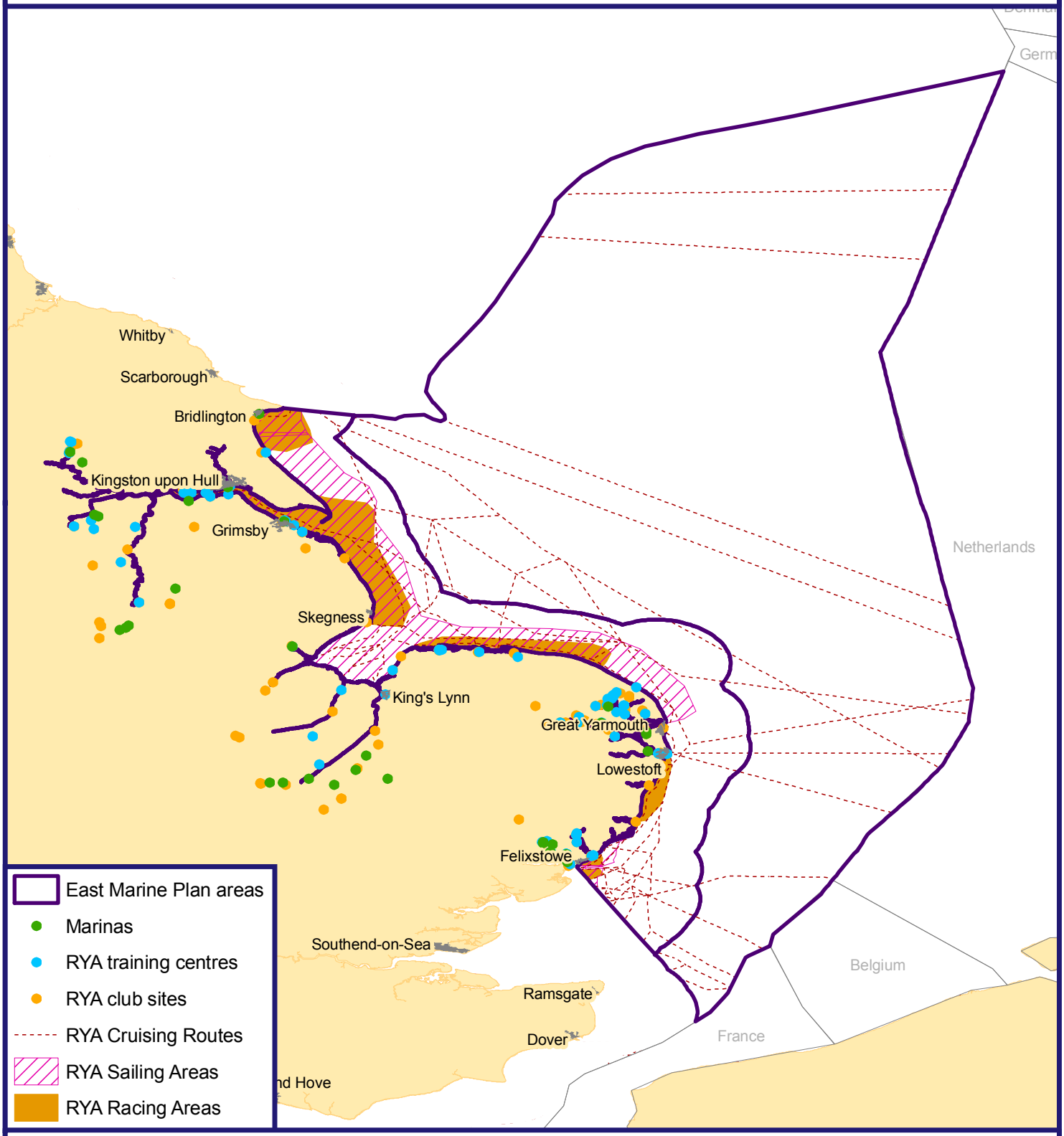
[272].Marine Policy Statement Page 3-4.

HM Government

Figure 28: Recreational boating routes and areas

February 2014

INDICATIVE MAP- This is an indicative map in support of policy TR2. This map is based on the best available evidence and must only be viewed alongside the accompanying text setting out the data limitations. The reader should check for any updates via the link provided in paragraph 102.



recreational boating routes[273] within the inshore area (eg from The Wash and Humber along the coastline) and also across to mainland Europe from East Anglia (see figure 28). This policy seeks to address the potential conflict between proposals involving static objects and recreational boating.

478. This policy adds clarification to the Marine Policy Statement through highlighting the benefits of early engagement and aims to ensure that any development takes account of the recognised boating areas and most used cruising routes for recreational craft in the East marine plan areas. This policy will be implemented by the public authorities responsible for authorising such developments.

479. Public authorities, in line with their statutory duties, may need to bring forward proposals to maintain safe navigation within harbour areas or carry out emergency work such as in response to a marine incident. These activities would take precedence over others including recreational activities. Please see the navigational safety section under the Governance chapter (3.5) for more information.

480. Figure 28 indicates some of the well-known and well-used boating areas and cruising routes in the East plan areas (data developed by the Royal Yachting Association). This figure is indicative[274] and serves to highlight some of the most frequent passages used. It is recognised that recreational boating takes place throughout the East marine plan areas and the absence of a specific cruising route or boating area should not be interpreted as an absence of activity. This is particularly the case in estuaries, and where there is activity shown at sea it should be assumed that all navigable parts of the estuary will/can be used for extensive recreational boating.

481. As part of the Environmental Impact Assessment process, the applicant is required to identify any navigational issues and list receptors that may be affected by the development. A stakeholder consultation strategy is also required. This policy builds on this, taking account of recreational boating being the only activity enabling leisure access to the offshore area, to highlight the importance of recreational boating in the East marine plan areas and the need to avoid or minimise impact to the activity.

482. Therefore there is a requirement for proponents to consider boating routes as well as industry representations in their licence applications to ensure the activity can continue and grow. Public authorities should look for evidence of consultation with the recreational boating sector, the outcome of those discussions and any mitigation agreed.

483. The requirement under d) is to provide information for consideration by the relevant public authority. It should not be taken in any way or of itself to indicate that approval of the proposal will follow by default. In determining proposals, the public authority will take account of a range of relevant

[273] Term used to encompass all forms of sailing

[274] See paragraph 102 for an explanation of indicative maps

considerations including compliance with legislation and regulations and environmental assessment.

484. In assessing the impact of development on recreational boating, decision-makers should also be aware of provisions set out relating to the assessment of commercial shipping in PS1, PS2 and PS3.

485. Change of use of existing static infrastructure would be subject to relevant licensing and permission processes and would be required to adhere to this policy.

Policy TR3

Proposals that deliver tourism and/or recreation related benefits in communities adjacent to the East marine plan areas should be supported.

Plan policy applies to both the Inshore and Offshore Marine Plan Areas. In reading this policy, please note the introduction to chapter 3 which explains the scope, application, structure and content of plan policies.

Justification/Explanation

486. The Marine Policy Statement (2.3.1.5 and 3.11.1) states that 'marine plans 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.' The Marine Policy Statement recognises the changes made by seaside towns to attract visitors all year round, although some marine activities are restricted by weather and many families only visit during school holidays.

487. Through analysis of local plans and discussions with local planning authorities in the East marine plan areas, diversification of tourism was identified as an important growth area.[275]

488. This policy aims to promote and support sustainable tourism and recreation opportunities in the East marine plan areas, an aspiration of many Local Authorities (eg East Lindsey, East Riding of Yorkshire, King's Lynn and West Norfolk and Suffolk Coastal), to help improve the local economies of many coastal communities. It must be noted that local authorities would not want new forms of tourism or recreation to harm the existing offers. This approach gives effect to the Marine Policy Statement (3.11.5) in proactively supporting tourism and recreation development such as, but not limited to:

- the general diversification of activities, particularly where they are accessible all year round
- provision of slipways

[275] East Inshore and East Offshore Marine Plan Areas Evidence and Issues Report, page 176 http://www.marinemanagement.org.uk/marineplanning/areas/east_issues.htm

- coastal footpaths
- ensuring coastal access
- wildlife watching
- adding to or improving existing tourism facilities and opportunities such as visiting heritage assets or areas of historic environment
- sustainable tourism and recreation activities which incorporate improvements in the quality of the natural environment
- promoting recreational sea angling and inshore fishing in coastal towns that is of cultural or historic significance to the local community and
- opportunities to learn more about, or visit, wind farms

489. This policy supports applications that deliver tourism and/or recreation related benefits through their proposal, either directly (ie the primary purpose of the application is tourism or recreation) or indirectly (ie new tourism or recreation activities are an additional benefit, alongside the original purpose of the development, such as an offshore wind farm or port expansion). This policy will be implemented by the public authorities responsible for authorising developments and activities.

490. Where tourism and recreation is not the primary reason for the development, public authorities will assess the extent to which proponents have considered the benefits of the development for tourism and recreation, and where appropriate, include improvements or additions as part of the application.

Chapter 4
Implementation, Monitoring and Review

Implementation

491. The marine plans will primarily be applied in practice through public authority decisions. (See chapter 1 'The effect of the East Inshore and Offshore Marine Plans'). Objectives and policies in the marine plans will be delivered through a wide variety of existing regulatory and decision-making mechanisms. Implementation will involve many public authorities, as although the Marine Management Organisation has been delegated the marine planning functions, it is not solely responsible for delivery of the policies in the East marine plans.

492. The plans should be taken as a whole, as it is likely that several plan policies will be pertinent to any decision or situation. It will be for the public authorities, working with the applicants and others, to determine which plans policies are appropriate to a particular decision.

493. Any decisions must be compliant with relevant legislation, regulations and existing policies and measures (see, for example, the Habitats Directive); the plan policies complement rather than replace such requirements. These relevant considerations may well have a stronger influence on the decision than the marine plan policies (see for example, MPA1).

494. In implementing the plans, the relevant public authorities, including the Marine Management Organisation, will need to apply precaution within an overall risk-based approach,[276] in accordance with the sustainable development policies of the United Kingdom Administrations.[277] This will apply equally to the

[276] This means that if the risks from an activity are uncertain preventative measures may be required if there is concern that human activities may harm human health, living resources and marine ecosystems or interfere with other legitimate uses of the sea or have other social and economic impacts. This would need to be considered based on risk.

[277] Marine Policy Statement 2.3.1.2.

protection of the natural marine environment, impacts on society and impacts on economic prosperity.

495. When decisions are made under the precautionary principle in situations of uncertainty, the uncertainty that is being responded to should be made explicit, as should the precautionary measures that are being taken. This will ensure transparency, and also provide a clear basis for monitoring and feedback to future decision-making and management.

496. The precautionary principle covers those specific circumstances where: scientific evidence is insufficient, inconclusive or uncertain, and there are indications through preliminary objective scientific evaluation that there are reasonable grounds for concern that potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the requirements of protection. Ultimately, the precautionary principle requires a balancing exercise in which the risks of an activity, in the light of imperfect evidence, must be balanced against the need for sustainable development. In having recourse to the precautionary principle, the aim is to identify (and where possible quantify) the plausible risks, reduce uncertainty (to the extent possible) and then employ management measures that are proportionate to the activity in question and the level of plausible risk.

497. Decisions should be made in line with the better regulation principles[278] and lead to action that is proportionate, consistent and targeted, delivered through a transparent and accountable process. A proportionate level of strategic and detailed assessment should be considered in decision-making determined by the complexity, scale and sensitivity of the project or activity.

498. To support plan implementation, the Marine Management Organisation has developed an online Marine Information System,[279] to display the East Inshore and Offshore marine plan policies and provide some suggestions to help consider the marine plans during application and decision-making processes. The aspiration for the MIS is that once fully functional it will support plan-led management and streamline the consenting process by providing a platform to present marine plans as they are developed, along with links to other relevant plans and existing measures, and information on existing marine developments.

Monitoring and Review

499. The process of monitoring and periodical reporting on the implementation of the marine plans and any need for review is a requirement under the Marine and Coastal Access Act (S 61). The Marine Management Organisation (under its functions delegated to it by the Secretary of State) has a duty to:

- At intervals not more than three years after each marine plan is adopted, report on the effects of policies, the effectiveness of those policies in securing

[278] HM Treasury (2005) Reducing Administrative Burdens: Effective Inspection and Enforcement. Hampton, P.

[279] http://www.marinemanagement.org.uk/MIS

marine plan objectives and the progress towards achieving the Marine Policy Statement objectives set out for that region in the Marine Policy Statement. After each report, the marine planning authority should decide whether or not the marine plans need to be amended or replaced. The Marine Management Organisation, with the input of government and stakeholders, may choose to report to government more frequently

- At intervals not more than six years after the passing of the Marine Coastal Access Act until 2030, the Marine Management Organisation will report to government on any marine plans it has prepared and adopted, its intentions for their amendment, and its intentions for the preparation and adoption of further marine plans

500. If there are significant changes to the evidence base supporting the East marine plans, or there are other significant relevant considerations since the marine plans were adopted (such as new legislation), the Marine Management Organisation may recommend to government an earlier review. The monitoring and review of the East marine plans is essential in ensuring that they remain fit for purpose and take account of and incorporate any new drivers or influences where appropriate.

501. In developing the approach to marine plans monitoring, consideration has been given to guidance on evaluation of policies provided in the government's Magenta Book, the Marine Policy Statement, and the Department for Environment Food and Rural Affairs' description document to ensure the approach is comprehensive but proportionate. Case studies of existing statutory and non-statutory plans have also been reviewed, such as River Basin Management Plans, Estuary Management Plans, Shoreline Management Plans, Local Plans and their equivalents such as Local Development Frameworks, Regional Spatial Strategies and marine plans for Victoria Australia, The Netherlands, Massachusetts and Rhode Island.

502. Monitoring of the impacts of marine plans will also be informed by recommendations from the Sustainability Appraisal including the Strategic Environmental Assessment and Habitats Regulations Assessment, and the analysis of the East marine plans.

503. The monitoring framework should be appropriate for all marine plans, therefore it should link to the Marine Policy Statement objectives, as these underpin the plan objectives, and in turn the policies. This approach will allow subsequent plan objectives to fit into one framework, and provide an explicit link to the Marine Policy Statement, to allow monitoring of the cumulative effect of marine planning.

504. A description of how and when the marine plan policies and objectives will be implemented and monitored can be found in the supporting Implementation and Monitoring Plan.[280] The Implementation and Monitoring Plan has been developed with the engagement of delivery partners and public authorities, and will enable public authorities and stakeholders to understand in a clear

[280] Please see the published implementation and monitoring plan

and transparent way whether or not implementation of the marine plans is being monitored appropriately and the policies are achieving marine plan objectives.

505. A specific aspect of the implementation and evolution of the East marine plans is the evidence base. The Marine Management Organisation's commitment to continue to develop the evidence base for the East marine plan areas is of central importance to the successful delivery of plan monitoring and review and reinforces the requirement set out in the Marine Policy Statement (3.2.1.2) for marine plans to use the best available evidence.[281]

[281] Marine Policy Statement Box 1

Annex 1
Glossary

Glossary

Activities – A general term that includes development and uses. Examples of uses might include fishing or recreation.

Analysis of the marine plans –Looks at potential impacts of the marine plans. It discusses current and expected future marine development in the absence of plans and provides an overview of how marine plans might alter future development.

Applicant – Organisation or individual that applies for an authorisation, for example those applying for an authorisation in relation to a development or activity (see 'Development').

Area of search – A broad area (of seabed and associated water column) within which some development or other activity may be acceptable, subject to detailed consideration, for example mineral extraction, or renewable energy generation. Can refer to areas of search used by Joint Nature Conservation Committee for offshore Special Areas of Conservation and may be defined in map format by the relevant organisations involved depending on the sector concerned.

Authorisation – Normally relates to something which can be applied for. See also 'Decisions'.

Capital dredging – This can be deepening or widening an existing navigable area, or enabling an entirely new channel for access to a new facility. Capital dredging allows improvement of access, eg to allow bigger and deeper vessels, longer optimum tidal windows and the provision of passing places. This area will not have been dredged during the preceding 10 years.

Co-existence – Where multiple development, activities or uses can exist alongside or close to each other in the same area and/or at the same time.

Co-location – Where multiple development (often structures), activities or uses co-exist in the same place by sharing the same marine footprint or area. Footprint can

include both the physical location of a development or activity, eg a built structure, and a wider area associated with the development or activity, eg a surrounding safety zone.

Cumulative Impact – An impact occurs only when a pressure is present and acts on a receptor that is sensitive to that pressure. A cumulative impact refers to the combined impact of such pressures over time in the marine area.

Cumulative Effects – Effects are taken to be distinct from impacts; an effect is a change caused by a pressure without any consideration of the impact. A cumulative effect is the result of a set of effects that are linked over time in the marine area. If cumulative effects occur but there is no or little impact, there may be no need for a management intervention.

Decisions – There are two types of 'decision' specified in the Marine Coastal Access Act (S 58) that are to be made by public authorities and which will involve consideration of the marine plans. Firstly, 'An authorisation or enforcement decision which is defined in Section 58(4) the Marine Coastal Access Act as any approval, confirmation, consent, licence, permission or other authorisation (however described), whether special or general. Examples include a decision to grant or refuse a marine licence in accordance with Part 4 of the Marine Coastal Access Act, or a planning permission granted by a local planning authority if the permission is capable of affecting part of the marine area. Such decisions must be taken 'in accordance with' the marine plans (Marine Coastal Access Act S58 (1)) unless relevant considerations indicate otherwise. An exception is a decision under the Planning Act on applications for development consent for Nationally Significant Infrastructure Projects which only have to have regard to marine plans. Secondly any other decisions which 'relate to the exercise of any function capable of affecting the United Kingdom marine area, but which are not an authorisation or enforcement decision'. Examples include designation of Marine Protected Areas or bylaws that do not extend/replace/vary/revoke or withdraw an authorisation. A public authority must 'have regard to' the marine plans when taking any such decision (Marine Coastal Access Act S58 (3)).

Development – Built infrastructure and 'activities' as defined in Marine Coastal Access Act (S 66) and other legislation, for example oil and gas activities (under Petroleum Act 1998) and carbon dioxide storage (under Energy Act 2008). Includes Nationally Significant Infrastructure Projects under the Planning Act (S 29). The definition is analogous to that in section 55 of the Town and Country Planning Act 1990 of 'carrying out of building, engineering, mining or other operations in, on, over or under land, or the making of any material change in the use of any buildings or other land'. Encompasses, but is not restricted to, what is sometimes commonly called 'development'. Examples include built or fixed structures, such as a gas platform or a wind farm comprising pilings, turbines, and associated structures (convertor stations etc), and activities such as aggregate extraction and maintenance dredging.

Displacement – The action of causing the moving of a development, or activity from its current place or position, eg shipping traffic can no longer occur in an area due to the placement of built infrastructure.

Evidence – For the purpose of marine planning, evidence includes policy, data, information, surveys, maps, and any other relevant material.

Gross Value Added – Gross Value Added is the value generated by any unit engaged in a production activity. It is measured at basic prices, excluding taxes (less subsidies) on products. Regional Gross Value Added is measured using the income approach.
The main components of income based Gross Value Added are:

- compensation of employees (wages)
- gross operating surplus (the sum of self-employment income, gross trading profits) and
- surpluses, non-market capital consumption, rental income (less holding gains)
- taxes (less subsidies) incurred as a result of engaging in production, independently of the quantity or value of goods and services produced such as business rates

Heritage Assets – Elements of the historic environment such as buildings, monuments, or landscapes that have been identified as holding a degree of significance.

Implementation and Monitoring Plan – A description of how and when the marine plan policies and objectives will be implemented and monitored.

Independent Investigation – Once the consultation draft of the marine plans has been published, and the Marine Management Organisation has assessed comments received, resolved any issues where possible and identified any issues that remain unresolved, the Marine Management Organisation will consider whether or not to recommend the need for an Independent Investigation (II). The Secretary of State will then determine (in accordance with paragraph 13 of Schedule 6 of the Marine Coastal Access Act), whether or not to initiate. If an Independent Investigation is initiated by the Secretary of State the Marine Management Organisation will appoint an independent person to assist the Planning Inspectorate to investigate the draft marine plans' proposals, to make any recommendations and the reasons for those recommendations will be published.

Leasing Round – A public tendering process where The Crown Estate Commissioners invite applications for the grant of exclusive rights to exploit the seabed for a specified purpose.

Licensing Round – Period during which Government offers and then allocates a number of specified areas (Blocks or part Blocks) within its national boundaries for exploration to oil and gas companies, typically in return for fees and/or a commitment to carry out a work programme.

Local planning authority – An organisation that has powers under the Town and Country Planning Act to determine applications for planning permission and prepare development plans for its area. In England local planning authorities are: (1) district

councils; (2) London borough councils; (3) metropolitan district councils; (4) county councils in relation to any area in England for which there is no district council; (5) the Broads Authority. A National Park authority is the local planning authority for the whole of its area.

Marine Conservation Zone – Specific areas designated under the Marine Coastal Access Act for the purposes of conserving marine flora or fauna, marine habitats or features of geological or geomorphologic interest.

Nationally Significant Infrastructure Project – Major infrastructure developments in England and Wales as defined in section 14 of the Planning Act. In England and Wales, consents for Nationally Significant Infrastructure Projects, including the larger offshore renewable energy (> 100Megawatts) and port developments, need to be determined in accordance with the Planning Act. However, where a relevant National Policy Statement has been published, Nationally Significant Infrastructure Project applications must be determined in accordance with the National Policy Statement, subject to certain exceptions, and having regard to the Marine Policy Statement and relevant marine plans. The determining authority is the relevant Secretary of State (for example, the Department for Energy and Climate Change in the case of offshore wind energy) on a recommendation supplied by the National Infrastructure Directorate within the Planning Inspectorate (to whom the Marine Management Organisation is a statutory consultee).

Objectives – Desired outcomes of the marine plans. Objectives form the link between the vision and the detailed strategy, including policies.

Options – In planning terms, this is the part of the planning process for considering different ways of achieving the objectives of a plan and addressing any significant issues.

Precautionary Principle – Where evidence is inconclusive, decision-makers should make reasonable efforts to fill evidence gaps but will also need to apply precaution within an overall risk-based approach, in accordance with the sustainable development policies of the United Kingdom Administrations. This means that if the risks from an activity are uncertain, preventative measures may be required if there is concern that human activities may harm human health, living resources and marine ecosystems or interfere with other legitimate uses of the sea, or have other social and economic impacts. This would need to be considered based on risk.

Pressure – The effects from any given activity over time in the marine area. Pressures can be physical, chemical or biological. The same pressure can be caused by a number of different activities, eg fishing using bottom gears and aggregate dredging both cause abrasion.

Proponent – Organisation or individual putting forward a ‘proposal’ (see below). Includes but is not restricted to ‘applicant’.

Proposals – General term, usually for something new but could also be for a change that encompasses development and uses, subject to management by public authorities, eg fishing or certain recreation activity, together with management

measures. Proposals may relate to either type of decision specified in the Marine Coastal Access Act (see 'Decisions').

Public authority – This means a Minister of the Crown, a public office-holder or a public body (Marine Coastal Access Act S322 (1)). A 'public body' includes government departments, The Crown Estate, local authorities, local planning authorities, Inshore Fisheries Conservation Authorities and statutory undertakers. A 'public office holder' means a person holding an office under the Crown, an office created by an Act or devolved legislation, or an office paid for by Parliament. Public authorities are responsible for ensuring that relevant decisions (see 'Decisions') take appropriate account of the marine plans and plan policies.

Renewable Energy Zone – The Renewable Energy Zone was declared under section 84 of the Energy Act 2004. It extends up to a maximum of 200 nautical miles from the baseline (usually the low water mark but with exceptions such as straight baselines across the mouths of some bays). The United Kingdom has claimed exclusive rights in this area with respect to production of energy from water or wind.

Seascape – In the context of this document, reference to seascape should be taken as meaning landscapes with views of the coast or seas, and the adjacent marine environment with cultural, historical and archaeological links with each other.

Seascape character – In the marine environment seascape character relates to the perception of an area, and the combination of characteristics at the surface, within the water column and on the seabed.

Signposting – Highlights or points to existing plans, policies, measures or information, relevant to a specific plan policy or sector/topic, particularly if they are critical to addressing an issue identified in the planning process.

Sustainability appraisal – The purpose of the sustainability appraisal is to promote more sustainable development by checking and testing a plan, policy or programme for the quality and robustness of its environmental, social and economic content. Sustainability appraisal is iterative and must be closely linked with the plan making process.

Sustainable development – Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs.

Use – Generally a purpose for which the marine area is used, for example fishing or recreation. Distinguished from 'development' (see above), which has a specific meaning in legislation and in marine management.

Visual Resource – Can be interpreted primarily as views of the coast and sea from land. Views from the sea to land, and sea to sea, are also relevant.

HM Government

East Inshore and East Offshore Marine Plans

Annex 1: Supporting information on the production of maps

April 2014

This document is available in large print, audio and braille on request. Please call +44 (0)300 123 1032 or email planning@marinemanagement.org.uk

Published by the

Department for Environment, Food and Rural Affairs
Nobel House, 17 Smith Square
London SW1P 3JR

Publication date: April 2014

Any enquiries regarding this document/publication should be sent to the Marine Management Organisation at **planning@marinemanagement.org.uk**

This document is also available on the Marine Management Organisation website: [web link]. http://www.marinemanagement.org.uk/marineplanning/areas/east_plans.htm

PB 414159

Contents

Chapter 1
Supporting information on the production of maps

Introduction

The information contained in this annex gives detailed explanation on the creation of a number of maps in the East Inshore and Offshore Marine Plans. The annex does not address every map in the plans. The maps addressed in this annex are those that required some level of explanation or additional analysis of data for the purposes of supporting marine planning.

Figure 5: Broadscale habitats

This figure shows a map of broadscale habitats derived from both modelled and survey based data. It incorporates the predictive habitat layer from UKSeaMap 2010, the Joint Nature Conservation Committee's revised habitat layer for the Marine Management Organisation's East plan areas and Mapping European Seabed Habitats survey data from April 2013. Each of these datasets are described below.

UKSeaMap 2010 predicts the presence and extent of European Nature Information System[1] classified habitats in United Kingdom marine waters by overlaying physical data layers in a model and translating these into European Nature Information System habitats descriptions. The physical layers used were: substrate, biological zones, (made up of bathymetry, light penetration and depth to wave base), kinetic energy (made up of tidal current and wave-generated kinetic energy), biogeographic zone (derived from bathymetry data) and salinity. These source layers were a combination of both surveyed and modelled information with varying confidence. In combining survey and modelled data it was assumed that:

- habitat maps derived from surveys that collected both remote sensing and ground truthing data should take priority over modelled data

[1] The European Nature Information System Habitat types classification is a comprehensive pan-European system to allow standardised descriptions and collection of data across Europe through the use of criteria for habitat identification; it covers all types of habitats from natural to artificial, from terrestrial to freshwater and marine (http://eunis.eea.europa.eu/about.jsp).

- where survey-derived maps had a confidence score of 60% or less, predictive data would be used
- in the intertidal area all survey data was used irrespective of confidence scores as the predictive habitat model does not extend to these locations

More information on the modelling processes involved in deriving the UKSeaMap 2010 can be found here: www.jncc.defra.gov.uk/ukseamap.

The revised habitat map was created by updating the substrate layer (a component of the model that defines broadscale habitats) in the UKSeaMap 2010 predictive habitat model. This provided a more accurate output in locations where improved substrate data was available. The full methodology of how the Joint Nature Conservation Committee's revised habitat layer for the Marine Management Organisation's East plan areas was created can be found in the marine Management Organisation report.[2]

The Mapping European Seabed Habitats project created a single Geographical Information System layer that combined all available broadscale habitat maps, an overview of the process can be found here: www.searchmesh.net/Default.aspx?page=1921.

The final dataset incorporating the three data sources described above was created by erasing areas covered by Mapping European Seabed Habitats surveys from both the UKSeaMap 2010 predictive habitat layer and the revised habitat map for the East plan areas datasets. The areas covered by the revised habitat map for the East plan areas were also erased from the UKSeaMap 2010 predictive habitat layer. This left the UKSeaMap 2010 dataset with gaps where the other two higher confidence datasets had coverage. The three data layers were then merged to produce a single dataset.

Please note the following limitations to this dataset:

Although this dataset is considered the best available broadscale habitat map, it is heavily based on modelled data. This has inherent inaccuracies and issues in both the confidence and the extent of the presence of particular habitats.

2 Marine Management Organisation (2012). Compilation and confidence assessment of seabed habitat data. A report produced for the Marine Management Organisation, pp 18. Marine Management Organisation Project No: 1014. ISBN: 978-1-909452-05-3.

Figures 6a and 6b: Habitats and species of conservation importance and Figure 7: Species (of low or limited mobility) of conservation importance

Features of conservation importance are species and habitats that are particularly threatened, rare, or declining. These were principally identified from features listed under existing legislation and international conventions, such as the Wildlife and Countryside Act 1981, United Kingdom Biodiversity Action Plan, Convention on Biological Diversity, and the Oslo Paris Convention for the Protection of the Marine Environment of the North-East Atlantic. Data displayed on these maps highlight known features of conservation importance derived from the Department for Environment and Rural Affairs MB0102[3] project which was commissioned to produce the data layers necessary for the recommendation of Marine Conservation Zones.

The MB0102 project includes both point and polygon data. Point data comes from samples collected for example through grab, quadrat, and photographic survey, whereas polygon data is derived from a combination of area-wide remote sensing, point samples, extrapolation and in some cases modelling methods. There are some instances where the same biotope (a description of a physical habitat with associated biological community) is mapped with both points and polygons due to different surveys collecting data using different techniques; for this reason point data may occur outside polygon data for the same biotope. The MB0102 data has been supplemented by additional evidence collected by the Net Gain regional Marine Conservation Zone project, for example the data on peat and clay exposures around Holme-next-the-Sea given to English Heritage by Norfolk Council.

Please note the following limitations to this dataset:

- data quality for any given point or polygon may differ due to the survey it came from
- confidence in the extent of Net Gain data showing peat and clay exposures around Holme-next-the-Sea is considered to be low due to the data collection period (2003) and the method used to digitise the original data provided. However, the occurrence of this habitat was verified by Net Gain through site visits, photographic evidence and surveys in 2011
- the MB0102 project data confidence assessment was based on the volume of data acquired and the information provided by experts and organisations. This yielded different confidence results for different species, ranging from low to high

Further information on the data collected for the Department for Environment and Rural Affairs MB0102 project and its associated confidence rating can be found in reports 2b and 2c (mapping protected habitats and non-mobile species): http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=16368

[3] Department for Food and Rural Affairs (2011), Marine Protected Areas - gathering/developing and accessing the data for the planning of a network of Marine Conservation Zones - MB0102. http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=16368

Figure 8: Habitats Directive, Annex 1 habitats

The Marine Policy Statement states that marine planning should take into account obligations made under the European Commission Habitats Directive (92/43/EEC) which promotes the conservation of biodiversity. Habitats in particular need of protection are listed under Annex 1 of the Habitats Directive and are displayed in Figure 8 where data is available.

Annex 1 reefs:

The reef data displayed in Figure 8 has been mapped as a result of surveys undertaken by Natural England, Natural Resources Wales, Scottish Natural Heritage, the Joint Nature Conservation Committee, British Geological Survey and National Oceanography Centre. These surveys used a combination of remote sensing and ground truthing and/or were specifically designed to identify Annex I habitats. Areas mapped as potential reef are a result of surveys, but further work may be needed to delineate the precise boundaries of the habitat. This figure shows data from version seven of the dataset which was created in 2013.

Further information on Annex 1 reef can be found at http://jncc.defra.gov.uk/page-1448#

Annex 1 sandbanks:

Annex I sandbanks in United Kingdom waters have been delineated, where possible, using a combination of British Geological Survey Seabed Sediments (v3) and bathymetry, slope and aspect from multibeam data where available, otherwise the 2012 Department for Environment, Food and Rural Affairs/Astrium Digital Elevation Model . The Interpretation Manual of European Union Habitats - EUR25[4] includes the following in its definition of sandbanks:

- permanently submerged;
- top of bank is generally in <20m of water depth;
- composed mainly of sandy sediment;
- may be non-vegetated or vegetated with Zostera marina (sea grass) and/or free living species of the Corallinaceae family (maerl).

The Interpretation Manual of European Union Habitats EUR27 subsequently added that the bank must be: “an independent elevation from the seabed, predominantly surrounded by deeper water”.

For a full methodology please refer to UK_Sandbanks_Method which can be accessed here

[4] European Commission (2007), Interpretation Manual of European Union Habitats, EUR 27. http://ec.europa.eu/environment/nature/legislation/habitatsdirective/docs/2007_07_im.pdf

(http://jncc.defra.gov.uk/plugins/MPSMapper/Downloads/C20121212_AnnexISandbanks.zip)

Please note the following limitations to this dataset:

- there are 13 marine Annex 1 habitats present in United Kingdom waters yet only two of these are shown here due to data availability;
- there is ongoing work by the Joint Nature Conservation Committee and Natural England to further develop these datasets (including a specific project to more precisely delineate the boundaries of Annex 1 sandbanks).

Figure 10: Seabird foraging ranges

This figure shows interpreted foraging areas for both summer and winter seasons for a range of seabirds. The data are taken from the Natural England “seabird sensitivity mapping for English territorial waters” project which is due to be published at the end of March 2014. This report will contain in-depth descriptions of the datasets and analysis methods used to create the dataset.

The dataset combines input values from the Wildlife and Wetlands Trust and the European Seabirds at Sea databases. These two datasets are described below.

The Joint Nature Conservation Committee’s European Seabirds at Sea database includes surveyed track lines from European Seabirds at Sea boat surveys from 1979 to 2011 extracted to show sightings in English Waters only. Additional data has also been added from The Crown Estate's data catalogue which includes publically available bird survey data to support offshore wind farm environmental assessments.

Aerial survey data from the Wildlife and Wetlands Trust, recorded between 2001 and 2011 has also been included in this study.

Summer months are determined to be April to September (inclusive) with remaining months classed as wintering with both periods shown in figure 10. All species that were observed in English waters from each of the two studies were included as part of the analysis. A full list of these is included in the report.

The two datasets described above were combined and densities calculated using density surface modelling using a 3km by 3km grid creating the outputs that are presented in figure 10. For confidence purposes, data was only extracted on a species by species basis where the coefficients of variance were less than 0.3.

Please note the following limitations to this dataset:

High intensity aerial surveys provided good estimates of inshore species around small coastal features but estimates are less reliable further offshore away from the surveyed areas. By contrast the generally wider spaced transects of the boat surveys enabled more confident predictions to be made across larger areas, though any finer scale patterns may have remained undetected.

It is known that some of the European Seabirds at Sea data are decades old and spatial and temporal coverage between the datasets, though good in some areas, is poor in others. This has led to areas of poorer quality predictions.

Figure 16: Areas of identified tidal stream resource (TIDE1)

The data displayed in figure 16 sets out areas of identified tidal stream resource that could be harnessed in the future for power generation. The areas have been identified using the same parameters that defined The Crown Estate's Wave and Tidal Key Resource Areas[5] work.

The marine Management Organisation used Seazone bathymetry data filtered to sites of 5m depth and over, and the Atlas of United Kingdom Renewable Energy Resource[6] with mean spring peak current filtered to over 1.5m/s.

Please note the following limitations to this dataset:

The results of The Crown Estate study are theoretical estimates of the wave and tidal energy resources available in broad geographic areas around the United Kingdom. The thresholds used to define areas are based on industry estimates.

It is important to understand that the study did not take into account existing sea uses, sensitivities or environmental factors which are likely to constrain deployments to smaller areas of seabed in practice. This is not because such factors are unimportant, but since at the industry's present stage of development, it is difficult to quantify these constraints.

More information on limitations and thresholds are available through The Crown Estate website: http://www.thecrownestate.co.uk/energy-infrastructure/wave-and-tidal/.

5 The Crown Estate (2012). United Kingdom Wave and Tidal Key Resource Areas Project. Available online at: http://www.thecrownestate.co.uk/media/355255/uk-wave-and-tidal-key-resource-areas-project.pdf

6 ABPmer (2008). Atlas of United Kingdom Marine Renewable Energy Resources. Available online at: http://www.renewables-atlas.info/ [date of access 15/01/2010]

Figure 17: Potential opportunity for carbon capture and storage (CCS1)

The areas identified in figure 17 for having potential for carbon capture and storage are derived from two different sources:

- active and inactive oil and gas fields (taken from United Kingdom Deal's 'hydrocarbon field' dataset)[7]. Data on the location of oil and gas fields was used to extract the location of those fields where production was still ongoing but also where production had ceased (these areas are of particular interest due to the presence of existing oil and gas infrastructure). The East marine plan areas represent the greatest opportunity for carbon capture and storage development in the English marine area due in part to the high concentration of existing oil and gas infrastructure. Storage is also possible within some active oil and gas fields as part of enhanced hydrocarbon recovery. This would involve the introduction of carbon dioxide to an aquifer, displacing the hydrocarbons, allowing their recovery under pressure
- saline aquifers as defined by the British Geological Survey[8] as potential geological storage sites in which large quantities of carbon dioxide could be isolated from the atmosphere to prevent them acting as a greenhouse gas

It should be noted that none of the sites featured in figure 17 are currently being used for carbon capture and storage and that their inclusion is intended to be indicative of potential areas where carbon capture and storage may develop. For more information on this study the full report can be accessed at the following link: http://nora.nerc.ac.uk/4837/1/CR06185N.pdf

Please note the following limitations to this dataset:

Whilst saline aquifers represent significant potential for trapping buoyant fluids such as carbon dioxide, there are a number of possible limitations to using them in this way:

- there are potential permeability barriers within the formation in various parts of the Southern North Sea Basin such as faults (which may act as intra-reservoir seals) which are clearly imaged on seismic surveys
- it is difficult to demonstrate that firstly the saline aquifer will not leak and secondly that significant masses of carbon dioxide can be injected into them. Although the Bunter Sandstone is, in regional terms, sealed by the overlying Haisborough Group mudstones and halites, there are crestal faults on many of the domes and it is uncertain whether, or at what pore fluid pressure, these might leak
- the integrity and injectivity of individual structures cannot be estimated from the data available for the British Geological Survey study. If three-

[7] Department of Energy and Climate Change website, accessed 13/02/2014. https://www.gov.uk/oil-and-gas-offshore-maps-and-gis-shapefiles.

[8] British Geological Survey (2008), Industrial carbon dioxide emissions and carbon dioxide storage potential in the United Kingdom, Commercial Report CR/06/185N. http://nora.nerc.ac.uk/4837/1/CR06185N.pdf

dimensional seismic data was available and licensed, and well test data was available, it could provide a much more detailed view of the potential of an individual structure but it still would not be able to provide any guarantees about either injectivity or integrity. This could only be proved or disproved by field injection tests.

Figure 18: Important navigation routes (PS2)

The data to support PS2 was based on interpretation of the Marine Management Organisation's shipping density data.[9] This interpretation aimed to identify corridors of shipping activity where more than 1000 ships per year transit, and was completed by Geographic Information System processing and manual data interpretation by Anatec using their ShipRoutes database. Once these routes have had been identified, the 90% of the lane width was determined to provide the extent of the important navigation route. This is the same method as described by MGN 371. The policy layer was then created by removing space allocated to harbour authority administrative areas (who have jurisdiction over these areas), International Maritime Organization routes (which are addressed separately through policy PS1) and Round 3 wind farm zones (who are considering and accounting for navigation corridors through their Zone Appraisal and Planning processes).

The Marine Management Organisation's shipping density data was computed using Anatec's Ship Routes database represented over a 0.5km by 0.5km grid. The data includes the estimated number of ships passing through the cell per year and the breakdown of shipping by ship type (cargo, tanker, ferry and offshore).

Please note the following limitations to this dataset:

The data is modelled in part from logging Automatic Identification System data which is based on Very High Frequency signals that contain information on the location and vessel type. Very High Frequency signals are limited by line of sight range due to the curvature of the earth which means this data is limited to being collected within 30 nautical miles of any receiver. Anatec have receivers collecting data along the coast as well as on oil and gas platforms meaning areas outside the coverage of these receivers will be under-represented in the dataset.

The other source of information that Anatec use to build this model is estimation using known ship routeing frequencies which Anatec collect in their 'Ship Routes' database. The data inshore and around oil and gas infrastructure (where Anatec have Automatic Identification System receivers logging traffic) will be far more reliable than offshore locations which will be purely estimates based on common ship routeing. When calculating ship density, the movements of 'non-routine traffic' such as fishing vessels, military vessels, tugs, dredgers and recreational craft are excluded.

[9] Marine Management Organisation (2013), Anatec - 90th Percentile Shipping Density , URI 1600043. http://www.marinemanagement.org.uk/evidence/documents/mdr.pdf

Figure 19: Ports and shipping context

Figure 19 is an indicative map to supply supporting information for policies PS1, PS2 and PS3. Layers that have been included are:

- Navigational approaches
- Harbour administrative areas
- Round 3 areas of search (zones)
- Identified scheduled services
- Indicative shipping activity (90th percentile from the centre line in areas of over 1000 transits per year)

Identified scheduled services were defined by interpreting shipping traffic coming out of the Humber and heading to European ports. The information on scheduled services was supplied by the Association of British Ports and consisted of destination ports and crossing frequency.

The indicative shipping density data[10] on this map is the full dataset without the areas that are covered by harbour authority administrative areas, International Maritime Organization routes and Round 3 wind farm zones erased, as in the analysis undertaken for Figure 18.

[10] Marine Management Organisation (2013), Anatec - 90th Percentile Shipping Density , URI 1600043. http://www.marinemanagement.org.uk/evidence/documents/mdr.pdf

Figure 21: Areas of high potential aggregate resource (AGG3)

The data displayed on figure 21 represents key outputs from the British Geological Survey Report, depicting mineral resources of current or potential future economic interest in the East marine plan areas. The data displayed on the map was created by combining the two following project outputs:

- the geological distribution of all offshore aggregate minerals: this data highlights the presence of coarse sand and gravel considered to be of national importance, suitable for construction or beach nourishment. This layer was created using data held by the BGS, augmented by data collected from Regional Environment Characterisation Reports[11] funded by the Marine Aggregate Levy Sustainability Fund. Three Regional Environmental Characterisation studies have been undertaken in the East Inshore and East Offshore Plan Areas - The Humber, The East Coast, and the Outer Thames Estuary. Geophysical data, grab samples and bathymetric data collected and processed as part of the Regional Environmental Characterisation studies was incorporated into the dataset used to interpret the distribution of sand and gravel resources;
- prospective areas for coarse sand and gravel in the Humber, East Anglia region and the Outer Thames Estuary: these are prospective areas for construction aggregates, where the geographical and depositional setting indicates that geological features and associated deposits are likely to be present, but where there was no data available to confirm this.

The Round 3 wind farm zones were then removed from the resulting area, as it was identified through the marine planning options process that aggregate extraction would need to take place outside of Round 3 zones.

Please note the following limitations to this dataset

The purpose of the map is to show the defined areas of high potential aggregate resource to which policy AGG3 applies. It highlights areas within which potentially workable minerals may occur. These areas are not of uniform or equal potential and also take no account of planning constraints that may limit their working. The economic potential of individual sites can only be proved by a detailed evaluation programme (which is an essential precursor to the submission of a planning application for mineral extraction).

With reference to the marine aggregates map, extensive areas are shown as having no mineral resource potential; however some aggregate dredging does occur in these areas. The presence of these operations generally reflects local or specific situations that are not resolved by the resolution of data that is available for compilation of this regional-scale map and require site-specific investigation to identify. This can result in marine mineral licences covering areas where no resource is shown. It is possible that local variations in geology that are too subtle to be

[11] Marine Aggregate Levy Sustainability Fund, website accessed 13/02/2014, Marine Aggregate Levy Sustainability Fund Geographic Information System. http://www.marinealsf.org.uk/data/

resolved by this regional-scale survey can contain substantial volumes of resource and could prove to be significant future resources.

Please see the following link for the full project report: http://www.thecrownestate.co.uk/media/340963/BGS%20east%20coast%20report.pdf

Figure 23: MMO fishing activity by E.U. (inc.UK) over 15m vessels (time spent in hours 2007-2010, mobile gears)

The Marine Management Organisation vessel monitoring system data was processed to show 15-metre and over vessel fishing activity, or those vessels deemed to be fishing (for example, as opposed to steaming) from 2007 to 2010, by extracting the data for vessels travelling between 0 and 6 knots. Data displayed shows the time spent fishing (in hours) for 15-metre and over vessels using mobile gears only, and was created by summing the fishing activity for United Kingdom and non-United Kingdom vessels (Belgium, Denmark, Netherlands, France, Germany, Ireland, Spain and Sweden). Areas exhibiting zero minutes fished were removed from the dataset. For the purposes of the data displayed, mobile gears[12] were combined. Since static gear fishers by the very nature of their activity are not generally considered to travel at a speed of 1 – 6 knots, (possible steaming to grounds excepted), the Marine Management Organisation considered the vessel monitoring system data to be unhelpful in determining European Union static gear fishing activity.

The Marine Management Organisation United Kingdom fishing activity data is distributed in the shape of a J-curve and has been manually classified by the Marine Management Organisation for ease of viewing. A standard classification was used whereby the maximum value of the data was taken and then divided by two to create two points representing the top class. The data was then successively divided by 2 until the smallest value in the data was reached. Each time the data was divided, a new class was created. As the data was showed in 'minutes fished' the remaining values were then divided by 60 to give 'hours fished.' This classification method ensures that each class range has approximately the same number of values with each class and that the change between intervals is fairly consistent.

Please note the following limitations to this dataset:

- the dataset only covers activity by 15-metre and over vessels – there are significant elements of fishing activity that are not covered (particularly near the coast where smaller boats are more prevalent);
- since this dataset includes information on value and weight of fish caught by the United Kingdom fleet, it has been necessary for the data to match up with satellite position reports (from the vessel monitoring system signal) and reported activity from landings records (to include data on weight and value within particular International Council for the Exploration of the Sea rectangles). However there are a number of instances where this matching is not exact, affecting the accuracy of the data. For example, only approximately 50% of the satellite position reports which are estimated as representing fishing activity can be matched to dates where fishing activity was reported within that particular International Council for the Exploration of

[12] Mobile gears are: beam trawls, beach seines, Danish seines, pair seines, Scottish seines, seine nets, boat dredges, hand dredges, mechanised dredges, pumps, otter trawls, otter trawls – bottom, otter trawls – midwater, otter twin trawls, pair trawling, pair trawls – bottom, pair trawls – midwater, bottom trawls nets, nephrops trawls, shrimp trawls – bottom, midwater trawls, shrimp trawls – midwater, other trawls not specified, purse lines, purse seine – one boat, purse seine – two boats and miscellaneous gear.

the Sea rectangle. The following table illustrates firstly the estimated percentage of 15-metre and over fishing activity that supplies both the satellite data and the landings data, and secondly the estimated percentage of 15-metre and over fishing activity where an exact match was able to be made between the activity and satellite data.

Year	Percentage of activity that supplies both activity and satellite data for United Kingdom fleet	Percentage of exact match between satellite and activity data for United Kingdom fleet
2007	84	61
2008	84	58
2009	86	66
2010	86	65
2007-2010	85	62

Table 1.1: Percentage of activity that supplies both activity and satellite data and exact match between satellite and activity data for United Kingdom fleet

Problems in matching satellite and activity data arise for a variety of reasons. There can be errors in the reporting of activity data (historically reported in paper logbooks) and for satellite data, the 1 – 6 knot speed range used to determine whether a position report relates to fishing activity or not are applied generically. In reality, differences may occur across vessels and gear type.

Figure 24: MCZ Fishermap project combined gear fishing intensity

During the planning process, the Marine Management Organisation received feedback from a number of stakeholders with regard to the limitations of the inshore fishing data displayed in the draft Evidence and Issues report, as a number of stakeholders were unable to identify their specific fishing activity. In response to this, the Marine Management Organisation acquired the Fishermap survey data (collected by the regional Marine Conservation Zone projects) for use in marine planning.

The objective of the Fishermap project was to collect information on the activities of commercial fishermen using under 15-metre vessels between the years 2003 to 2010. In total, the research collected data across the four regional Marine Conservation Zone projects on 260 vessels using bottom gear, 161 dredgers, 22 pelagic trawlers and seiners, 253 hook and line fishermen, 509 netters and 559 fishermen using pots and traps. In the East marine plan areas no vessels with pelagic mobile gear were recorded. This data was then amalgamated and summed onto a sampling grid with each grid cell having the dimensions of 1/160 degree latitude by 1/80 degree longitude.

The combined dataset was created using the following method: each of six gear types (pots and traps, nets, mobile pelagic gear, hook and line, dredging gear and mobile demersal gear) were standardised to the same scale 0 -1.The layers were then combined together adding the scores for each gear type in the same grid cell. The final score for each grid cell represents the % of participants undertaking their activity (in a particular grid cell), averaged across the six gear types. The data has been displayed using Jenks Natural Breaks statistical classification method.

Please note the following limitations to this dataset:

In the East marine plan areas, the Net Gain regional Marine Conservation Zone project sampled approximately 50% of the total fleet within this region; however a significant number of skippers requested that their data not be shared with third parties. When this occurred their results have not been displayed unless the total number of vessels within a sampling unit exceeds four (as this level of aggregate prevents the identification of individual activity). The omission of these records does not cause the relative distribution of fishing effort to be altered; however, it does reduce the total extent of fishing activity that is being represented.

Figure 25: Total Fishing Effort 2011 (Fisheries Activity Database- all gears)

This dataset displays commercial fishing effort for United Kingdom registered vessels, in Kilowatt days (i.e. engine power multiplied by days at sea) to International Council for the Exploration of the Sea statistical rectangle level. The data was calculated using data collected and processed by officials of the various Fisheries Administrations in the United Kingdom, namely the Marine Management Organisation, Marine Scotland, Northern Irish Department of Agriculture and Rural Development (DARD), Welsh Assembly Governments (WAG) and Departments in Jersey, Guernsey and the Isle of Man. The main legislation used to collect these data is:

1). The European Union fisheries legislation on keeping and submitting logbooks and providing landing declarations and sales notes, primarily Council Regulation (EC) No. 1224/2009 (the Control Regulation);

2). General powers under the Sea Fisheries (Conservation) Act 1967 under which Ministers granting a licence can require the master, owner or charterer of the vessel named in the licence to provide them with such statistical information as they may direct.

The method of data collection depends on the length of the vessel. Data collection for over 10-metre vessels comes primarily from the fishing logbook, but also from landing declarations and sales notes. The fishing logbook captures data on fishing activity by individual vessels by trip and for each day of activity within a trip. This includes details of the catch, by species, in terms of the presentation and quantity of fish retained on board. Information is also collected on the gear used and the International Council for the Exploration of the Sea division, rectangle and zone for the activity. Supply of logbook data is mandated by legislation for all over 10-metre vessels in respect of catches of all species. Logbook data for United Kingdom vessels must be submitted within 48 hours of landing to United Kingdom authorities; this includes landings into foreign ports. Landing declarations provide information on the weight and presentation of fish landed by species.

For under 10-metre vessels, there is no statutory requirement under either European Union or national legislation for fishermen to declare their catches. Historically, information for this sector has been collected with the co-operation of the industry: it comprised log sheets and landing declarations voluntarily supplied by fishermen as well as sales notes and assessments of landings collected from market sources and by correspondents located in the ports. Collection of this data has now been replaced after the introduction in September 2005 of a scheme of registration for buyers and sellers of first sale fish (see above). Sales notes are now used in addition to the voluntary information from fishermen. During 2005 and 2006, United Kingdom Fisheries Administrations introduced a system of restrictive licensing for activity targeted at shellfish. As part of this system, new reporting requirements were introduced involving a requirement for under 10-metre vessels to complete diaries of their daily activity which needed to be submitted on a monthly basis. Summary information from these diaries is now in use in Northern Ireland but was discontinued in the rest of the United Kingdom at the end of February 2009.

Please note the following limitations to this dataset:

Data collected for over 10-metre vessels aims to achieve full coverage of activity. For the under 10-metre vessels, landings are only reported where the fish are sold or data have been provided voluntarily, leading to reduced coverage. The reliability of the data collected is dependent on the information provided by fishermen. Despite legal obligations for fishermen to declare their catches, a proportion of fishing activity remains unreported.

Figure 26: High intensity fish spawning and fish nursery grounds

The data displayed on Figure 26 has been derived from the Department for the Environment and Rural Affairs MB5301 project 'Mapping spawning and nursery areas of species to be considered in Marine Protected Areas',[13] which builds on a study by Coull, et al.[14] The purpose of the project was to determine important spawning areas for fish species by assessing the presence of eggs and larvae in ichthyoplankton surveys and to determine important nursery areas for fish species by assessing the presence of juvenile fish in trawl surveys.

Please note the following limitations to this dataset:

Data is displayed in International Council for the Exploration of the Sea half rectangles, as displaying in higher resolution polygons was deemed to be inaccurate due to the subtle shifts in species using these grounds.

[13] Department for Environment, Food and Rural Affairs (2010), Mapping spawning and nursery areas of species to be considered in Marine Protected Areas (Marine Conservation Zones), MB5301. http://randd.defra.gov.uk/Document.aspx?Document=MB5301_9578_FRP.pdf

[14] United Kingdom Offshore Operators Association Ltd (1998) (now Oil and Gas United Kingdom), Fisheries Sensitivity Maps in British Waters, Coull, K.A., Johnstone, R., and S.I. Rogers. http://www.cefas.co.uk/media/29947/sensi_maps.pdf

Figure 27: Optimum sites of aquaculture potential (AQ1)

The data shown in figure 27 identifies where policy AQ1 applies within the East Marine plan areas. The dataset presents the output of modelling to determine favourable locations for: macroalgae culture, bivalve bottom culture, finfish cage, lobster restocking, rope-cultured bivalve shellfish or trestle/bag culture of bivalves.

The data is derived from MMO1040[15] which contains information on the spatial trends of aquaculture potential in the South and East Inshore and Offshore marine plan areas.

In order to measure the sustainability of the natural resource which is needed to accommodate different aquaculture types a spatial model was created. This model was used to assist in site selections, and by doing so also provided outputs on the different natural and anthropogenic limitations on aquaculture developments.

MMO1040 collated datasets to derive areas as well as a modelling methodology. The environmental datasets that fed into the model were: bathymetry, (derived from the Department for Environment, Food and Rural Affairs Digital Elevation Model), predicted seabed sediments and combined seabed energy, (both from UKSeaMap 2010 (McBreen, et al., 2010)).

Please note the following limitations to this dataset:

- the model does not contain any measure of water quality (eg dissolved oxygen, sediment loading or contaminants) and therefore is likely to overestimate the area deemed suitable for aquaculture developments (particularly finfish cage culture, rope-grown bivalve culture and macroalgae culture);
- the UKSeaMap 2010 predicted seabed sediment map (McBreen, et al., 2010) is modelled at a coarse scale which has led to inaccuracies in the identification of areas which have potential for aquaculture development;
- the UKSeaMap 2010 combined seabed energy map included in the model (McBreen, et al., 2010) provides an approximation of the environmental conditions that are likely to limit aquaculture development (eg strong currents and large waves);
- UKSeaMap 2010 is known to under-estimate rock habitats because of the type of sampling data (sediment grabs) used to underpin the model. The Marine Management Organisation is working with the Joint Nature Conservation Committee to develop these data to lead to improvements in future models.

More accurate results could be obtained by using more precise component datasets (such as the maximum wave height and tidal current range, which would feed into the

[15] Marine Management Organisation (2013), Spatial trends in aquaculture potential in the South and East Inshore and Offshore Marine Plan Areas (MMO 1040), Available online at: http://www.marinemanagement.org.uk/evidence/1040.htm

combined seabed energy input dataset) and if more detail on the technical constraints of aquaculture activities was available. The dataset shows potential based on current technologies as defined in Table 10 of the MMO1040 Aquaculture Potential Final Report.