

Chapter 2: Evidence gathering

Contents

2.1 Introduction	12
2.2 Analysis of stakeholder engagement.....	13
2.3 Technical data collation and GIS analysis.....	16
2.4 Assessment of national policy	24
2.5 Assessment of sub-national plans and policy.....	25
2.6 Results of RBMP and SMP analysis	30

2.1 Introduction

This chapter outlines the approach and methods used to draw together information for the report, particularly chapters 4 and 5, and supporting annexes, together with some generic material that doesn't readily fit within one sector, such as overview of stakeholder engagement and assessment of river basin management plans. The information has been drawn from four main sources:

- **National policy:** Marine plans should translate the Marine Policy Statement (MPS), directing marine plans to be developed to deliver sustainable development, into detailed policy and spatial guidance for each marine plan area. This requires an understanding of the MPS and national policy, including sector-specific documents that underpin or add detail to the MPS, including national policy statements (NPS). Relevant material has been assessed and summarised, taking account of dialogue with policy owners including government departments.
- **Stakeholder engagement:** A successful, enabling marine plan will be one that meets the needs and expectations of stakeholders. To that end the marine planning team, including three liaison officers based across the first two plan areas, have attended numerous local, national and international meetings and events, gathering views and information from a wide spectrum of sectors and representing a breadth of opinions. These have been logged and summarised to enable analysis for this report.
- **Technical data collation and geographic information system (GIS) analysis:** The Marine Management Organisation (MMO), working with a range of partners and stakeholders, has collated a wide range of datasets related to activities and considerations to be taken into account in marine planning. The data has been used to derive various maps and statistics relating to current and potential future situations (Chapter 4) and to investigate the interaction between different activities and between activities and the environment (Chapter 5)¹. A full list of the data used in the MMO's analysis can be viewed in Annex 1.
- **Sub-national plans and policies:** The evidence base for marine plans should "take in a wide range of sources including existing plans"². Specific attention should be paid to terrestrial plans³. Informed by consultation, a process was developed for assessing local development frameworks in particular, but also other plans, such as shoreline management plans. Involving planning authorities and other key stakeholders has allowed us to assess material at the sub-national level that should be considered in marine planning.

¹ It should be noted that the MMO has adopted ETRS89 as a corporate standard for its co-ordinate reference system (CRS). It is a particularly appropriate CRS when mapping within Europe, with the UK remaining in the correct position in relation to the continent, accounting for variations in position due to tectonic shift. For marine planning, the ETRS89 CRS used is appropriate, recognising that there is little discernable difference between this and WGS84, the CRS commonly used in navigation by those operating in the marine environment

² Marine Policy Statement 2.3.1.2

³ The Marine and Coastal Access Act 2009 (Schedule 6, Section 3) requires the MMO to take all reasonable steps to secure that any marine plan for a marine plan area in its marine planning region is compatible with development plans.

2.2 Analysis of stakeholder engagement

Introduction

The Statement of Public Participation (SPP) was produced to document how and when stakeholder engagement would take place throughout the marine planning process as required under the Marine and Coastal Access Act 2009⁴, and was signed off by the Secretary of State in April 2011.

The SPP highlighted the need to engage with stakeholders at a local and national level and identified a number of stakeholder groups to engage with, including:

- key sectors as listed in the Marine Policy Statement
- bordering nations
- non-government organisations
- industry representative groups
- interested parties including the general public, local communities and special interest groups
- sustainability appraisal consultees
- statutory partners and other government bodies (see annex 2 for diagram of stakeholder groups).

Engagement needs to take place not only at local and national level but also internationally. Discussions have taken place with European nations (with further events planned) and fellow marine planners from other nations including South Korea, the USA and beyond to capitalise on best practice and lessons learnt in approaches to the delivery of marine planning. Regarding the East plan areas in particular, early contact was made with marine plan authorities in the Netherlands, Belgium and France. This contact will continue through the planning process. This should help to ensure not only an appropriate level of consultation and co-operation but also awareness of relevant complementary projects and initiatives.

Stakeholders outside of the East plan areas also want to engage with the process, reflecting this, events and meetings have been held in the reporting areas (plan areas bordering the East Inshore and East Offshore plan areas) and elsewhere to facilitate this.

The Marine Planning Team and its liaison officers based in the East plan area have attended in excess of 157⁵ stakeholder-focussed meetings including individual and bi-lateral discussions, drop-in sessions and workshops. This includes meetings in the reporting areas to the north and south of the plan area and also with both national and local stakeholders.

Overall methodology

The Evidence and Issues Report draws together a number of strands of evidence, including the views and opinions of stakeholders. The Marine and Coastal Access

⁴ Department for Environment, Food and Rural Affairs (2009) Marine and Coastal Access Act 2009, Schedule 6, Section 5 and 6.

⁵ Meetings from before marine planning process commenced (April 2010) to January 2012.

Act 2009 sets out the requirement to involve interested persons in the marine plans, with the SPP describing how and when this will happen. Therefore, it is important that this report captures the views of stakeholders in the overall analysis.

In order to incorporate stakeholder views within the report, detailed meeting notes were taken at every meeting⁶, each meeting then logged on a database and categorised to correspond to the 11 sectors in the MPS⁷. In total 123 meetings were recorded on this database. Issues raised by stakeholders at meetings were captured in meeting notes and subsequently summarised into a table (see Annex 2 for full table). This is set out to summarise stakeholder concerns related to a particular MPS sector – either by that sector or concerns about that sector. These issues are incorporated into the overall analysis in Chapter 4. It is important to note that many issues were raised by stakeholders that are not specifically marine planning related, and therefore not included in Annex 2.

These general points have been supplemented by those that emerged from the workshops held in December 2011 (see all below). Comments on data and evidence have also been submitted to the MMO by stakeholders through the web portal⁸, which is an interactive online tool that allows any stakeholder to view data and submit comments. These comments have been considered separately, and the evidence base revised accordingly.

General and recurring points from on-going stakeholder engagement

- Since the commencement of marine planning in the East Inshore and East Offshore plan areas, MMO marine planning staff have attended a diverse range of meetings and events throughout the plan area and beyond. Comments and contributions from many parties interested and affected by activities and development in, and adjacent to, the marine area have been wide ranging. Stakeholders are enthused by the introduction of marine planning, but as this is a new activity for England, there is a degree of stakeholder uncertainty as to what a marine plan will contain, affect, deliver and support.
- Many sectors have interest in the data gathering process, and question how any evidence deficiencies will be addressed, and how evidence will be used in delivering marine planning. This report hopes to address these questions.
- Concerns arise regarding potential stakeholder fatigue, particularly with regard to consultation and overlap with projects managed outside the MMO by other bodies, including those related to Marine Conservation Zones and Round 3 wind energy, limiting stakeholder time available for participation and contribution. Limitations exist for many stakeholders to make adequate representations through resource constraint, with sector dominance and greater resourcing of some organisations seen as equating to better/more significant level of influence.

⁶ Meeting notes analysed from April 2011 to October 2011.

⁷ A stakeholder category not included in the MPS was partner organisations, for example other government bodies or local authorities. These organisations have figured significantly in MMO's stakeholder engagement during the specified period and so a further stakeholder category was added to the events database and summary table in recognition of this.

⁸ MMO Marine Planning Web Portal

www.marinemanagement.org.uk/marineplanning/portal.htm (Accessed November 2011)

It should be noted that the MMO is committed to considering all evidence provided in a consistent way.

- There is a high level of interest in offshore and onshore impacts of renewable energy projects, both visual and environmental. Concerns of note for other activities are displacement of existing activities such as fishing and recreational sailing, and possible effects on tourism through visual impacts. Marine planning is actively considering co-location options to address this, and MMO licensing colleagues will also consider impacts of individual applications.
- The integration of terrestrial and land based planning systems on existing and future plans is seen as essential to ensure the success of marine planning. The introduction of the National Planning Policy Framework, and implications regarding sustainability and the safeguarding of the supply of minerals, were seen as important influences.
- Economic benefits of marine development and where they accrue is under scrutiny, with some forms of development seeing as contributing little to economic wellbeing at local level. The MMO will explore this further via ongoing evidence gathering.

General and recurring points from workshops December 2011

Below are the core messages from the workshops that stakeholders would like marine planning to take away and consider. The messages are split into overarching themes and sector-specific messages (in no particular order).

Overarching themes

- There was recognition that there are many plans and policies already adequately managing sectors and marine planning can signpost these in its plans.
- Any consideration of co-location needs to take account of safety issues but overall, stakeholders would like to see discussions around co-location continue and develop.
- Consideration needs to be given to how the marine plans will adequately represent specific areas within the plan area, particularly estuaries.
- Continued co-ordination between marine planning and terrestrial planning is required, including joint communications as appropriate.
- It will be important to optimise the benefits of marine planning for coastal communities and highlight to other organisations where there are social and economic opportunities.
- A number of sectors require flexibility in plans, rather than too many prescribed policies so as to respond to external drivers.
- Marine planning should make use of best available data and information, taking due consideration of quality, and improve on it where possible.

Sector-specific messages

- The impact on land of infrastructure from offshore development, such as offshore wind, needs to be addressed in marine plans and early and regular communication with stakeholders is required to limit the impact of energy connections onshore.
- Marine planning could encourage the co-location of new infrastructure alongside that which is already in place to make best use of space, as well as promoting use of redundant infrastructure for new sectors where possible.

- Tourism and recreation is an important sector for many communities in the East plan area and the opportunities available need to be maintained and balanced with other marine sectors.
- There can be interactions between activities within a single sector, as well as interactions between sectors. Marine planning will look at these on an individual basis as to whether these can be addressed through marine plans.

Where possible, these themes and messages have been considered and edits to the report have been made to reflect them. In some cases, further work is required to develop the area of work and we may be in contact with you in the future to discuss this and we will keep you updated with our progress.

The MMO acknowledge the contribution and input stakeholders have made in the planning process to date and look forward to their continued involvement and input.

Local enterprise partnerships and enterprise zones

The MMO recognise the establishment and potential benefits of a number of local enterprise partnerships (LEPs) in the East plan area. These are:

- Humber
- Greater Lincolnshire
- Greater Cambridge and Greater Peterborough
- New Anglia.

At time of publication, LEPs were not at the stage of being able to inform evidence development via production of their own plans or strategies. However, the MMO has established contact with them and is committed to ensuring LEP views and activities are supported by the plan where applicable as these emerge.

Furthermore, the MMO is aware of a number of enterprise zones (EZs) in development that are employing mechanisms such as local development orders (LDOs) to enable development in support of marine activities including offshore wind development. The implications of EZs in the East plan area will be kept under review through engagement, with appropriate responses detailed in the plan as necessary.

2.3 Technical data collation and GIS analysis

Methodology for technical analysis

The overview of the methodology for the technical analysis is set out in Figure 2.1 and Figure 2.2. These flowcharts demonstrate the steps taken to assess the activities currently taking place in the East Inshore and East Offshore plan areas (outputs in Chapter 4), how the space needed by different activities may change over the next 20 years (end of Chapter 4), how conflict or opportunity for co-location have been highlighted (outputs in Chapter 5) and the pressures they produce and associated sensitivity of the receiving habitats (also Chapter 5).

Examples of some of the main outputs described in figures 2.1 and 2.2 are included in the report. Other examples for the full range of outputs are available or continue to be produced. See further information and contacts via the MMO website⁹.

Data collection and quality assurance

Since the MMO began marine planning in April 2011, data has been gathered from a number of existing sources, with much of this available to view through the Marine Planning Portal¹⁰. A full list of the data used in our GIS analysis can be viewed in Annex 1. This includes data held within the Department for Environment, Food and Rural Affairs (Defra), such as that collected to assist in the designation of marine conservation zones (MCZs), The Crown Estate, Charting Progress 2¹¹ and various other holders of marine data.

Through the marine planning portal, stakeholders have been able to view and verify the data sources being used in analysis. Through this stakeholder involvement and by pooling the most up-to-date data on the marine environment, we can be confident marine planning is using the best available evidence. Stakeholders have also been invited to submit evidence which could reinforce the evidence base underpinning marine planning¹².

The data used in the analysis in this report represents key datasets that were chosen to best represent the spatial extents of key marine activities across the East plan areas. The maps shown in chapters 4 and 5 of the report are therefore intended to give a high level view of the spatial extent of each sector's activity (generally consisting of national and UK level datasets) to ensure a consistent approach across the East plan areas. There is however a considerable volume of data available which covers only part of the marine area around England which may be taken into account at a later stage in the plan-making process.

All data used within the following analysis has undergone the MMO's internal quality assurance process to assess data confidence and ensure that data used in analysis is the best available evidence. Data being used for marine planning must possess Marine Environmental Data and Information Network (MEDIN) standard metadata to ensure its lineage, collection method and limitations are known. For further information on the MMO's quality assurance procedures, please visit the MMO website¹³.

⁹ Marine Management Organisation, www.marinemanagement.org.uk/marineplanning/index.htm (Accessed November 2011)

¹⁰ Marine Management Organisation, <http://planningportal.marinemanagement.org.uk> (Accessed November 2011)

¹¹ Defra and UKMMAS, Charting Progress 2, <http://chartingprogress.defra.gov.uk/>

¹² Marine Management Organisation, www.marinemanagement.org.uk/marineplanning/evidence.htm (Accessed November 2011)

¹³ Marine Management Organisation, www.marinemanagement.org.uk/marineplanning/data.htm (Accessed November 2011)

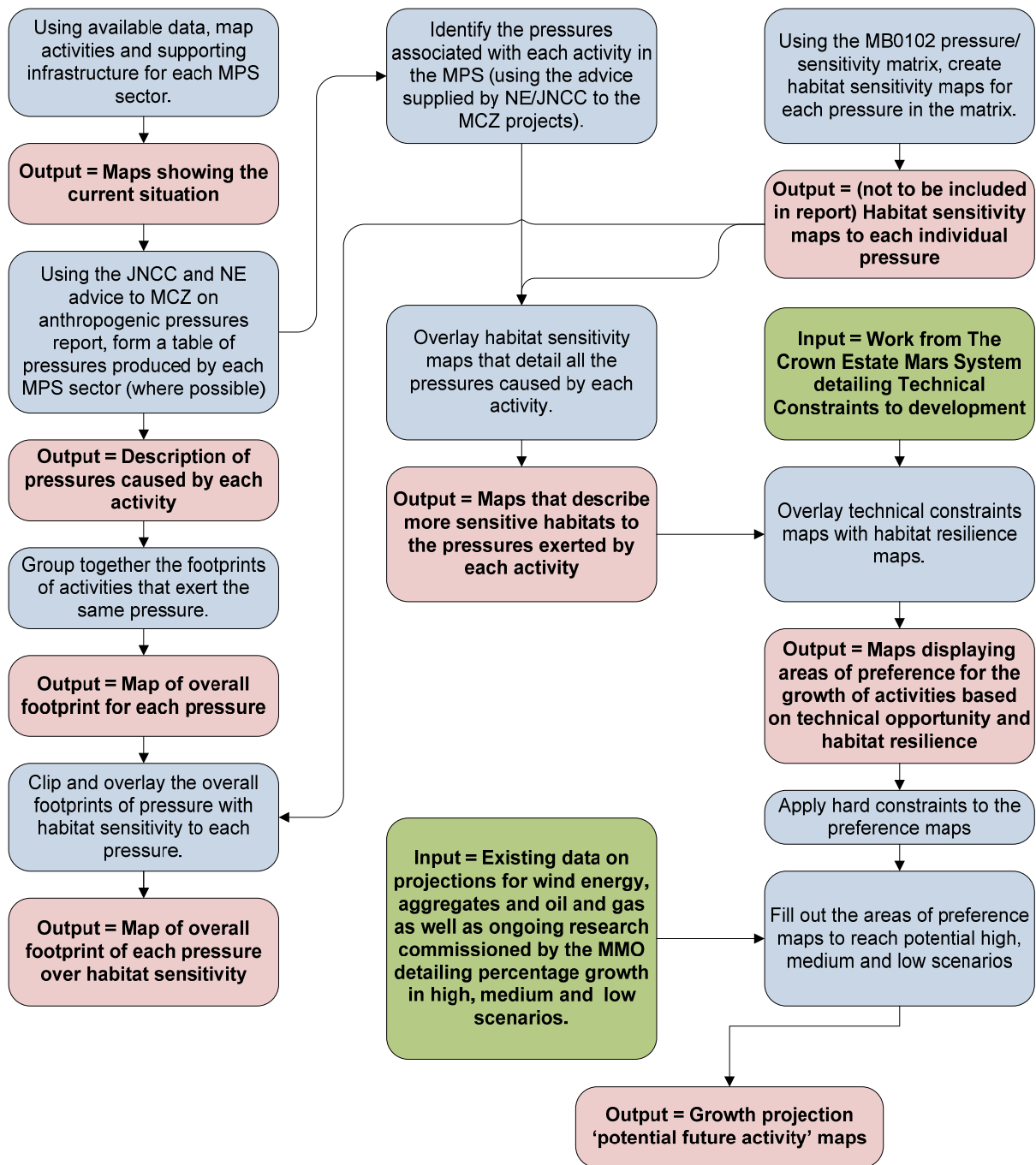


Figure 2.1: Technical methodology for analysis and mapped outputs presented in Chapter 4

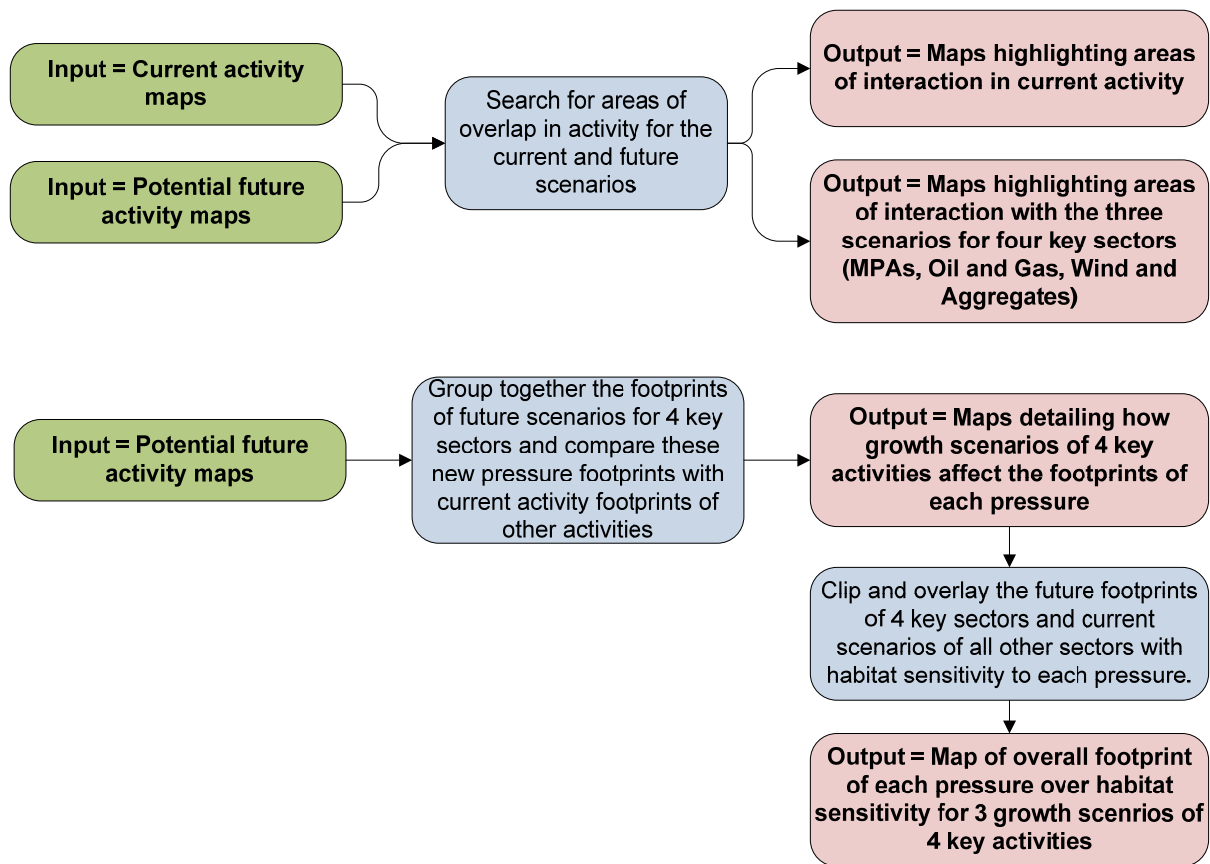


Figure 2.2: Technical methodology for analysis and mapped outputs presented in Chapter 5

Assessment of pressures and environmental sensitivity

The Marine Policy Statement states that the marine planning process should be based on an ecosystem approach¹⁴. This requires the marine planning system to balance the collective pressure of human activities with the ability of the marine ecosystem to maintain good environmental status¹⁵. To help consider this and inform how marine planning might respond, an assessment of anthropogenic pressures caused by activities and the sensitivity of receiving habitats has been considered (further environmental considerations are addressed in Chapter 6 of this report). The analysis uses outputs from the Defra MB0102 study on Development of a Sensitivity Matrix¹⁶ and pressures from the Joint Nature Conservation Committee (JNCC) and Natural England advice to MCZ projects^{17, 18}.

¹⁴ Defra (2011) Marine Policy Statement, p12

¹⁵ Defra (2011) Marine Policy Statement, p4

¹⁶ Defra (2010) MB0102 Report No 22 Task 3 Development of a Sensitivity Matrix (pressures-MCZ/MPA features)

¹⁷ JNCC and Natural England (2011) General advice on assessing potential impacts of and mitigation for human activities on MCZ features, using existing regulation and legislation

¹⁸ JNCC and Natural England (2011) Advice from the Joint Nature Conservation Committee and Natural England with regard to fisheries impacts on marine conservation zone habitat features

These were assessed against broad scale habitats classified to Eunis level 3¹⁹ using a recently updated habitat map from JNCC for the East plan areas (see Figure 2.3 below). This allowed plan level analysis of the interactions between activities and the environment.

This combined broad-scale habitat map makes use of information from two key sources:

- An update of the MESH combined survey data-derived EUNIS layer created by combining habitat maps developed from local habitat surveys. Coverage is intertidal and subtidal, but only where surveys have taken place.
- A regional update of the UKSeaMap 2010 model: created by combining physical datasets associated with habitats. Coverage is subtidal only.

The combined map provides the MMO with a full coverage baseline habitat map, based on the best available data at the present time.

Please note that for the futures analysis undertaken in Chapter 5 the UK SeaMap 2010 V8 model was used. This is because the combined map is at a plan area scale only rather than for all English waters. This is a requirement for this analysis to assess the suitability of the East plan areas for future development on a national scale.

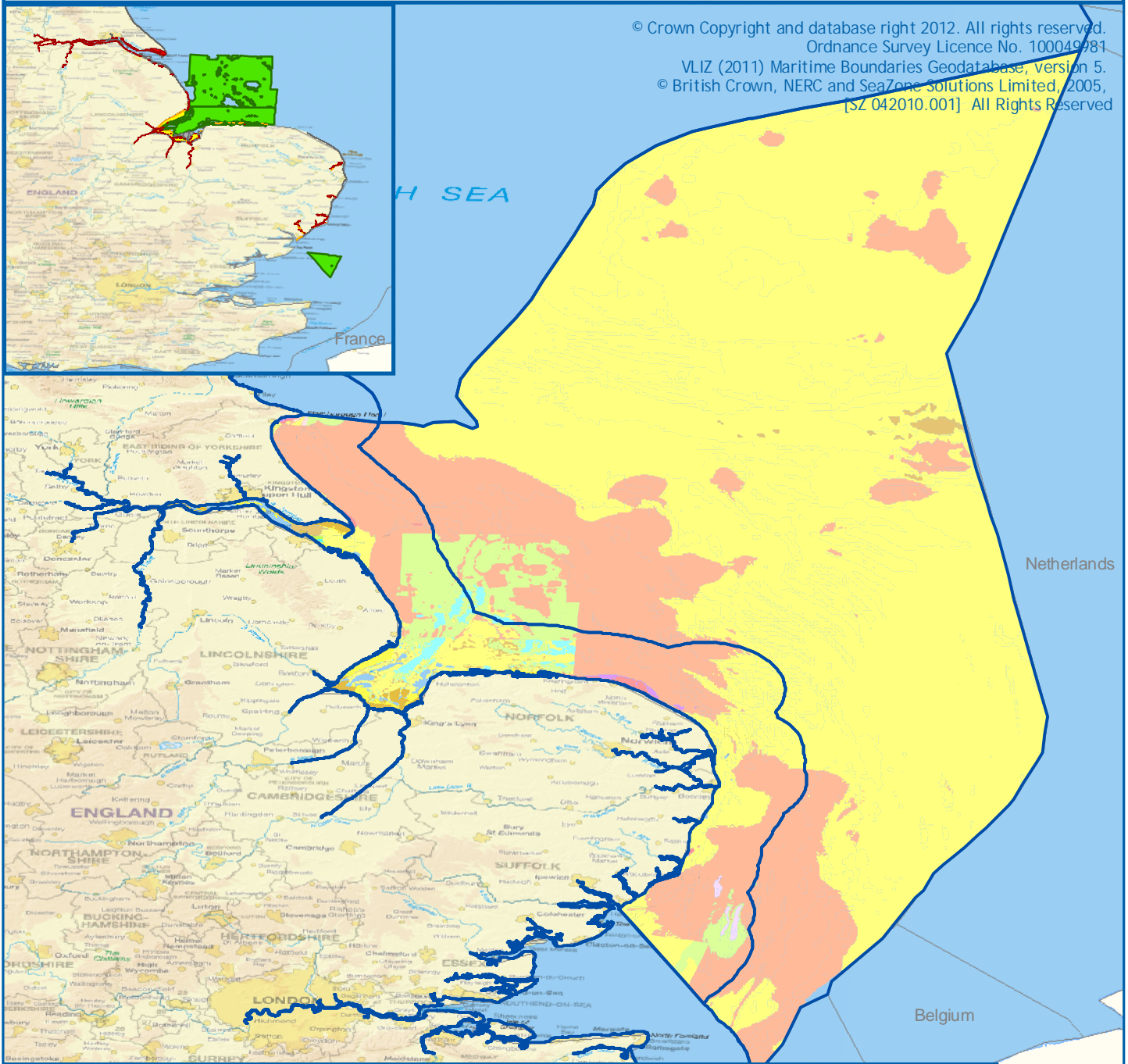
¹⁹ Developed by the European Environment Agency (EEA), the EUNIS system (European Nature Information System) defines species, site and habitat information. It classifies terrestrial, freshwater and marine habitats. It contains 5 hierarchical levels for marine habitats. This classification extends to level 5 with the breakdown of habitats more specific in higher levels. Sensitivity analysis has been completed to level 3. <http://eunis.eea.europa.eu/index.jsp>

Figure 2.3: Combined EUNIS level 3 habitat map

Please note: The MMO is awaiting confidence data for the updated UKSeaMap 2010 model which is expected soon

January 2012

This map has been produced using the ETRS89 Coordinate Reference System



© Crown Copyright and database right 2012. All rights reserved.
 Ordnance Survey Licence No. 100049781
 VLIZ (2011) Maritime Boundaries Geodatabase, version 5.
 © British Crown, NERC and SeaZone Solutions Limited, 2005,
 [SZ 042010.001] All Rights Reserved

	MMO Marine Plan Areas	Combined broadscale habitat map			A2.3		A4.2
	Confidence in survey data	EUNIS level 3 habitat group			A2.4		A5.1
	high		A1.1		A2.5		A5.2
	moderate		A1.2		A2.6		A5.3
	low		A1.3		A2.7		A5.4
	unknown		A1.4		A3.1		A5.6
			A2.1		A3.2		
			A2.2		A4.1		

The Development of a Sensitivity Matrix work for recommending MCZs classed habitat sensitivity against 40 pressures (see Annex 3 for full matrix) with sensitivity a function of both resistance and resilience of habitats. Sensitivities were represented as low, medium, high, not sensitive, not exposed and not assessed, alongside confidence scores for each assessment. These scores were reclassified to allow analysis in ArcGIS as described in table 2.1 and Annex 3a.

Table 2.1: Scores applied to MB0102 sensitivities

Low sensitivity	1
Medium sensitivity	2
High sensitivity	3
Not sensitive	0
Not exposed	0
Not assessed	Excluded from study

Where sensitivity scores for a habitat fell across a range (such as high to low) the highest sensitivity value was taken in line with the precautionary approach.

High sensitivity: Habitat features are highly sensitive where the pressure causes severe or significant mortality of key functional or structural species or those that characterise the habitat, and/or cause changes in the habitat such that environmental conditions are changed (such as the habitat type is changed). If recovery is possible, the feature is anticipated to take more than 10 years to recover from the impacts caused by the pressure. An example would be a cold water coral reef, which is highly likely to be demolished by deeply abrasive or penetrative activities and would take in excess of 100 years to recover its original extent and biodiversity.

Medium sensitivity: Features with medium sensitivity are those characterised by medium resistance and no-low recovery or no-low resistance and medium-high recovery. A possible example might be a muddy sand assemblage with some minor structural components that would be damaged by penetrative and abrading activities but followed by recovery within 2 to 10 years.

Low sensitivity: Features with low sensitivity are those with high resistance or where recovery from any impacts caused by pressure is rapid, so that the feature is recovered within two years from cessation of the pressure causing activity. An example would be removal of ephemeral algae (such as *Ulva*) from the shoreline. This species would typically take 6 to 12 months to regain their original cover.

Not sensitive: Features that are not sensitive are those where resistance to the pressure is high where there is no significant mortality of individuals or changes to the habitat, and where recovery from any impact is complete within two years.

1. Mapping sensitivity to pressure

The table of habitat sensitivity scores was combined with a EUNIS level 3 habitat map. A map was then created in ArcGIS showing the habitat sensitivity for each individual pressure in turn.

Pressures with "not assessed" values were excluded from the GIS analysis as their presence was found to affect the values of other layers where layer multiplication or addition was required. Those excluded as a result were: pH changes, introduction of other substances (solid, liquid or gas), litter, introduction of light and genetic modification and translocation of indigenous species. It is hoped that analysis of these environmental pressures will improve, such as through work in support of the Marine Strategy Framework Directive (MSFD).

2. Definition of pressures

Pressures were interpreted from the JNCC and Natural England reports that gave advice to MCZ projects on the potential impacts and mitigation of human activities on MCZ features. This report was translated into a table with data layers assigned to demonstrate where activities could cause each pressure to occur. This table is situated in Annex 4.

3. Limitations

- **Low confidence was present in many parts of the broadscale habitat map used although confidence was usually greater in the areas where survey data was available (such as around The Wash)**
- **Low confidence was also present throughout the sensitivity and pressure data from the Defra MB0102 project** either through lack of data or evidence, site and conditional variability, and temporal variability in resistance or resilience of the habitat.
- The coverage of the habitat map does not extend into estuaries leaving gaps in the analysis around the coastal area. Some activities such as aquaculture in the East plan areas cannot be included in this analysis due to the lack of coverage of the habitat map.
- The pressure sensitivity work in the MB0102 matrix does not take into account intensity or frequency of pressure.

As such this assessment should only be viewed at a broadscale, with decisions only being made through drilling down into more detail or with reference to the underlying confidence in the data

Note: More specific limitations are included in Chapter 5, Section 5.2 along with information on how this analysis might feed into marine planning.

Use of habitat sensitivity and pressure mapping

Maps have been generated using the habitat sensitivities and pressures described above in several sections of the report namely:

- Sensitivity analysis (Chapter 5, Section 5.2)
- Future projected estimates Renewable Wind Energy, Aggregate Extraction and Oil and Gas Production (Chapter 4, Sections 4.13 – 4.15)

Please note – further environmental and ecological evidence is addressed in Chapter 6 of this report and will continue to be addressed throughout plan-making.

2.4 Assessment of national policy

Overall methodology

The rationale for this process is drawn from a number of key documents that guide marine planning. The Marine and Coastal Access Act 2009²⁰ requires the MMO to develop marine plans in conformity with the MPS²¹. The MPS acts as a synthesis of the main national policies (which themselves reflect relevant supra-national policies and conventions) relating to marine planning and so, as part of plan development, it is essential to understand the MPS. As the MPS also references further documents, it was prudent to explore the content of these to understand more fully the implications laid out in the MPS. The marine planning system should also look at national planning documents²².

The output provides a summary and assessment of implications of national policy to inform a broad range of stakeholders and ensure such policies are taken account of in developing planning for the East plan areas. Marine plans will be produced in accordance with prevailing national policy, directly referencing these where particularly important, with much of the detail being signposted and plan objectives seeking to be an integrated part of policy delivery.

Document selection

This task was undertaken across the 11 activities identified in Chapter 3 of the MPS. For all of these the text was reviewed to extract and/or summarise goals, objectives and points and considerations of most relevance to planning. Further information was incorporated from the Strategic Scoping Report²³ which provided an overview of sectors and topics around the whole of England. To augment this assessment, a few key supporting documents for each activity were examined to add relevant or updated detail further to the MPS, particularly:

- cited key documents in the MPS
- the relevant NPS for an activity (such as National Policy Statement for Ports)
- other major strategic reports particularly those produced after the MPS was drafted (such as the Department of Energy and Climate Change's (DECC) Renewable Energy Road Map).

Documents were primarily sourced from the websites of the relevant government departments and industry bodies.

Analysis

In analysing the documents identified, the following questions were used to identify information considered most relevant:

- What does this mean for marine areas? (the activity-related facts from the SSR were the starting point for this)

²⁰ Defra (2009) The Marine and Coastal Access Act, Schedule 6, Section 3 sub-sections 2 and 3

²¹ Defra (2011) UK Marine Policy Statement, p12

²² Defra (2011) Description of the Marine Planning System for England

²³ MMO (2011) Strategic Scoping Report

- What does this mean for the likely future growth (positive or negative) of the sector?
- What is this likely to mean for the East of England?
- What might this mean for marine planning?

Answers to these questions were used to derive text and points included in the activity sections in Chapter 4 including the following:

- An introductory text setting out the relevant policy levels (EU, international), legislation (and targets if applicable) and key facts of relevance for the sector.
- The main strategic objectives and goals for the sector further to the high level marine objectives (see Chapter 1). An objective or goal was defined as a statement that set out the aspirations for future development and change (possibly including targets), bridging the gap between the vision of a document or activity and the detail set out in it. It also included statements that might influence the development of plan policies.
- Links to issues set out in Chapter 2 of the MPS, such as environment interests.
- Implications for the plan area, based on the MPS, augmented by material taken from the supporting documents

All sections used original text as much as possible, in order to avoid misinterpretation while avoiding unnecessary duplication of large tracts of text and/or extensive referencing.

2.5 Assessment of sub-national plans and policy

Rationale

The rationale for this process is drawn from a number of key documents that guide marine planning. The Marine and Coastal Access Act 2009²⁴ requires the MMO to take all reasonable steps to secure that any marine plan for a marine plan area in its marine planning region is compatible with development plans. The MPS²⁵ directs the evidence base to take in a wide range of sources including existing plans. The 'Description of the Marine Planning System for England'²⁶ states that as much as possible the marine planning system should facilitate the process of land-sea integration, build on and reinforce existing terrestrial policies.

As it is specifically set out in the Marine and Coastal Access Act 2009 and in supporting documentation, there is a need to evaluate local development frameworks (LDFs), and in particular core strategies, to understand which policies need to be taken in to account in development of marine plans, that is to identify the marine relevance of each policy. If it is applied in a consistent way across existing plans in a plan area, this analysis can help generate a robust evidence base and therefore a sound marine plan. If it can then be applied in a similarly consistent way across a second plan area, ensuring marine plans are compatible and consistent with one another, as well as with the terrestrial planning system.

²⁴ Defra (2009) The Marine and Coastal Access Act, Schedule 6, Section 3 sub-sections 2 and 3

²⁵ Defra (2011) UK Marine Policy Statement, p12

²⁶ Defra (2011) A Description of the marine planning system for England, p31 and p77

Document selection

Primary research was undertaken to establish a long list of statutory and non-statutory plans. This list was then prioritised, removing those that:

- have commonality in terms of being numerous, spatially designated areas and therefore are better described via the marine planning portal, such as sites of special scientific interest (SSSIs) 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 (SACs) and special protection areas (SPAs)
- are national or supranational as these would be examined in the relevant sector policy analysis, such as the Marine Strategy Framework Directive (MSFD)
- were not at that point in time part of the planning regime, such as water protection zones
- were not considered marine relevant, such as historic gardens
- are outside the plan area, such as burial at sea sites
- are too numerous to account for, such as local nature reserves.

Prioritised plans include (numbers in brackets indicate the number of a given type of plan identified in the East plan areas):

- local development frameworks (LDFs) (26)
- national park (NP) plans (1)
- areas of outstanding natural beauty (AONB) plans (2)
- river basin management plans (RBMPs) (2)
- shoreline management plans (SMPs) (6).

This is not to say that any of the plans not prioritised here would not be important to a marine plan, rather it was felt that stakeholder engagement would be the best avenue through which to receive further advice on the importance of plans that may not have been accounted for in this process. Furthermore, examination of relevant plans is an ongoing process, such as estuary management plans (EMPs). It should be noted that documents reviewed varied in terms of being adopted or being in draft form, and that document development is a continuous process. The marine planning evidence base will continue to be updated as appropriate, new information emerges. For the purposes of gaining an overview of the plan area content in both adopted and draft documentation has informed the evidence base.

Analysis

The Description of the Marine Planning System for England²⁷ suggested that at the scoping stage, policies within relevant plans identified should be analysed to identify those that have a marine dimension or impact should then be listed by the MMO. In the case of LDF, NP and AONB plans, the following methodology was applied.

- To enable analysis, marine relevance was identified as being a positive response to the question 'Does the policy relate to those topics which, by virtue of their

²⁷ Defra (2011) A description of the marine planning system for England, p80

inclusion in the MPS, have been judged as being of marine relevance by the UK Government?'

- It was identified that numerous plans were to be considered, so a common lens of national policy through which individual local policies were to be viewed was developed. To do this, the test of marine relevance was applied to Planning Policy Guidance (PPG) or Planning Policy Statement (PPS) documents, central references for LDF or core strategy development. It was considered that if a local policy refers to a marine relevant PPG or PPS, the policy itself may be considered marine relevant. Many policies in plans examined did not relate directly to PPSs or PPGS and in these cases each policy was assessed individually.
- Another check for marine relevance was geographic, using LDF documents that support policies, such as proposals maps, to identify proximity of the coast to areas in which a local policy is put into effect.
- Details or summaries of local policies were recorded as necessary for the plans examined, and in each case a most relevant MPS section (either detailed consideration from Chapter 2 or sector from Chapter 3 of the MPS) was identified, with Secondary MPS Section(s) also listed. Text relating to a marine-relevant policy identified was highlighted in summaries produced.
- Consultation took place with planning authorities to assess the validity of analysis, confirming or challenging those local policies identified as marine relevant, identifying any policies missing from analysis and dismissing any that are considered in excess of the MMO's planning remit (that is those that cannot be influenced by marine planning). Amendments were made to the MMO's analysis and the final analysis was then communicated to plan authorities.
- Once all plans within the East plan areas were assessed as above, the material developed was summarised to identify key trends and issues identified on a local plan scale. Material identified as being most associated with MPS detailed considerations was provided to sustainability appraisal contractors to inform work on the receiving environments section of the synthesis report. Material relating to sectors in Chapter 3 of the MPS was provided to members of the MMO planning team to inform sector document production for the key activities part of the synthesis report.

Local transport plans

Another type of sub-national plan that may be relevant to the marine plans are local transport plans (LTPs)²⁸. Transport infrastructure is vital to integration of terrestrial and marine activities, particularly around specific transport nodes such as ports and in some cases, power stations, a point recognised by the MPS that refers to the need to liaise as appropriate regarding on-shore infrastructure²⁹. Highways authorities, including local authorities, are cognisant of this and liaise with all parties in preparation of LTPs that recognise transport issues through strategic planning. In examining a number of LTPs it was noted that the majority of infrastructure addressed is of terrestrial concern, detailed and specific measures, such as improvement of transport links to and from ports, have not been cited in this evidence document. The MMO will continue to work with ports on matters that that

²⁸ Defra (2011) A Description of the marine planning system for England, p31 and p77

²⁹ Defra (2011) Marine Policy Statement, p30

may impact upon their activities that may be strategically dealt with through the plan, with highways authorities working with ports to ensure landward transport links are sufficient. Should LTP content raise issues at the appropriate scale to be addressed strategically through a marine plan it would be considered in the production of any marine plan. Early sight of any such opportunity is welcomed.

Regarding the wider role of the MMO, there may be cases where development of transport links within a local authority area require liaison with the MMO's marine licensing team. For example where maintenance of transport infrastructure requires a marine licence, these specific, case by case licensing issues will not form features of a marine plan.

Area action plans

The focus of sub-national analysis has been on plans and strategies such as local development frameworks (LDFs) that provide strategic context to development over a given area assigned to a planning authority. These documents, while spatially operating at a smaller scale than that of the marine plan, set out policies in a way that may be likened to what could be expected within a marine plan. Area action plans (AAPs) establish proposals and policies for the development of specific areas. Examples of AAP use in a marine context include planning for development of infrastructure such as marinas. While AAPs represent change on the coast within the East plan area, they are typically an extension of larger scale approaches set out in LDFs, setting out specific detail to enable development. As such, AAPs have not been examined in detail with LDFs used as the primary means of identifying coastal change at the plan scale. Should AAP proposals raise issues at the appropriate scale to be addressed strategically through a marine plan it would be considered in the production of any marine plan. Early sight of any such opportunity is welcomed.

River basin management plans

The MPS states that "When developing marine plans the marine plan authority should ensure it has regard to any relevant RBMP or supplementary plan and the programme of measures devised for the river basin district which is summarised in each plan"³⁰. Therefore an assessment of the marine relevance of RBMP has been undertaken to ensure the relevant policies are taken into account during the marine planning process. It is also the case that RBMPs must have regard for marine plans, or the MPS where no plan exists.

We first confirmed with the Environment Agency (EA) that there were two RBMPs within the East plan areas: the Humber RBMP and the Wash RBMP.

RBMPs are extensive documents with many annexes and so through discussion with the EA, the MMO focused on the plan policies of marine relevance. In order to understand the relevance of the policy to the MPS, a primary MPS section was assigned to each policy identified, with secondary links to other sections of the MPS also noted. This information was compiled in a spreadsheet.

³⁰ Defra (2011) Marine Policy Statement, p20

The next step was to summarise this raw information, gaining an understanding of the implication(s) of the policy for marine planning.

This summary, alongside the raw information, was shared with the Environment Agency to ensure we had:

- looked at the relevant documents of the RBMP
- highlighted the relevant policies in the documents for marine planning
- understood the implications of the policy on marine planning.

Comments received were integrated into the summary and any changes to the RBMP in the future will be reflected in the summary document.

Shoreline management plans

Similarly to RBMPs, SMPs are explicitly mentioned in the MPS: "When developing marine plans, marine plan authorities should liaise with terrestrial planning authorities, drawing on shoreline management plans (SMPs)..."³¹. As such, an assessment of the marine relevance of SMPs was required to ensure that marine planning has due regard for the plans.

The stretch of coastline and associated management policy was extracted from each SMP and collated in a spreadsheet. Any descriptive text was also extracted for more detailed information.

In addition to having regard for the content of the SMP, an understanding of the interaction between the management policies and 11 sectors in the MPS was required. This would give a high-level indication of the likelihood of an activity being compatible with the management policies.

This analysis, alongside the raw information extracted from the SMPs, was shared with the lead authority for each SMP (in some cases this was a local authority, in others it was the Environment Agency). Feedback was requested over a period of two weeks. In some cases, the lead authority asked for longer to consult with partner authorities and this was granted, on the understanding the feedback may not appear in this report draft.

The first part of the feedback focused on comments on the high level, non area-specific interactions of the management policies and MPS sectors to ensure our understanding of the impact of the policy on sectors was accurate. The second part focussed on area-specific detail in response to four questions posed. The aim of this part was to highlight activities related to SMP delivery that need to be taken account of in marine plans.

This information was collated into a summary document for inclusion in the evidence and issues report.

³¹ Defra (2011) Marine Policy Statement, p24

In addition to this analysis the MMO worked with the Environment Agency to spatially map SMPs (and policy units within each SMP) and the associated management policy. This has produced a GIS layer which will be visible on the marine planning portal for stakeholders to view, when the next data upload occurs.

Estuary management plans

For estuary management plans (EMPs) the following method was applied. Note that at time of release this process is ongoing.

EMPs are produced by a group of organisations all of whom have an interest and/or stake in an estuary. They group brings together all those with an interest in an estuary to reach a consensus on the sustainable use of that estuary. EMPs are non-statutory and all the major estuaries in England have one.

We have initially looked at the Humber EMP and the Wash EMP. The plans have been reviewed for policies that marine planning need to have regard to, and the excerpts have been extracted from the document into a spreadsheet for analysis as we go forward in the marine planning process.

As part of this process, we recognise the need to examine port and harbour management plans and, where they have been put in place, are seeking to integrate the review of these documents with the marine planning review process.

2.6 Results of RBMP and SMP analysis

RBMPs are tasked with protecting and improving the water environment and have been developed in consultation with organisations and individuals. They contain the main issues for the water environment and the actions everyone needs to take to deal with them³².

RBMPs have been drawn up for river basin districts in England under the Water Framework Directive (WFD). The WFD looks at the ecological health of surface water bodies, as well as achieving traditional chemical standards and all water bodies need to achieve good ecological status or potential under the directive.

The marine planning description document for England states "A key issue is the relationship between RBMPs and marine plans"³³, with further background provided in sections 5.35 to 5.38.

A river basin district is classed as a river basin and the river basin's adjacent coastal waters³⁴.

The RBMPs are approved by the Secretary of State for the Department for Environment, Food and Rural Affairs (Defra) and the Welsh minister where relevant.

³² Environment Agency, www.environment-agency.gov.uk/research/planning/33106.aspx, (Accessed November 2011)

³³ Defra (2011) A description of the marine planning system for England, p67

³⁴ Environment Agency, www.environment-agency.gov.uk/research/planning/33112.aspx, (Accessed November 2011)

Annex C of each RBMP sets out the actions needed to be taken on the ground to deliver the objectives of the plan. The actions for the two plans are summarised in the following tables but it is worth noting that although the MMO is not mentioned (because the MMO did not exist when the RBMPs were produced), the Marine and Fisheries Agency (the MMO's predecessor) is named under the navigation action plan of both RBMPs to deliver the actions relating to dredging and disposal of dredged material.

Annex J of each RBMP sets out the other plans and process that need aligning with river basin management, and has a chapter on marine, specifically mentioning the MPS and marine plans. Commonly for RBMPs in the East plan areas, Annex J states "Marine plans covering transitional and coastal waters will play an important role in supporting achievement of river basin management plans through setting out what activities may or may not be permitted in particular areas". It is important to note here that marine plans will not necessarily provide this level of detail throughout the plan area.

Annex J of each of the RBMPs in the East plan areas goes on to say that it will be important to ensure that the aims of RBMPs and SMPs are complemented by marine plans, particularly as the cycles for each planning regime are not aligned. This clearly recognises the need to align RBMP and marine plans to ensure they have the same intent, where appropriate.

Analysis

RBMPs are statutory documents, produced by the Environment Agency. The MPS states that the "marine planning system will sit alongside and interact with existing planning regimes across the UK". Therefore an assessment of the marine relevance of RBMPs has been undertaken to ensure the relevant policies are taken into account during the marine planning process.

There are two RBMPs in the East plan areas: the Anglian RBMP and the Humber RBMP. The main documents were analysed and the relevant text was extracted and tabulated.

Alongside the text from the RBMP, the corresponding MPS chapter is noted to indicate the link between the two.

From this information, some high level considerations are suggested for comment and further consideration in the marine planning process.

The following tabulated information sets out the key policy areas in the RBMP, the associated MPS chapter and the considerations for marine planning. It is important to note that the overall policy aim is to deliver good environmental status (GES) or good ecological potential (GEP) for water bodies under the WFD³⁵.

³⁵ Environment Agency, <http://www.environment-agency.gov.uk/research/planning/33256.aspx>, (Accessed November 2011)

Table 2.2 – Anglian RBMP

RBMP policy	Most relevant associated MPS section	Considerations for marine planning
Removal of or modification to barriers to increase fish passage. This will help to increase the biodiversity within rivers and estuaries.	2.6.1 Marine ecology and biodiversity	Any activity that creates a physical barrier within estuaries must consider the safe passage of fish. This would be predominantly a consideration for licensing and covered in planning guidance.
Introduce sediment management strategy to improve the quality of rivers and estuaries and balance with the need for dredging.	3.6 Marine dredging and disposal	Any new activity or development that will impact on sediment movement must consider its impact at a catchment scale. This would be a consideration for both planning and licensing.
Sustainable water management goals need to be considered for new port development or expansion.	3.4 Ports and Shipping	Certain criteria will need to be met before physical changes to water occur through port development or expansion. Criteria could be set by licensing, with input from Environment Agency.
Support for recreation within the Anglian river basin while minimising environmental impacts. This is particularly needed in the Broadland Rivers where there are SPAs and SAC and boating and angling are popular activities.	3.11 Tourism and recreation	Integration of recreational activities and protection of designated sites along the Anglian coast is required. This could be a spatially specific requirement in the plan.
Support for habitat creation to offset coastal squeeze (often delivered through management realignment).	2.6.1 Marine Ecology and Biodiversity	New activities that damage marine/coastal habitat will need to mitigate against this loss. This could be stated in the plan and enforced through licensing.
Marine spatial planning will help to reduce the physical modification of waterways and the spread of invasive species.	2.6.1 Marine Ecology and Biodiversity	Regarding invasive species, this would most likely be included as a licence requirement if appropriate and encouraging natural methods, where appropriate, to manage watercourses could be mentioned in the plan guidance.

Table 2.3 – Humber RBMP

RBMP policy	Associated MPS chapter	Considerations for marine planning
Removal of or modification to barriers to increase fish passage. This will help to increase the biodiversity within rivers and estuaries.	2.6.1 Marine ecology and biodiversity	Any activity that creates a physical barrier within estuaries must consider the safe passage of fish. This would be predominantly a consideration for licensing and covered in planning guidance.
Action to reduce the physical impacts of flood risk management activities in artificial or heavily modified water bodies.	2.6.8 Coastal change and flooding	Marine planning must not increase the risk of coastal flooding in the East plan areas. This could feed in to the licensing process as Environment Agency are a consultee.
Develop a dredging and disposal framework which will provide guidance to all those undertaking or permitting navigation dredging and dredged material disposal activities to assist in achieving the statutory objectives of the Water Framework Directive.	3.6 Marine dredging and disposal	All dredging-related activities will need to adhere to EA guidance on dredging to support the objectives of WFD. This could feed into planning guidance.
Focus on supporting the Humber SSSI return to favourable status.	3.1 Marine protected areas	No marine activities should contribute to the degradation of the SSSI and this could be a spatially specific consideration in marine plans.

Although not stated in the Humber RBMP, the Environment Agency has stated that the MMO will need to ensure the environmental and economic significance of the Humber estuary is recognised and managed. A diverse range of existing and future development means that cumulative impacts need to be clearly understood so no environmental deterioration is recognised. This is a requirement under the plan.

Summary of issues marine planning needs to be aware of

Both plans focus on the following themes that are of most relevance to Marine Planning guided by the scope of the MPS:

- importance of fish passage for biodiversity
- integration (and balance) between recreational use and protection (and improvement) of designated sites (SSSI, SPA, SACs)
- sediment issues including dredging guidance and the reduction in diffuse pollution and sediment-based pollutants to improve the water quality in order to meet the objectives of WFD.

They recognise the overlap between RBMP and marine plans and the need to align them to deliver the RBMP objectives.

Shoreline management plans

SMPs are large-scale assessments of the risks associated with coastal processes and helps reduce these risks to people and the developed, historic and natural environments. Coastal processes include tidal patterns, wave height, wave direction and the movement of beach and seabed materials³⁶.

SMPs are non-statutory and therefore should be viewed as aspirational rather than a legal requirement.

SMPs are developed by coastal groups. These are principally made up of local authorities and the Environment Agency, one of whom adopts a leading role in co-ordinating the coastal group and writing the SMP for each stretch of coastline³⁷.

There are six SMPs within the East plan area. These are (with the associated lead authority):

- SMP 3 – Flamborough Head to Gibraltar Point (East Riding of Yorkshire District Council)
- SMP 4 – Gibraltar Point to Hunstanton (Environment Agency)
- SMP 5 – Hunstanton to Kelling Hard (Environment Agency)
- SMP 6 – Kelling Hard to Lowestoft (North Norfolk District Council)
- SMP 7 – Lowestoft to Felixstowe (Suffolk Coastal District Council, currently draft version)
- SMP 8 – Essex and South Suffolk (Environment Agency).

Within each SMP, there are a number of policy development units (PDU) which are stretches of coastline based on the evidence gathered through the SMP process, with each unit is aligned to one of four management policies. The management policies are as follows:

- Hold the line – maintain the existing defence on its current alignment.
- Advance the line – advance the existing defence line by building new defences on the seaward side of the original defences.
- No active intervention – a decision not to invest in providing or maintaining defences.
- Managed realignment – allowing the shoreline to move backwards, with management to control or limit movement.

³⁶ Environment Agency, www.environment-agency.gov.uk/research/planning/104939.aspx (Accessed November 2011)

³⁷ Environment Agency, www.environment-agency.gov.uk/research/planning/105014.aspx (Accessed November 2011)

Analysis

The MPS states "When developing marine plans, marine plan authorities should liaise with terrestrial planning authorities, drawing on shoreline management plans"³⁸. Therefore an assessment of the marine relevance of SMP has been undertaken to ensure the relevant policies are taken into account during the marine planning process.

Management measures for stretches of coastline were extracted from each SMP and collated in a spreadsheet (see Annex 5). This information is also being mapped to produce a GIS layer for the marine planning web portal, viewable for comment by stakeholders. This will provide marine planning with a visual representation of the management measures along the coast.

The next step was to understand the implications of the management measures on the 11 MPS sectors. We have produced a high-level matrix to gain an understanding of the impact, if any, of the interaction between management policies and the 11 sectors identified in Chapter 3 of the MPS. This was shared with the Environment Agency and local authorities and can be viewed as Annex 5 to this report.

To gain a greater understanding of more specific issues identified within SMPs relevant to marine planning in the East of England, we have gathered SMP-specific information from the lead authorities. Below is a summary of the comments received based on a series of questions (note that we have not yet had responses from all authorities due to the need for wider consultation – further details are to be provided that will be added in due course).

1. What would you like or need marine planning to take account of or draw out (focussed on relevance to marine planning) from your shoreline management plan?

Overall, there is a requirement for marine planning to take account of SMP policies in a marine plan as not to contradict the suggested management measure for a stretch of coastline and thus impede implementation without sound reasons.

- Any marine activity that impacts on coastal processes and has the potential to cause a change, such as erosion to the coastline, requires a sound understanding of the existing evidence.
- The impact of increased offshore energy production and related infrastructure on areas in and around areas of coastal defence identified with SMPs.
- SMPs have moved towards a stronger influence from communities and this provides an opportunity for marine plans to utilise these networks to ensure compatibility.

2. What do you expect or hope marine planning will assist with in the delivery of your SMP and/or flood and coastal risk management in this SMP area, and/or on future shoreline management planning that wasn't possible in the absence of marine planning? That is what will be easier or harder to deliver?

³⁸ Defra (2011) Marine Policy Statement, p24

- Marine planning could support the SMP policies so that the marine licensing process and physical works undertaken are as efficient as possible.
- Consider the use of near shore dredged materials to enhance saltmarsh or raise land prior to manage realignment schemes and dredged materials for beach recharge. This also links with the desire for beach improvement schemes for the purposes of enhancing tourism offers.
- Raise awareness of the impact of climate change on the marine environment.
- Ensure marine and terrestrial planning are clearly linked and working together to take account of coastal change throughout the planning process.

3. What are the implications of the SMPs for the marine environment, and are there any specific details in the local flood risk management strategies that we need to be aware of?

The responses to the first part of the question can be seen in the spreadsheet as part of Annex 5 to this document.

With reference to SMP 5, much of the land is designated at international level as well as the marine SAC along the whole frontage. Therefore almost any policy is likely to lead to a breach of one or other directives and thus management of this stretch will require close working between the relevant authorities.

4. What are the linkages between your local SMP and the local RBMP (and any other statutory or non-statutory plans such as estuary strategies or catchment flood management plans) that marine planning needs to be aware of?

SMPs 4, 5, 6 and 8 have no contradictory policies with catchment flood management plans. Clarity needs to be provided on where marine plans will sit in the planning hierarchy. Neighbourhood plans and the National Planning Policy Framework have been highlighted as requiring consideration by marine planning when they are introduced.

As the marine plans for the East of England develop, we will continue to work with the Environment Agency and local authorities to understand the links between SMPs and marine plans.