

# Marine Conservation Zones

Natural England's advice to Defra on recommended Marine Conservation Zones to be considered for consultation in 2015

## Site-specific advice

December 2014

Natural chalk arch - Cromer shoal © Natural England/Rob Spray





## **Marine Conservation Zones**

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#### **Annex 9. Site-specific advice**

This is a part of the publication 'Natural England's advice to Defra on recommended Marine Conservation Zones to be considered for consultation in 2015' published separately to make downloading easier.

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## **A9.1 Introduction**

Marine Conservation Zones (MCZs) are an important tool in England's protection of the marine environment and support the government's requirements under the Marine and Coastal Access Act 2009 (MCAA). Defra will take decisions regarding MCZs based on sound evidence, and Natural England's evidence-based, scientific advice will be used to support these decisions. This will help to ensure that the government can create successful, well-managed MCZs.

In July 2012, Natural England and the Joint Nature Conservation Committee (JNCC) submitted an advice package on the recommendations made by the 4 regional MCZ projects (JNCC and Natural England, 2012a) and the subsequent Amendments report in December 2012 (JNCC and Natural England, 2012b). Since then considerable amounts of new data have become available that are pertinent to features within the rMCZs. Features refer to species, habitats and geological or geomorphological entities for which MCZs are identified and managed. This includes information provided during a public consultation conducted by Defra in 2013 on 31 Tranche 1 MCZs, 27 of which were subsequently designated in November 2013.

Defra has requested that Natural England provide updated advice on a further 29 inshore sites. This is to help Defra identify sites and their constituent features for public consultation on a second tranche of rMCZs. This includes 21 of the rMCZs recommended by the regional MCZ projects and the addition of 12 undesignated features to 8 of the Tranche 1 MCZs designated in 2013, of these we advised on 5 new features in 4 Tranche 1 sites and re-submitted advice on 7 features from 2013 in 4 other sites which were not designated at that time (these are covered in the main document and not this Annex 9). Natural England has also provided advice on extra features within the regional MCZ project recommended sites that were identified through new survey data.

This Site Specific Advice document provides a summary of Natural England's advice for each inshore rMCZ that is a candidate for consultation in Tranche 2. Natural England has assessed scientific confidence in the evidence for feature presence and extent and we have recommended a GMA for each feature which is based on the consideration of feature condition and which includes our assessment of the relative risk of damage to or deterioration of each feature. The JNCC has provided complementary advice on offshore sites.

Please note that the term 'general management approach' replaces the term 'conservation objective (CO)' used in previous advice as it was subsequently decided by Defra that since the CO for all features being protected within an MCZ is 'favourable condition', the term 'GMA' would be used to describe the approach required to either maintain a feature in, or recover it to, favourable condition.

### **A9.1.1 Purpose of the site-specific advice**

This annex contains site-specific advice for the 21 inshore rMCZs recommended by the regional MCZ projects and 5 new features in 4 existing Tranche 1 MCZs so interested stakeholders can view all relevant site information more easily. This advice builds on, but does not repeat, the site-specific information provided in 2011 in the Selection Assessment documents compiled by each regional MCZ project and submitted as part of the Final Recommendations reports, the site-specific advice given in the 2012 Statutory Nature Conservation Body (SNCB) advice and the subsequent Amendments report.

The Pre Consultation Advice document, to which this document is an annex, has been written for Defra to assist them in deciding which rMCZs to designate. As such it is a complex and technical document, intended to be read by technical and policy experts within Defra who are already familiar with earlier stages in the process, which commenced in 2009. Natural England recommends that stakeholders less familiar with the overall process but interested in our advice on specific sites read this Site Specific Advice document which outlines the key findings from our main advice. For each rMCZ, the information provided in the tables in Section 4 of the Pre Consultation Advice document has been extracted and any additional

advice provided to Defra is explained. The advice is based on the rMCZ boundaries recommended by the regional MCZ projects unless otherwise stated.

### **A9.1.2 Contents of the site-specific advice**

Each site document contains the following information:

#### **1. Site description**

A general description of each site is provided, highlighting the key features for which the site is being recommended for designation.

#### **2. Map(s) of the features within the rMCZ for which advice is being provided**

The site feature maps show presence and extent, where known, of all of the features for which we have provided advice to Defra, including new features which were not designated in 2013 as part of Tranche 1. The maps do not include features where we have advised that there is no confidence in their presence in the site.

Where georeferenced extent data are available, features have been mapped as polygons and where extent data are not available features have been mapped as points. For some sites, both polygon extent data and point data are available and in these cases both types have been mapped, and the feature appears twice in the legend.

Features for which we have no spatial georeferenced data have not been mapped and thus do not appear in the legend. Similarly, features that are confidential, for example commercially sensitive species such as oysters, have not been mapped. Where this is the case a text box has been included on the map. Information about these features can be found in the site-specific advice text and Section 4 in the Pre Consultation Advice document.

Due to the scale of the maps in printed form and the need for the maps to show the sites in their entirety, rather than split them, some features of very limited spatial extent, such as intertidal habitats, are not easily recognisable. However, their presence in the site is confirmed by the feature being listed in the legend.

It should be noted that the maps do not indicate confidence in the feature data. The assessment of the confidence in the evidence for feature presence and extent is given in Table 1 for each site.

For some sites it has been possible to incorporate all BSHs and FOCI into the same map. For other rMCZs, especially those with many features, BSHs and FOCI have been separated and appear in 2 maps for clarity.

#### **3. Table summarising Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the rMCZ/MCZ**

Table 1 for each site is extracted from the summary tables in Section 4 of the Pre Consultation Advice document and summarises our 2014 confidence assessments and proposed GMA for each feature. The feature status refers to whether they are original features proposed for the Tranche 2 sites by the regional MCZ projects (Tranche 2 advice); new features identified through the feature confidence assessment process for Tranche 2 sites (T2 new features) or new features in designated Tranche 1 sites (T1 new features).

#### **4. Table listing supporting documentation and reference materials**

Table 2 for each site lists the key documents and datasets relevant to each rMCZ. Where appropriate, the datasets are listed in code form and the full reference can be obtained from Table 2 in Section 4.3 of the Pre Consultation Advice document.

## **5. Audit trail for the development of the site-specific advice**

This section contains 2 tables that set out the rationale for any changes in assessments since Natural England's advice published in July 2012 or the Amendments report published in December 2012, and the advice given in 2014 for:

- confidence assessments of presence and extent of features (Table 3)
- recommended GMA (Table 4)

## **6. Feature risk**

This section contains 1 table (Table 5) that provides an assessment of current and future risk (high, moderate or low) from potentially damaging activities for each feature recommended, including a narrative to support high current risk and high future risk where applicable.

Risk in this context refers to 'risk of loss of or irreparable damage to a feature in the short term' (ie in terms of the time it takes to get management measures in place).

This assessment provides a feature-based risk assessment for all Tranche 2 features. This is composed of an assessment of current risk of damage or deterioration by assessing exposure to current activities in the site and a future risk assessment of feature sensitivity to new activities that may take place in the site in the future.

Due to the methods of determining current and future risk, it is possible that the future risk score may be higher than the current risk score. This is because the current risk score is determined by taking into consideration actual exposure to pressures from ongoing (current) activities on a feature. Future risk only takes into account general sensitivity to pressures, which may or may not be occurring to a feature in a site at a given time.

Natural England has provided a narrative for future high risk features where it is considered on the basis of local knowledge to be unlikely that high future risks will in actuality be realised.

Feature risk is explained in full in Section 3.3 of the Pre Consultation Advice document and in Annex 7.

## **7. Scientific basis to support feature/site designation**

This section contains 3 tables that provide advice as to whether a feature or site has enough scientific evidence to support its designation as an MCZ. The first 2 tables (Tables 6 and 7) provide our analysis on whether there is enough scientific evidence to support the designation of a feature or site as described in the guidance note: 'MCZ levels of evidence – advice on when data support a feature/site for designation from a scientific, evidence-based perspective' (JNCC and Natural England, in prep).

The third table (Table 8) provides a site-based commentary on a site's ability to fill 'big gaps' in the network, using information taken from 'Identifying the remaining MCZ site options that would fill big gaps in the existing MPA network around England and offshore waters of Wales & Northern Ireland (JNCC, 2014) but updated to take account of any reduction in confidence in features potentially filling gaps.

## **8. Additional advice**

This section covers additional advice provided on request to Defra on features and boundaries. For features, clarification is given on the presence and extent where evidence has resulted in significant changes to features that are proposed for protection within the site.

Additional advice on features is given for the following rMCZs: The Swale Estuary, Studland Bay, Mount's Bay, and West of Walney and the following MCZs: Blackwater, Crouch, Roach and Colne Estuaries, and Fylde.

For boundaries, the advice describes the responses provided to Defra in relation to their queries. These responses include: Dover to Deal, Dover to Folkestone, Norris to Ryde, Bembridge, Yarmouth to Cowes,

Mount's Bay, Runnel Stone (Land's End), Newquay and the Gannel, Bideford to Foreland Point, and Coquet to St Mary's. Where boundary changes are discussed, the viability of features affected by any changes is shown in Table 9.

#### **9. Evidence not used**

In the final section, Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed. Where Table 9 shows feature viability affected by boundary changes, evidence not used is shown in Table 10.

## A9.2 The Swale Estuary rMCZ BS 10

### A9.2.1 Site description

The Swale Estuary rMCZ is an estuary site measuring 51 km<sup>2</sup>. The site covers The Swale Estuary from the point at which it meets the Medway Estuary south of the Isle of Sheppey and extends seawards to the end of The Street at Whitstable. The area is made up of vast salt marshes and grazing marshes.

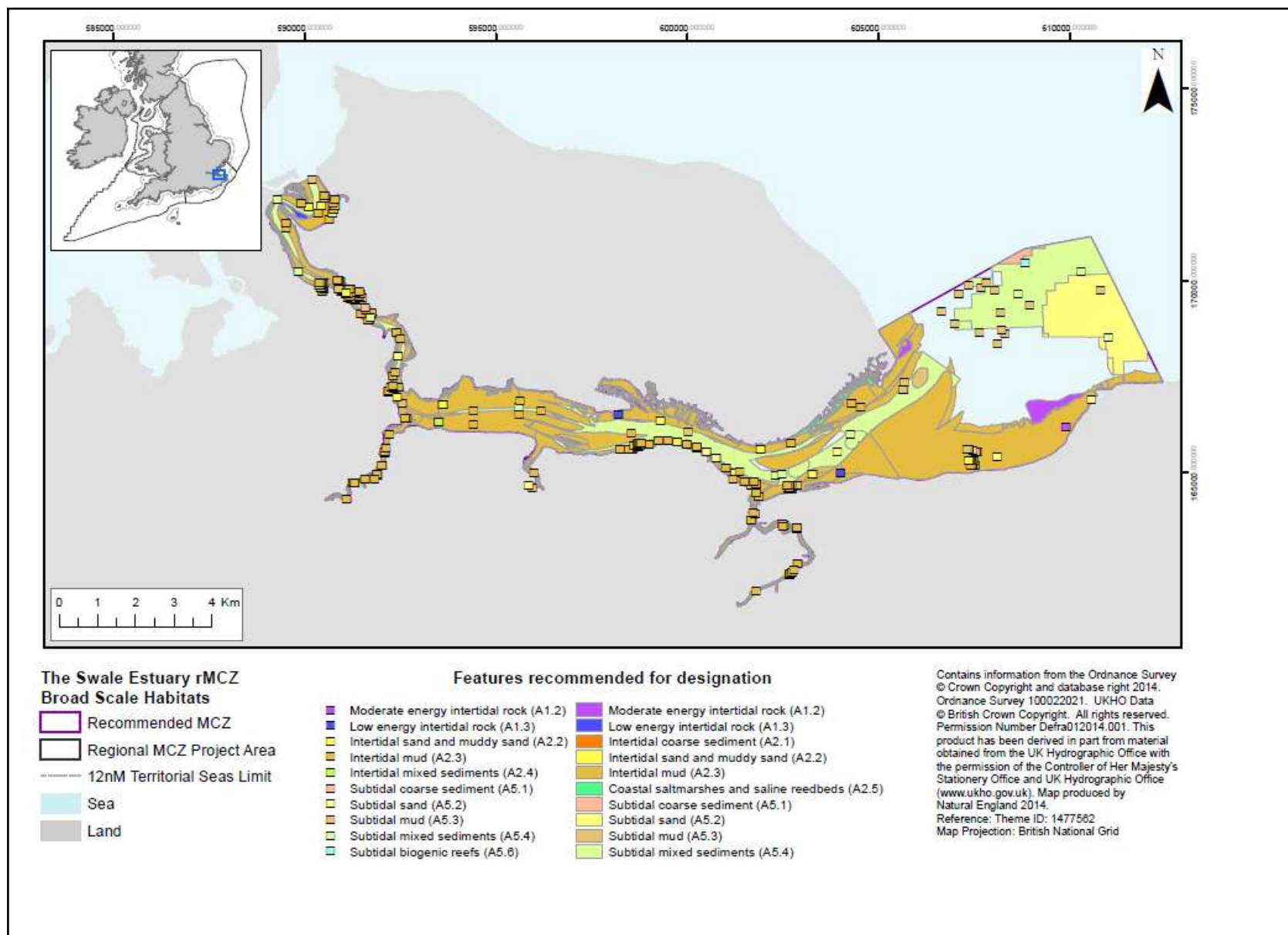
The main channel of The Swale Estuary contains a range of subtidal BSHs that have been identified for protection in the rMCZ to complement the intertidal BSHs protected by The Swale SSSI and SPA. The site contains some of the best examples of exposed London Clay and also makes an important contribution to the regional targets for low energy infralittoral rock. There is good scope for shellfish recovery to occur if the site is protected. The site is considered to be a highly biodiverse area and is important as a spawning and nursery ground for various species.



**Plate 1** View of the Swale from Seasalter © Ingrid Chudleigh, Natural England



## A9.2.2 Site feature maps



**Figure 1** Location of mapped BSHs in The Swale Estuary rMCZ BS 10

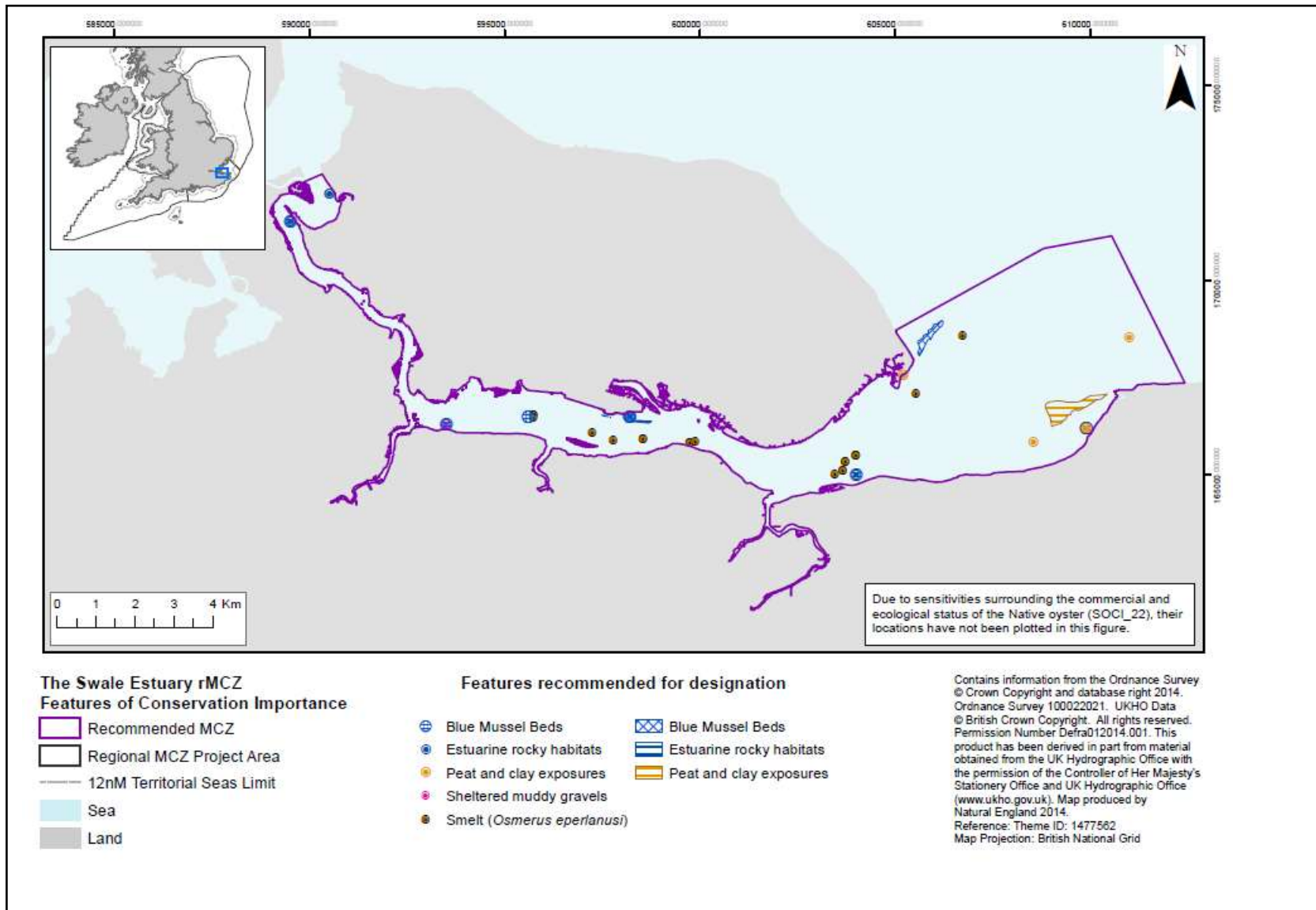


Figure 2 Location of mapped FOCI in The Swale Estuary rMCZ BS 10

### A9.2.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for The Swale Estuary rMCZ BS 10

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.3 Low energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A3.3 Low energy infralittoral rock	BSH	Tranche 2 advice	No confidence	No confidence	N/A
A5.2 Subtidal sand	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A5.3 Subtidal mud	BSH	Tranche 2 advice	High	Moderate	Maintain
A5.4 Subtidal mixed sediments	BSH	Tranche 2 advice	High	Moderate	Maintain
Blue mussel ( <i>Mytilus edulis</i> ) beds	HOCI	Tranche 2 advice	High	High	Recover
Peat and clay exposures	HOCI	Tranche 2 advice	High	Moderate	Maintain
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	HOCI	Tranche 2 advice	No confidence	No confidence	N/A
Sheltered muddy gravels	HOCI	Tranche 2 advice	Low	Low	Maintain
Native oyster ( <i>Ostrea edulis</i> )	SOCI	Tranche 2 advice	Moderate	Low	Maintain
A1.2 Moderate energy intertidal rock	BSH	T2 new features	High	High	Maintain
A2.1 Intertidal coarse sediment	BSH	T2 new features	High	High	Maintain

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A2.2 Intertidal sand and muddy sand	BSH	T2 new features	High	Moderate	Maintain
A2.4 Intertidal mixed sediments	BSH	T2 new features	High	Moderate	Maintain
A5.1 Subtidal coarse sediment	BSH	T2 new features	Moderate	Moderate	Maintain
Estuarine rocky habitats	HOCI	T2 new features	High	Moderate	Maintain
Smelt ( <i>Osmerus eperlanus</i> )	SOCI	T2 new features	High	High	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for The Swale Estuary rMCZ BS 10

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00038	NE MCZ Verification Photos	NE Regional Staff MCZ Verification Photos	NE National GI
D_00064	EA WFD Subtidal Benthic Infauna Survey 2012 - Whitstable Bay		NE National GI <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00163	Marine Recorder snapshot 2013_06_24	2009 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00173	Marine Recorder snapshot 2013_06_24	2008 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00256	Marine Recorder snapshot 2013_06_24	1993 MNCR Swale and Medway estuaries survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00257	Marine Recorder snapshot 2013_06_24	1993 MNCR Swale and Medway estuaries sublittoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00296	Marine Recorder snapshot 2013_06_24	1990 NRA Swale Estuary survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00300	Marine Recorder snapshot 2013_06_24	1990 NRA Milton Creek (Kent) survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00301	Marine Recorder snapshot 2013_06_24	1990 NRA Faversham Creek survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00345	Marine Recorder snapshot 2013_06_24	1953–1955 Kent, Essex, Dorset, Devon and Cornwall Ostrea edulis survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00351	MESH Combined EUNIS 20140203	Swale survey - mudflat	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00353	MESH Combined EUNIS 20140203	Swale survey - saltmarsh	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00355	MESH Combined EUNIS 2014020	MNCR Area Summaries - Inlets in eastern England	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00362	MESH Combined EUNIS 20140203	Kent mudflats	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00377	MESH Combined EUNIS 20140203	Thames 2100 project data	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00378	MESH Combined EUNIS 20140203	Intertidal mudflat layer for England	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2001 Swale, Fowley Channel, Fowley Channel Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2002 Swale, Fowley Island, Fowley Island Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2003 Swale, Faversham End, Faversham End Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>



Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2003 Swale, Fowley Island, Fowley Island Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2003 Swale, Spit End Lily Bank, Spit End Lily Bank Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2004 Swale, Faversham End, Faversham End Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2005 Swale, Faversham End, Faversham End Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2005 Swale, Spit End Lily Bank, Spit End Lily Bank Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2006 Swale, Faversham End, Faversham End Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2008 Swale, Faversham End, Faversham End Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2008 Swale, Fowley Bank, Fowley Bank Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2008 Swale, Mouth of River Swale, Mouth of River Swale Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2008 Swale, Spit End Lily Bank, Spit End Lily Bank Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2009 Swale, Faversham End, Faversham End Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt	2009 Swale, Fowley	EA

Survey ID code	MCZ source dataset	MCZ original survey	Location
	Data_20140305 - Transitional and Coastal	Bank, Fowley Bank Otter Trawl Survey	<a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2009 Swale, Mouth of River Swale, Mouth of River Swale Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00387	EA Eel and Smelt Data_20140305 - Transitional and Coastal	2009 Swale, Spit End Lily Bank, Spit End Lily Bank Otter Trawl Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00406	ABPmer 2012 data collection - original data - dataset BS	A249 Improvement Scheme Swale to Queenborough	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00413	ABPmer 2012 data collection - original data - dataset: BS	EMU - Queenborough Ecological Survey 2005	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00416	ABPmer 2012 data collection - original data - dataset: BS	Impact of <i>Enteromorpha</i> on Benthos	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00417	ABPmer 2012 data collection - original data - dataset: BS	Medway and Swale Estuarine Partnership Biotope Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00418	ABPmer 2012 data collection - original data - dataset: BS	Medway and Swale Estuarine Partnership Bird Model Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00425	ABPmer 2012 data collection - original data - dataset: BS	North Kent Marshes Estuarine Invertebrate Surveys	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00430	ABPmer 2012 data collection - original data - dataset: BS	Sittingbourne Northern Distributor Road: Milton Creek Survey 2003	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00432	ABPmer 2012 data collection - original data - dataset: B	Swale Habitats Directive Survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00434	ABPmer 2012 data collection - original data - dataset: BS	Thames Array benthic grab survey 2004	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00437	ABPmer 2012 data collection - original data - dataset: BS	Whitstable Bay WFD benthic survey 2007	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00443	ABPmer 2012 data collection - original data - dataset: MB102	2007–2009 BIOSYS extract EA WFD seagrass data	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
M_00004	ABPmer 2012 data collection - original data - dataset: BS	Kent Marine Group Intertidal Surveys 1986–2003	Marine Officer, Kent Wildlife Trust, Tyland Barn, Sandling, Maidstone, Kent, ME14 3BD 01622 662012 Bryony.Chapman@kentwildlife.org.uk

#### A9.2.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for The Swale Estuary rMCZ BS 10

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.3 Low energy intertidal rock	Tranche 2 advice	High	High	High	High	No change
A3.3 Low energy infralittoral rock	Tranche 2 advice	Low	Low	No confidence	No confidence	Confidence updated following Protocol E based on more recent data.
A5.2 Subtidal sand	Tranche 2 advice	High	Moderate	Moderate	Moderate	Confidence updated following Protocol E based on more recent data.
A5.3 Subtidal mud	Tranche 2 advice	Moderate	Low	High	Moderate	Confidence updated following Protocol E based on more recent data.
A5.4 Subtidal mixed sediments	Tranche 2 advice	Moderate	Moderate	High	Moderate	Confidence updated following Protocol E based on more recent data.
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	Low	Low	High	High	Confidence updated following Protocol E based on more recent data.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
Peat and clay exposures	Tranche 2 advice	High	Moderate	High	Moderate	No change
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	Low	Low	No confidence	No confidence	Confidence updated following Protocol E based on more recent data.
Sheltered muddy gravels	Tranche 2 advice	High	High	Low	Low	Confidence updated following Protocol E based on more recent data.
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Moderate	Low	Moderate	Low	No change
A1.2 Moderate energy intertidal rock	T2 new features	N/A	N/A	High	High	N/A
A2.1 Intertidal coarse sediment	T2 new features	N/A	N/A	High	High	N/A
A2.2 Intertidal sand and muddy sand	T2 new features	N/A	N/A	High	Moderate	N/A
A2.4 Intertidal mixed sediments	T2 new features	N/A	N/A	High	Moderate	N/A
A5.1 Subtidal coarse sediment	T2 new features	N/A	N/A	Moderate	Moderate	N/A
Estuarine rocky habitats	T2 new features	N/A	N/A	High	Moderate	N/A
Smelt ( <i>Osmerus eperlanus</i> )	T2 new features	N/A	N/A	High	High	N/A

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for The Swale Estuary rMCZ BS 10

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A1.3 Low energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A3.3 Low energy infralittoral rock	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for no confidence features.
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Maintain	No change
A5.3 Subtidal mud	Tranche 2 advice	Recover	Maintain	IQI data supports favourable condition of feature and therefore a maintain GMA. Feature is in a moderate energy environment so has high recoverability.
A5.4 Subtidal mixed sediments	Tranche 2 advice	Recover	Maintain	Moderate confidence in IQI data support favourable condition of feature. Feature also in a moderate energy environment so has high recoverability.
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	Recover	Recover	No change
Peat and clay exposures	Tranche 2 advice	Maintain	Maintain	No change
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	Recover	N/A	No GMA advised in 2014 for no confidence features.
Sheltered muddy gravels	Tranche 2 advice	Recover	Maintain	Feature remains vulnerable to fishing activity; however, in this site no fishing activity occurs in the location of this feature. Feature is close to shore and halfway up the estuary.
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Maintain	Maintain	No change
A1.2 Moderate energy intertidal rock	T2 new features	N/A	Maintain	New feature
A2.1 Intertidal coarse sediment	T2 new features	N/A	Maintain	New feature
A2.2 Intertidal sand and muddy sand	T2 new features	N/A	Maintain	New feature
A2.4 Intertidal mixed sediments	T2 new features	N/A	Maintain	New feature



Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.1 Subtidal coarse sediment	T2 new features	N/A	Maintain	New feature
Estuarine rocky habitats	T2 new features	N/A	Maintain	New feature
Smelt ( <i>Osmerus eperlanus</i> )	T2 new features	N/A	Maintain	New feature

## A9.2.5 Feature risk

**Table 4** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.3 Low energy intertidal rock	Tranche 2 advice	Low		Moderate	
A5.2 Subtidal sand	Tranche 2 advice	Low		High	Unaware of any developments or change in activity on the horizon that would result in an increased vulnerability of this feature.
A5.3 Subtidal mud	Tranche 2 advice	Low		Moderate	
A5.4 Subtidal mixed sediments	Tranche 2 advice	Low		Moderate	
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	High	Current risk from benthic trawling. Dredging also occurs in the site, which supports the recover GMA. There may be issues with management as the feature is partly located on private fishing grounds.	Moderate	
Peat and clay exposures	Tranche 2 advice	Low		High	Unaware of any developments or change in activity on the horizon that would result in an increased vulnerability of this feature.

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Sheltered muddy gravels	Tranche 2 advice	Low		High	Unaware of any developments or change in activity on the horizon that would result in an increased vulnerability of this feature.
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Low		High	Unaware of any developments or change in activity on the horizon that would result in an increased vulnerability of this feature.
A1.2 Moderate energy intertidal rock	T2 new features	Low		Moderate	
A2.1 Intertidal coarse sediment	T2 new features	Low		Moderate	
A2.2 Intertidal sand and muddy sand	T2 new features	Low		Moderate	
A2.4 Intertidal mixed sediments	T2 new features	Low		Moderate	
A5.1 Subtidal coarse sediment	T2 new features	Low		Moderate	
Estuarine rocky habitats	T2 new features	Low		Moderate	
Smelt ( <i>Osmerus eperlanus</i> )	T2 new features	Low		Unknown	Future risk narrative not provided for mobile species features as sensitivity to pressures determined by expert judgement only and not currently included in sensitivity matrix.

## A9.2.6 Scientific basis to support feature/site designation

**Table 5** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A1.3 Low energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.2 Subtidal sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.3 Subtidal mud	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.4 Subtidal mixed sediments	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Peat and clay exposures	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Sheltered muddy gravels	Tranche 2 advice	HOCI	No	No	No	Move to Q2	No	No	Yes	Further consideration		
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	SOCI	Yes	No	No	Move to Q2	Yes	Yes	Yes	Priority feature designation		
A1.2 Moderate energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.1 Intertidal coarse sediment	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.2 Intertidal sand and muddy sand	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.4 Intertidal mixed sediments	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.1 Subtidal coarse sediment	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Estuarine rocky habitats	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Smelt ( <i>Osmerus eperlanus</i> )	T2 new features	SOPI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		



**Table 6** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		Estuarine site – Q2 has not been calculated.	Yes. Available data support at least one JNCC Big Gaps identified feature for designation.

**Table 7** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Yes. Available data support at least one JNCC Big Gaps identified feature for designation.	13	5,129.9	

## A9.2.7 Additional advice

### A9.2.7.1 Advice on specific features

Defra requested further clarification on fisheries in the Swale and whether these target native oyster (*Ostrea edulis*).

Natural England confirmed that to the best of our knowledge the fisheries target Pacific oyster (*Crassostrea gigas*).

### A9.2.7.2 Advice on boundaries

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### A9.2.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 8** Evidence not used

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00034	EA MCZ Verification Survey - The Swale Estuary	BS 10	Grab samples, camera drops	Not available before data cut-off.

## A9.3 Dover to Deal rMCZ BS 11.1

### A9.3.1 Site description

Dover to Deal is an inshore site off the south-east coast of Kent situated just to the north-east of the major shipping terminal, Dover Port. The site covers an area of 10 km<sup>2</sup> and is recommended as a MCZ for its excellent examples of littoral chalk communities and wave-cut platform, considered to be the best example in the region. Below this platform lie gullies and rock pools supporting ephemeral green algae, animal-grazed rock and brown wrack species, leading to mixed red algae and into a zone dominated by kelp at low water. The chalk foreshore at St Margaret's Bay in this site represents the richest algal community in south-east England. Numerous other features are also proposed in this site, including the intertidal underboulder communities that encompass the wealth of rare sponge species that colonise this habitat. Well-developed Ross worm (*Sabellaria spinulosa*) reefs are present on the lower shore, where sand fringes the edge of the chalk foreshore reef; these habitats recorded together are particularly rare in Kent and in fact are unrecorded in the rest of the UK. This HOCl is also well developed subtidally off Kingsdown in a long continuous clump, providing habitat and shelter for numerous species.



**Plate 1** Boulders and level platform showing chalk habitat and algal communities, Kingsdown (Balanced Seas, 2011)

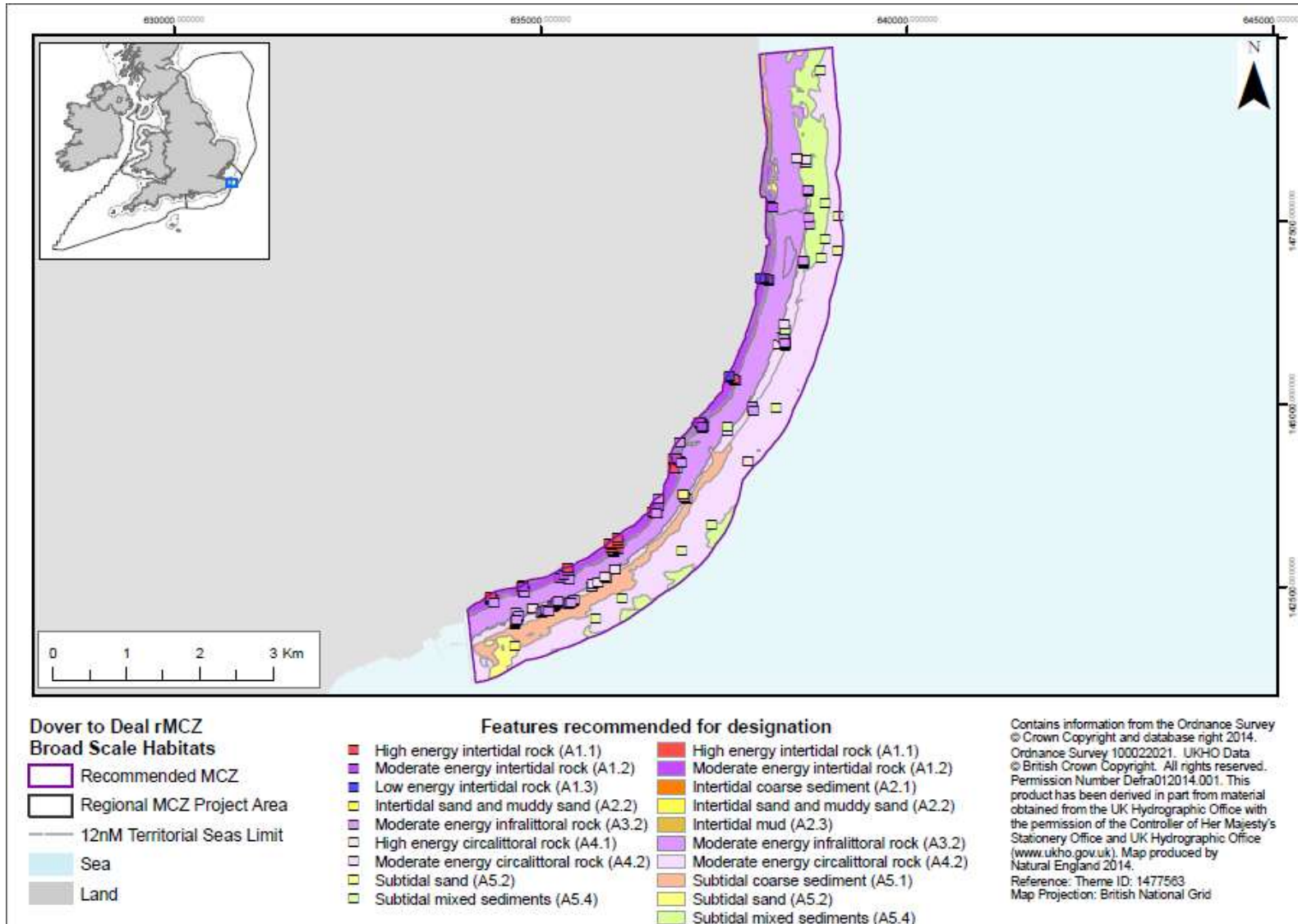


**Plate 2** Ross worm (*Sabellaria spinulosa*) reef on the foreshore, Kingsdown (Balanced Seas, 2011)



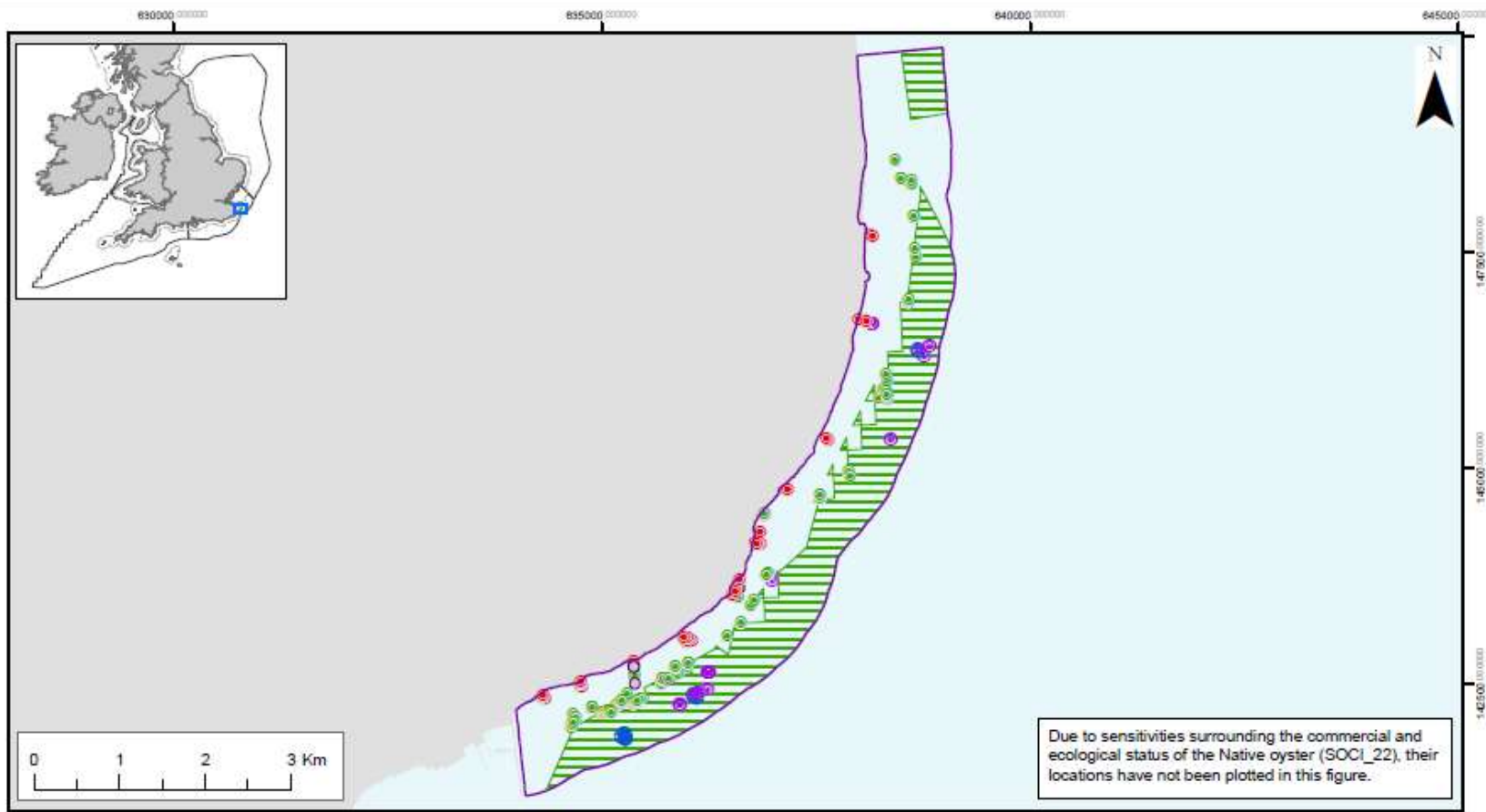
**Plate 3** Close-up of Ross worm (*Sabellaria spinulosa*) reef on the foreshore, Kingsdown (Balanced Seas, 2011)

### A9.3.2 Site feature maps



**Figure 1** Location of mapped BSHs in Dover to Deal rMCZ BS 11.1





**Dover to Deal rMCZ  
Features of Conservation Importance**

- Recommended MCZ
- Regional MCZ Project Area
- 12nM Territorial Seas Limit
- Sea
- Land

**Features recommended for designation**

- ⊕ Blue Mussel Beds
- ⊙ Intertidal under boulder communities
- Littoral chalk communities
- ⊙ Ross worm (*Sabellaria spinulosa*) reefs
- Subtidal chalk
- Subtidal chalk

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 Stationery Office and UK Hydrographic Office  
 (www.ukho.gov.uk). Map produced by  
 Natural England 2014.  
 Reference: Theme ID: 1477563  
 Map Projection: British National Grid

Due to sensitivities surrounding the commercial and ecological status of the Native oyster (SOC1\_22), their locations have not been plotted in this figure.

**Figure 2** Location of mapped FOCI in Dover to Deal rMCZ BS 11.1

### A9.3.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Dover to Deal rMCZ BS 11.1

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.2 Moderate energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A2.1 Intertidal coarse sediment	BSH	Tranche 2 advice	Low	Low	Maintain
A2.3 Intertidal mud	BSH	Tranche 2 advice	Low	Low	Maintain
A3.1 High energy infralittoral rock	BSH	Tranche 2 advice	No confidence	No confidence	Maintain
A3.2 Moderate energy infralittoral rock	BSH	Tranche 2 advice	High	Moderate	Maintain
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	Low	Low	Maintain
A5.4 Subtidal mixed sediments	BSH	Tranche 2 advice	High	Moderate	Maintain
Blue mussel ( <i>Mytilus edulis</i> ) beds	HOCI	Tranche 2 advice	High	Moderate	Maintain
Intertidal underboulder communities	HOCI	Tranche 2 advice	Moderate	Moderate	Maintain
Littoral chalk communities	HOCI	Tranche 2 advice	High	Moderate	Maintain
Ross worm ( <i>Sabellaria spinulosa</i> ) reef	HOCI	Tranche 2 advice	Moderate	Moderate	Maintain
Subtidal chalk	HOCI	Tranche 2 advice	High	Moderate	Maintain
A1.1 High energy intertidal rock	BSH	T2 new features	Moderate	Moderate	Maintain
A1.3 Low energy intertidal rock	BSH	T2 new features	Moderate	Moderate	Maintain

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A4.1 High energy circalittoral rock	BSH	T2 new features	Moderate	Moderate	Maintain
A4.2 Moderate energy circalittoral rock	BSH	T2 new features	Moderate	Moderate	Maintain
Native oyster ( <i>Ostrea edulis</i> )	SOCI	T2 new features	Moderate	Moderate	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Dover to Deal rMCZ BS 11.1

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00022	2012 EA MCZ Verification Survey – Dover to Deal (D_00022)		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00098	Kent Wildlife Trust/Seasearch MCZ Verification Photos		Kent Wildlife Trust, Tyland Barn, Sandling, Maidstone, Kent, ME14 3BD 01622 662012
D_00114	Marine Recorder snapshot 2014_01_28	2013 Kent WT Shoresearch Intertidal Survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00115	Marine Recorder new data 2014_02_14	2013 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00129	Marine Recorder snapshot 2013_06_24	2012 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00153	Marine Recorder snapshot 2013_06_24	2010 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00155	Marine Recorder snapshot 2013_06_24	Intertidal Chalk Survey from Folkestone to Deal, Kent, 2009–2011	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00163	Marine Recorder snapshot 2013_06_24	2009 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00173	Marine Recorder snapshot 2013_06_24	2008 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00180	Marine Recorder snapshot 2013_06_24	Kent Shoresearch Intertidal Survey 2007	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00195	Marine Recorder snapshot 2013_06_24	Kent Shoresearch Intertidal Survey 2005	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00196	Marine Recorder snapshot 2013_06_24	2005 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00206	Marine Recorder snapshot 2013_06_24	2004 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00320	Marine Recorder snapshot 2013_06_24	1986 BMNH south- east England littoral chalk and greensand faunal survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00324	Marine Recorder snapshot 2013_06_24	1985 BMNH Kent & Sussex littoral chalk- cliff algal survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00359	MESH Combined EUNIS 20140203	Chalk platform data, Kent	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00361	MESH Combined EUNIS 20140203	Littoral chalk in Kent	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00362	MESH Combined EUNIS 20140203	Kent mudflats	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00393	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from BGS and OS data by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00394	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from MB102 layers by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
M_00136	MESH Combined EUNIS 20140203	CCO Ramsgate to Dungeness	CCO, National Oceanography Centre, European Way, Southampton, SO14 3ZH cco@channelcoast.org.uk <a href="http://www.channelcoast.org/data_management/online_data_catalogue/">http://www.channelcoast.org/data_management/online_data_catalogue/</a>

### A9.3.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Dover to Deal rMCZ BS 11.1

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.2 Moderate energy intertidal rock	Tranche 2 advice	High	High	High	High	
A2.1 Intertidal coarse sediment	Tranche 2 advice	High	Low	Low	Low	Confidence updated following Protocol E based on more recent data.
A2.3 Intertidal mud	Tranche 2 advice	High	High	Low	Low	Confidence updated following Protocol E based on more recent data.
A3.1 High energy infralittoral rock	Tranche 2 advice	Low	Low	No confidence	No confidence	Confidence updated following Protocol E based on more recent data.
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low	Low	High	Moderate	
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low	Low	Low	Low	
A5.4 Subtidal mixed sediments	Tranche 2 advice	Low	Low	High	Moderate	
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	Moderate	Low	High	Moderate	
Intertidal underboulder communities	Tranche 2 advice	High	High	Moderate	Moderate	Manually downgraded to Moderate for presence due to removal of duplicate KWT photo records.
Littoral chalk communities	Tranche 2 advice	High	High	High	Moderate	
Ross worm ( <i>Sabellaria spinulosa</i> ) reef	Tranche 2 advice	High	High	Moderate	Moderate	Evidence for feature based primarily on Seasearch records.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
Subtidal chalk	Tranche 2 advice	High	High	High	Moderate	Should be supported by HOCl polygons from Ramsgate–Dungeness CCO survey. Need to source and tag polygons and check MESH score to support increase in confidence. Currently only received point data from Cefas. New data coming.
A1.1 High energy intertidal rock	T2 new features	N/A	N/A	Moderate	Moderate	N/A
A1.3 Low energy intertidal rock	T2 new features	N/A	N/A	Moderate	Moderate	N/A
A4.1 High energy circalittoral rock	T2 new features	N/A	N/A	Moderate	Moderate	N/A
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	N/A	Moderate	Moderate	N/A
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	N/A	N/A	Moderate	Moderate	N/A

**Table 4** Advice on the GMA and the rationale for any changes since Natural England’s advice published in 2012 for Dover to Deal rMCZ BS 11.1

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A2.1 Intertidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A2.3 Intertidal mud	Tranche 2 advice	Maintain	Maintain	No change
A3.1 High energy infralittoral rock	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for no confidence features.
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A5.4 Subtidal mixed sediments	Tranche 2 advice	Maintain	Maintain	No change
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	Maintain	Maintain	No change
Intertidal underboulder communities	Tranche 2 advice	Maintain	Maintain	No change
Littoral chalk communities	Tranche 2 advice	Recover	Maintain	Local adviser knowledge confirms low levels of activity over this feature.
Ross worm ( <i>Sabellaria spinulosa</i> ) reef	Tranche 2 advice	Maintain	Maintain	No change
Subtidal chalk	Tranche 2 advice	Maintain	Maintain	No change
A1.1 High energy intertidal rock	T2 new features	N/A	Maintain	New feature
A1.3 Low energy intertidal rock	T2 new features	N/A	Maintain	New feature
A4.1 High energy circalittoral rock	T2 new features	N/A	Maintain	New feature
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	Maintain	New feature
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	N/A	Maintain	New feature

### A9.3.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Low		Moderate	
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low		High	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A2.3 Intertidal mud	Tranche 2 advice	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
A3.1 High energy infralittoral rock	Tranche 2 advice			No future risk assessment made on no confidence features.	
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low		Moderate	
A5.4 Subtidal mixed sediments	Tranche 2 advice	Low		Moderate	
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	Low		Moderate	
Intertidal underboulder communities	Tranche 2 advice	Low		Moderate	
Littoral chalk communities	Tranche 2 advice	Low		Moderate	
Ross worm ( <i>Sabellaria spinulosa</i> ) reef	Tranche 2 advice	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
Subtidal chalk	Tranche 2 advice	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
A1.1 High energy intertidal rock	T2 new features	Low		Moderate	
A1.3 Low energy intertidal rock	T2 new features	Low		Moderate	
A4.1 High energy circalittoral rock	T2 new features	Low		Moderate	



Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A4.2 Moderate energy circalittoral rock	T2 new features	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.

### A9.3.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have a confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
A1.2 Moderate energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.1 Intertidal coarse sediment	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation		
A2.3 Intertidal mud	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation		
A3.1 High energy infralittoral rock	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have a confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	No	No	No	Move to Q2	Yes	No	No	No designation		
A5.4 Subtidal mixed sediments	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Intertidal under-boulder communities	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Littoral chalk communities	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Ross worm ( <i>Sabellaria spinulosa</i> ) reef	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Subtidal chalk	Tranche 2	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have a confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
	advice											
A1.1 High energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.3 Low energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.1 High energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.2 Moderate energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

<b>Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?</b>	<b>Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)</b>	<b>Comment on Q2 assessment</b>	<b>Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>
No	95%		Maybe. Available data support at least one JNCC Big Gaps identified feature for designation.

**Table 8** Site level commentary

<b>Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>	<b>Number of features with at least moderate confidence in both presence and extent (T2 new sites only)</b>	<b>Site area (ha)</b>	<b>Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)</b>
Maybe. Available data support at least one JNCC Big Gaps identified feature for designation.	13	1,039.3	

### A9.3.7 Additional advice

#### A9.3.7.1 Advice on specific features

No additional advice given to Defra on specific features for this site.

#### A9.3.7.2 Advice on boundaries

Defra requested advice on the implications of a boundary change to ensure a 500 m buffer, not within the MCZ, from the harbour wall to allow for vital maintenance of the harbour wall.

Natural England has advised that this is unlikely to affect the viability of any of the features proposed within the Dover to Deal rMCZ.

**Table 9** Implications of boundary changes in Dover to Deal rMCZ BS 11.1 for feature viability

Site	Feature	Approximate loss of known extent from rMCZ with revised boundary	Implications for viability
Dover to Deal	A1.1 High energy intertidal rock	About a quarter of feature	Still viable
Dover to Deal	A1.2 Moderate energy intertidal rock	Less than a quarter	Still viable
Dover to Deal	A3.2 Moderate energy infralittoral rock	Less than a quarter	Still viable
Dover to Deal	A4.1 High energy circalittoral rock	Less than a quarter	Still viable
Dover to Deal	A4.2 Moderate energy circalittoral rock	Less than a quarter	Still viable
Dover to Deal	A5.1 Subtidal coarse sediment	About a quarter of feature	Still viable
Dover to Deal	A5.2 Subtidal sand	About half the feature	Probably still viable
Dover to Deal	A5.4 Subtidal mixed sediments	Less than a quarter	Still viable
Dover to Deal	HOCI 11 Littoral chalk communities	About a quarter of feature	Still viable
Dover to Deal	HOCI 20 Subtidal chalk	About a quarter of feature	Still viable



The landward boundary between points D and A, follows Ordnance Survey MasterMap Mean High Water and is therefore liable to change. The seaward boundary between B and C is 1km seaward of Ordnance Survey Mastermap Mean High Water.

**Dover to Deal rMCZ Boundary**

- Revised Recommended MCZ
- Recommended MCZ (Balanced Seas)
- Regional MCZ project area
- MCZ boundary co-ordinates
- 12nM Territorial Seas Limit
- Land
- SACs
- SSSIs

Point	Lat	Long
A	51°11' 51.277" N	1°24' 17.831" E
B	51°11' 52.784" N	1°25' 9.263" E
C	51°7' 24.250" N	1°21' 1.443" E
D	51°7' 59.735" N	1°20' 57.708" E

**Depth Areas (metres)**

-20.0 - -10.0	25.1 - 50.0
-9.9 - -5.0	50.1 - 100.0
-4.9 - 0.0	100.1 - 250.0
0.1 - 5.0	250.1 - 500.0
5.1 - 10.0	500.1 - 1000.0
10.1 - 25.0	

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Figure 1 Boundary change proposed by Defra for Dover to Deal rMCZ BS 11.1

### **A9.3.7.3 Evidence not used**

All evidence received was used in our advice. Therefore Table 10 is not applicable to this site.



## A9.4 Dover to Folkestone rMCZ BS 11.2

### A9.4.1 Site description

Dover to Folkestone is an inshore site off the south-east coast of Kent situated just to the south-west of the major shipping terminal, Dover Port. The site covers an area of 20 km<sup>2</sup> and is recommended as a MCZ for its excellent and best regional example of intact Ross worm (*Sabellaria spinulosa*) reef and one of the best intertidal underboulder community examples in the region. It also has excellent examples of littoral chalk communities on intertidal and subtidal chalk reefs, with the wave-cut platforms in the site forming an almost continuous reef between Kingsdown and Folkestone Warren. These reefs grade seaward into subtidal coarse sediment. Very soft clay can be found at Folkestone Warren that supports different communities of algae, where larger kelp species are replaced with faster growing and lighter species of kelp. Harder rock habitat found in the vicinity of Shakespeare Cliff supports rich biota, including *Laminaria* kelps, red algae and *Polydora* worm tubes. This harder rock is unusual in the largely soft rock and sediment-dominated south-east region and the rocky outcrops, ledges and boulders also support attached sponges, sea squirts, bryozoans, anemones and hydroids, as well as mobile species such as crustaceans, sea slugs and other molluscs, echinoderms and fish. Mixed sediment covering underlying geology is rich in mobile animals including brittlestars, squat lobsters, crabs, fish and molluscs. Wild and unharvested native oysters (*Ostrea edulis*) are found scattered across the site and there are several records of the short-snouted seahorse (*Hippocampus hippocampus*).



**Plate 1** Intertidal underboulder communities on Abbot's Cliff (Balanced Seas, 2011)

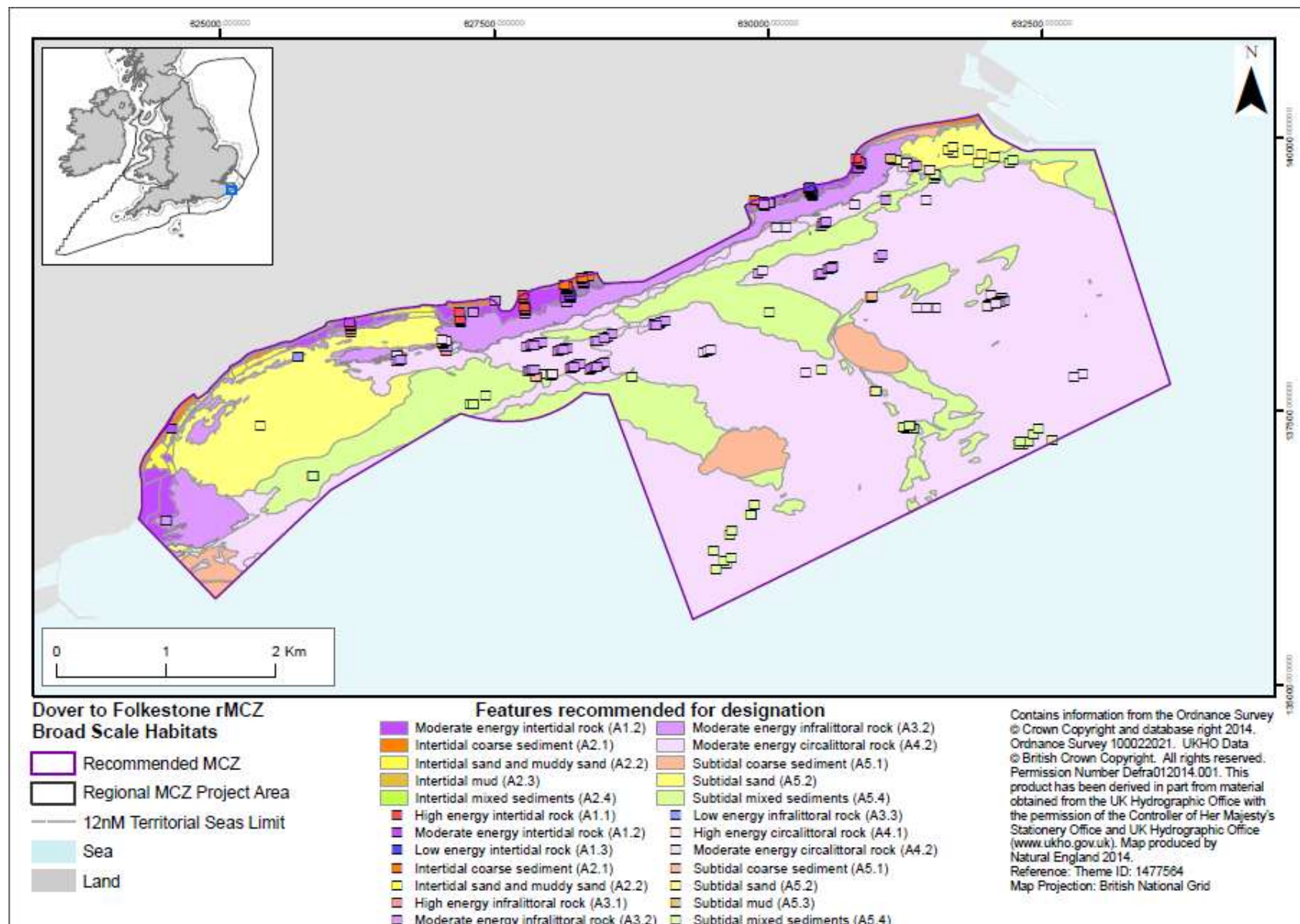


**Plate 2** Intertidal underboulder communities on Shakespeare Bay undercliff (Balanced Seas, 2011)



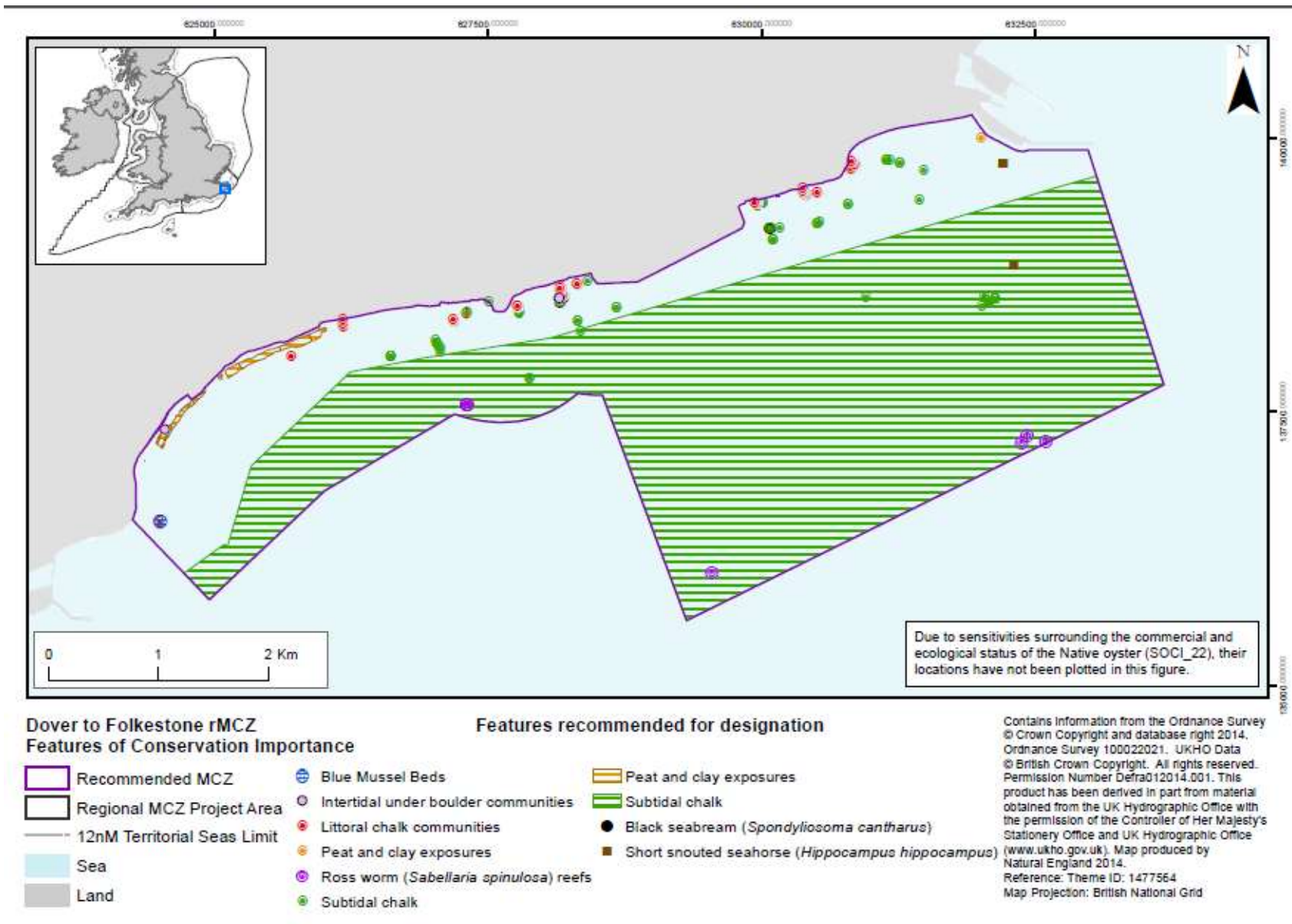
**Plate 3** Short-snouted seahorse (*Hippocampus hippocampus*) found at Shakespeare Bay (Balanced Seas, 2011)

## A9.4.2 Site feature maps



**Figure 1** Location of mapped BSHs in Dover to Folkestone rMCZ BS 11.2





**Figure 2** Location of mapped FOCI in Dover to Folkestone rMCZ BS 11.2

### A9.4.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Dover to Folkestone rMCZ BS 11.2

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.2 Moderate energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A2.1 Intertidal coarse sediment	BSH	Tranche 2 advice	High	High	Maintain
A3.1 High energy infralittoral rock	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A3.2 Moderate energy infralittoral rock	BSH	Tranche 2 advice	High	High	Maintain
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
Blue mussel ( <i>Mytilus edulis</i> ) beds	HOCl	Tranche 2 advice	Low	Low	Maintain
Intertidal underboulder communities	HOCl	Tranche 2 advice	High	Moderate	Maintain
Littoral chalk communities	HOCl	Tranche 2 advice	High	Moderate	Maintain
Peat and clay exposures	HOCl	Tranche 2 advice	High	High	Maintain
Ross worm ( <i>Sabellaria spinulosa</i> ) reef	HOCl	Tranche 2 advice	Moderate	Moderate	Maintain
Subtidal chalk	HOCl	Tranche 2 advice	High	Moderate	Maintain
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	SOCI	Tranche 2 advice	Moderate	Moderate	Maintain
Native oyster ( <i>Ostrea edulis</i> )	SOCI	Tranche 2 advice	High	High	Maintain
Folkestone Warren	Geological	Tranche 2 advice	High	Moderate	Maintain
A1.1 High energy intertidal rock	BSH	T2 new features	High	Moderate	Maintain

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.3 Low energy intertidal rock	BSH	T2 new features	Moderate	Moderate	Maintain
A2.2 Intertidal sand and muddy sand	BSH	T2 new features	High	High	Maintain
A3.3 Low energy infralittoral rock	BSH	T2 new features	Moderate	Low	Maintain
A4.1 High energy circalittoral rock	BSH	T2 new features	Moderate	Moderate	Maintain
A4.2 Moderate energy circalittoral rock	BSH	T2 new features	High	High	Maintain
A5.2 Subtidal sand	BSH	T2 new features	High	High	Maintain
A5.3 Subtidal mud	BSH	T2 new features	Moderate	Moderate	Maintain
A5.4 Subtidal mixed sediments	BSH	T2 new features	High	High	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Dover to Folkestone rMCZ BS 11.2

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00023	2012 EA MCZ Verification Survey - Dover to Folkestone (D_00023)		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00046	2013 Natural England MCZ Verification Survey - Dover to Folkestone (D_00046)		NE National GI
D_00098	Kent Wildlife Trust/Seasearch MCZ Verification Photos		Kent Wildlife Trust, Tyland Barn, Sandling, Maidstone, Kent, ME14 3BD 01622 662012
D_00101	Marine Recorder new data 2014_02_14	2014 Kent WT Shoresearch Intertidal Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00114	Marine Recorder snapshot 2014_01_28	2013 Kent WT Shoresearch Intertidal Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00115	Marine Recorder new data 2014_02_14	2013 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00129	Marine Recorder snapshot 2013_06_24	2012 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00140	Marine Recorder snapshot 2013_06_24	2011 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00153	Marine Recorder snapshot 2013_06_24	2010 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00155	Marine Recorder snapshot 2013_06_24	Intertidal Chalk Survey from Folkestone to Deal, Kent, 2009–2011	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00163	Marine Recorder snapshot 2013_06_24	2009 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00173	Marine Recorder snapshot 2013_06_24	2008 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00181	Marine Recorder snapshot 2013_06_24	2007 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00187	Marine Recorder snapshot 2013_06_24	Kent Shoresearch Intertidal Survey 2006	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00188	Marine Recorder snapshot 2013_06_24	2006 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00196	Marine Recorder snapshot 2013_06_24	2005 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00206	Marine Recorder snapshot 2013_06_24	2004 Kent Seasearch Sublittoral Survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00254	Marine Recorder snapshot 2013_06_24	1993 NHM south-east England littoral chalk and greensand survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00320	Marine Recorder snapshot 2013_06_24	1986 BMNH south-east England littoral chalk & greensand faunal survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00321	Marine Recorder snapshot 2013_06_24	1986 BMNH Shakespeare & Abbot's Cliffs (Kent) littoral fauna survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00322	Marine Recorder snapshot 2013_06_24	1986 BMNH Shakespeare & Abbot's Cliffs (Kent) littoral algal survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00324	Marine Recorder snapshot 2013_06_24	1985 BMNH Kent & Sussex littoral chalk-cliff algal survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00359	MESH Combined EUNIS 20140203	Chalk platform data, Kent	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00361	MESH Combined EUNIS 20140203	Littoral chalk in Kent	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00362	MESH Combined EUNIS 20140203	Kent mudflats	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00393	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from BGS and OS data by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00394	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from MB102 layers by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00442	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00058)	English Heritage peat records	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>



Survey ID code	MCZ source dataset	MCZ original survey	Location
M_00004	ABPmer 2012 data collection - original data - dataset: BS	Kent Marine Group Intertidal Surveys 1986–2003	Marine Officer, Kent Wildlife Trust, Tyland Barn, Sandling, Maidstone, Kent, ME14 3BD 01622 662012 Bryony.Chapman@kentwildlife.org.uk
M_00009	ABPmer 2012 data collection - original data - dataset: BS	Seahorse Trust	NE National GI/The Seahorse Trust, 36 Greatwood Terrace, Topsham, Devon EX3 0EB
M_00136	MESH Combined EUNIS 20140203	CCO Ramsgate to Dungeness	CCO, National Oceanography Centre, European Way, Southampton, SO14 3ZH cco@channelcoast.org.uk <a href="http://www.channelcoast.org/data_management/online_data_catalogue/">http://www.channelcoast.org/data_management/online_data_catalogue/</a>

#### A9.4.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Dover to Folkestone rMCZ BS 11.2

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.2 Moderate energy intertidal rock	Tranche 2 advice	High	High	High	High	
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low	Low	High	High	
A3.1 High energy infralittoral rock	Tranche 2 advice	Moderate	Moderate	Moderate	Moderate	
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low	Low	High	High	
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low	Low	Moderate	Moderate	
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	Moderate	Low	Low	Low	

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
Intertidal underboulder communities	Tranche 2 advice	High	High	High	Moderate	
Littoral chalk communities	Tranche 2 advice	High	High	High	Moderate	
Peat and clay exposures	Tranche 2 advice	High	Moderate	High	High	Manually increase confidence to high/high as NE verification shows peat and clay exposures.
Ross worm ( <i>Sabellaria spinulosa</i> ) reef	Tranche 2 advice	Moderate	Low	Moderate	Moderate	Evidence for feature based primarily on Seasearch records.
Subtidal chalk	Tranche 2 advice	High	High	High	Moderate	Should be supported by HOCl polygons from Ramsgate–Dungeness CCO survey. Need to source and tag polygons and check MESH score to support increase in confidence. Currently only received point data from Cefas. New data coming.
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	Moderate	Moderate	Moderate	Moderate	Possible post-2008 video records of seahorse from KWT to be added post consultation.
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	High	High	High	High	Records verified with KWT.
Folkestone Warren	Tranche 2 advice	High	Moderate	High	Moderate	
A1.1 High energy intertidal rock	T2 new features	N/A	N/A	High	Moderate	N/A
A1.3 Low energy intertidal rock	T2 new features	N/A	N/A	Moderate	Moderate	N/A
A2.2 Intertidal sand and muddy sand	T2 new features	N/A	N/A	High	High	Manually upgrade confidence to high/high based on manual application of MESH score >58 to dataset

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
						M_00136, which will increase confidence based on protocol E.
A3.3 Low energy infralittoral rock	T2 new features	N/A	N/A	Moderate	Low	Extent manually downgraded to low following spatial check and expert judgement.
A4.1 High energy circalittoral rock	T2 new features	N/A	N/A	Moderate	Moderate	N/A
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	N/A	High	High	Manually upgrade confidence to high/high based on manual application of MESH score >58 to dataset M_00136, which will increase confidence based on protocol E.
A5.2 Subtidal sand	T2 new features	N/A	N/A	High	High	Manually upgrade confidence to high/high based on manual application of MESH score >58 to dataset M_00136, which will increase confidence based on protocol E.
A5.3 Subtidal mud	T2 new features	N/A	N/A	Moderate	Moderate	N/A
A5.4 Subtidal mixed sediments	T2 new features	N/A	N/A	High	High	Manually upgrade confidence to high/high based on manual application of MESH score >58 to dataset M_00136, which will increase confidence based on protocol E.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Dover to Folkestone rMCZ BS 11.2

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A2.1 Intertidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A3.1 High energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	Maintain	Maintain	No change
Intertidal underboulder communities	Tranche 2 advice	Maintain	Maintain	No change
Littoral chalk communities	Tranche 2 advice	Maintain	Maintain	No change
Peat and clay exposures	Tranche 2 advice	Maintain	Maintain	No change
Ross worm ( <i>Sabellaria spinulosa</i> ) reef	Tranche 2 advice	Maintain	Maintain	No change
Subtidal chalk	Tranche 2 advice	Maintain	Maintain	No change
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	Maintain	Maintain	No change
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Maintain	Maintain	No change
Folkestone Warren	Tranche 2 advice	Maintain	Maintain	No change
A1.1 High energy intertidal rock	T2 new features	N/A	Maintain	New feature
A1.3 Low energy intertidal rock	T2 new features	N/A	Maintain	New feature

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A2.2 Intertidal sand and muddy sand	T2 new features	N/A	Maintain	New feature
A3.3 Low energy infralittoral rock	T2 new features	N/A	Maintain	New feature
A4.1 High energy circalittoral rock	T2 new features	N/A	Maintain	New feature
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	Maintain	New feature
A5.2 Subtidal sand	T2 new features	N/A	Maintain	New feature
A5.3 Subtidal mud	T2 new features	N/A	Maintain	New feature
A5.4 Subtidal mixed sediments	T2 new features	N/A	Maintain	New feature

#### A9.4.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Low		Moderate	
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low		Moderate	
A3.1 High energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low		Moderate	
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	Low		Moderate	
Intertidal underboulder communities	Tranche 2 advice	Low		Moderate	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Littoral chalk communities	Tranche 2 advice	Low		Moderate	
Peat and clay exposures	Tranche 2 advice	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
Ross worm ( <i>Sabellaria spinulosa</i> ) reef	Tranche 2 advice	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
Subtidal chalk	Tranche 2 advice	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
Folkestone Warren	Tranche 2 advice	Low		Unknown	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
A1.1 High energy intertidal rock	T2 new features	Low		Moderate	
A1.3 Low energy intertidal rock	T2 new features	Low		Moderate	
A2.2 Intertidal sand and muddy sand	T2 new features	Low		Moderate	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A3.3 Low energy infralittoral rock	T2 new features	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
A4.1 High energy circalittoral rock	T2 new features	Low		Moderate	
A4.2 Moderate energy circalittoral rock	T2 new features	Low		High	
A5.2 Subtidal sand	T2 new features	Low		High	Future Dover Port expansion likely to result in exposure to pressures to which this feature is sensitive.
A5.3 Subtidal mud	T2 new features	Low		Moderate	
A5.4 Subtidal mixed sediments	T2 new features	Low		Moderate	

#### A9.4.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
A1.2 Moderate energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.1 Intertidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A3.1 High energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		



Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	HOCI	No	No	No	Move to Q2	No	No	No	No designation		
Intertidal under-boulder communities	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Littoral chalk communities	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Peat and clay exposures	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Ross worm ( <i>Sabellaria spinulosa</i> ) reef	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
Subtidal chalk	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Folkestone Warren	Tranche 2 advice	Geo-logical	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
A1.1 High energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.3 Low energy	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
intertidal rock												
A2.2 Intertidal sand and muddy sand	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A3.3 Low energy infralittoral rock	T2 new features	BSH	Yes	No	No	Move to Q2	No	No	Not assessed	Not assessed		
A4.1 High energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.2 Moderate energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.2	T2 new	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
Subtidal sand	features											
A5.3 Subtidal mud	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.4 Subtidal mixed sediments	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No	99%		Maybe

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Maybe	20	2,019.5	This site supports the second largest number of features among those sites being considered for Tranche 2.

## A9.4.7 Additional advice

### A9.4.7.1 Advice on specific features

No additional advice given to Defra on specific features for this site.

### A9.4.7.2 Advice on boundaries

Defra requested advice on the implications of a boundary change to ensure a 500 m buffer, not within the MCZ, from the harbour wall to allow for vital maintenance of the harbour wall.

Natural England advised that this is unlikely to affect the viability of any of the features proposed within the Dover to Folkestone rMCZ.

**Table 9** Implications of boundary changes in Dover to Folkestone rMCZ BS 11.2 for feature viability

Site	Feature	Approximate loss of known extent from rMCZ with revised boundary	Implications for viability
Dover to Folkestone	A4.2 Moderate energy circalittoral rock	About a quarter of feature	Still viable
Dover to Folkestone	A5.1 Subtidal coarse sediment	No loss	Still viable
Dover to Folkestone	A5.4 Subtidal mixed sediments	Less than a quarter	Still viable
Dover to Folkestone	Subtidal chalk	Less than a quarter	Still viable
Dover to Folkestone	Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Both records of this species are within the 0.5 km to be removed from the boundary	No longer viable
Dover to Folkestone	A5.2 Subtidal sand	About a quarter of feature	Probably still viable

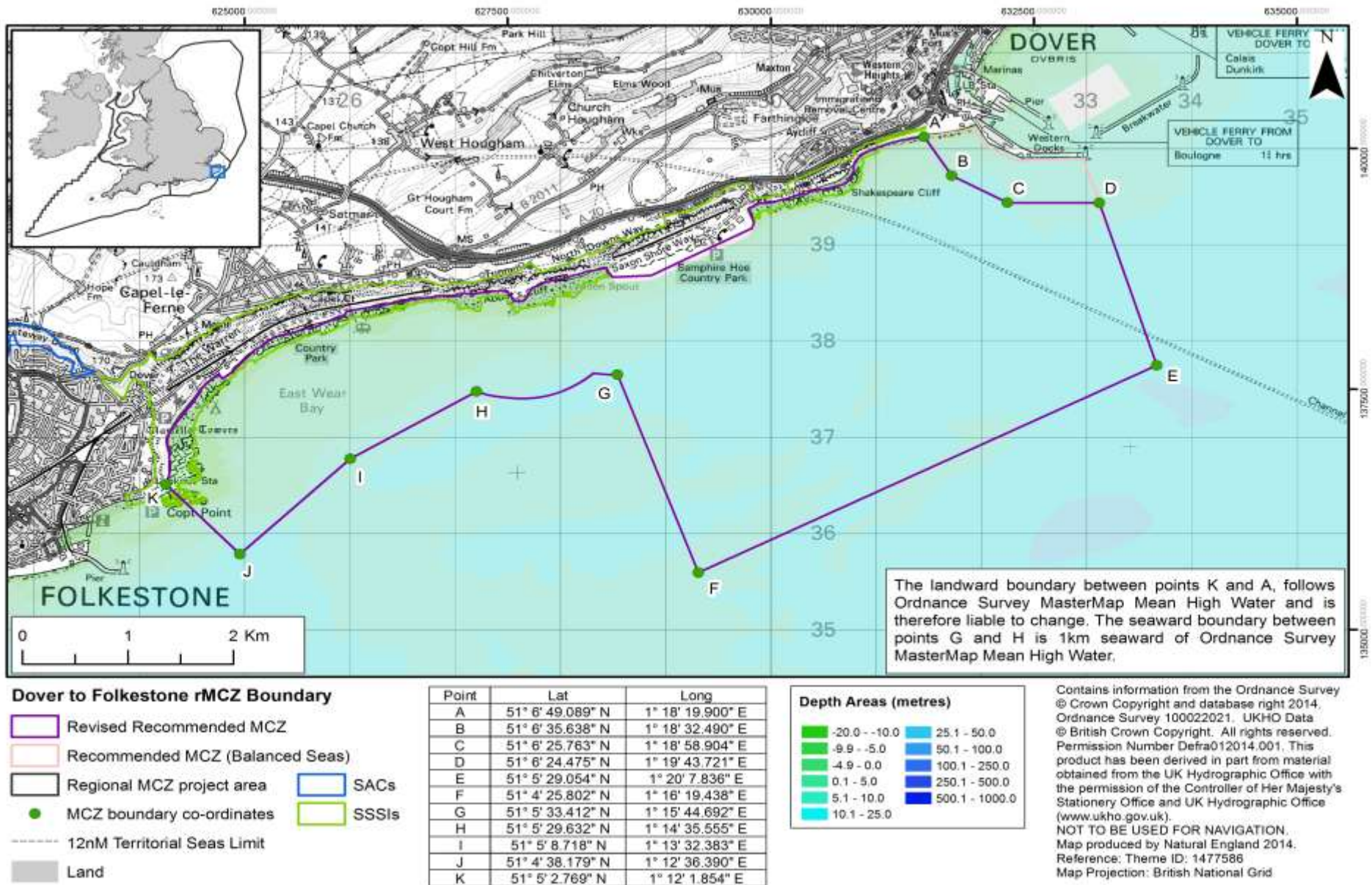


Figure 3 Boundary change proposed by Defra for Dover to Folkestone rMCZ BS 11.2

**A9.4.7.3 Evidence not used**

All evidence received was used in our advice. Therefore Table 10 is not applicable to this site.



## A9.5 Norris to Ryde rMCZ BS 19

### A9.5.1 Site description

The site covers the southern stretch of the Solent adjacent to the north-east coast of the Isle of Wight, stretching from just north of Norris Castle to the widest part of Ryde Sands. The main feature of the site is its subtidal mud, which extends almost throughout the site and is considered to be the best example of this habitat in the region. Other important features of this site include sheltered muddy gravel and mixed sediment. Extensive areas of seagrass (*Zostera noltii* and *Zostera marina*) occur along the greater part of the intertidal drying areas of the site. This seagrass bed, taking the site as a whole, is considered one of the best examples in the Solent. At the neck of Wootton Creek, the Old Mill Pond contains the highest density of tentacled lagoon worm (*Alkmaria romijni*) in the region, considered by the Wildlife Trusts as being the best example in the country. The site is also important for the native oyster (*Ostrea edulis*), a species that has declined in numbers across the UK in recent years. This site is also home to notable mantis shrimp warrens and Neolithic archaeological remains.



**Plate 1** Subtidal mixed sediments © Gavin Black, Natural England

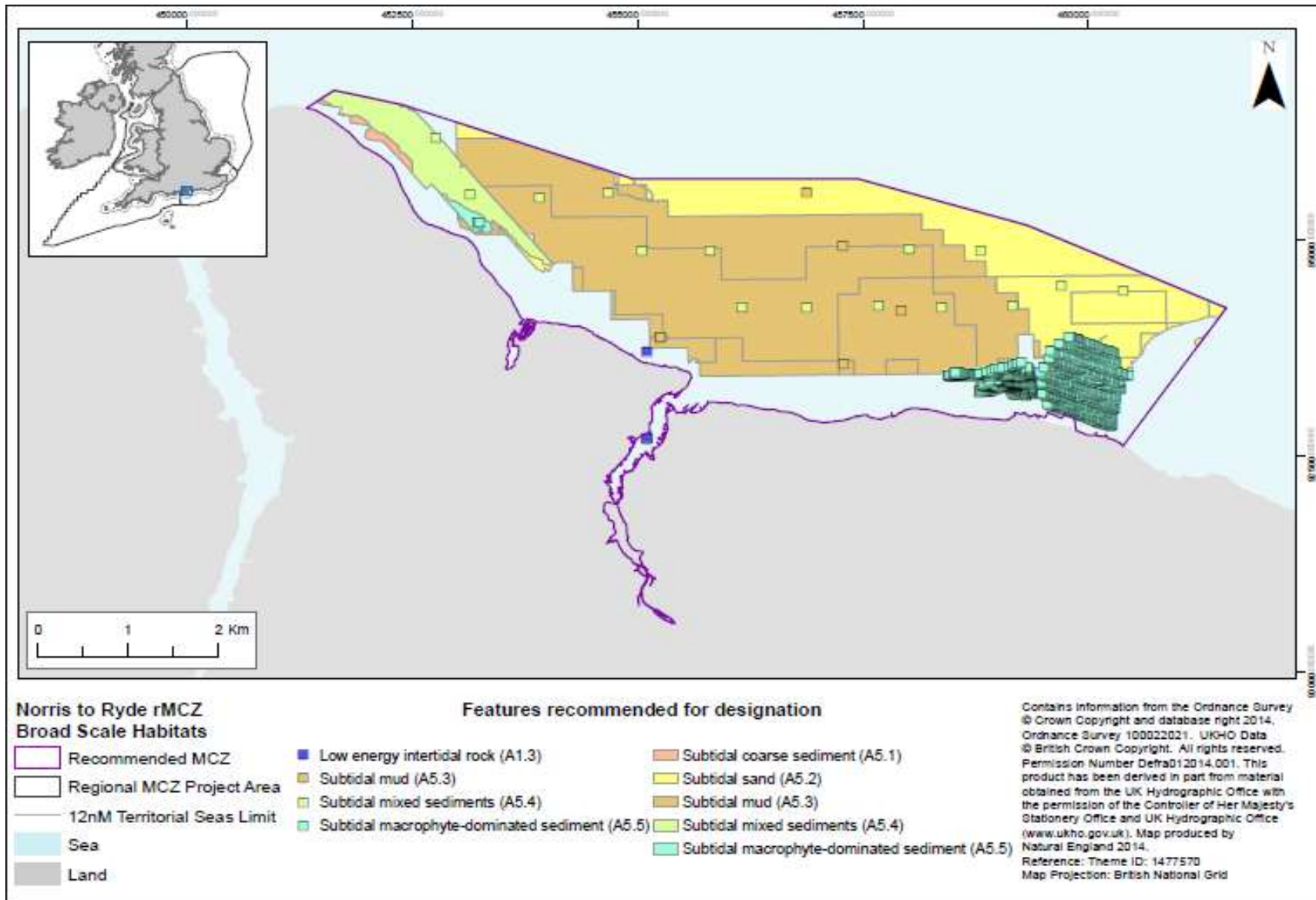
Please note this photograph is an example photograph of the above habitat only and does not necessarily represent the habitat found at the site.



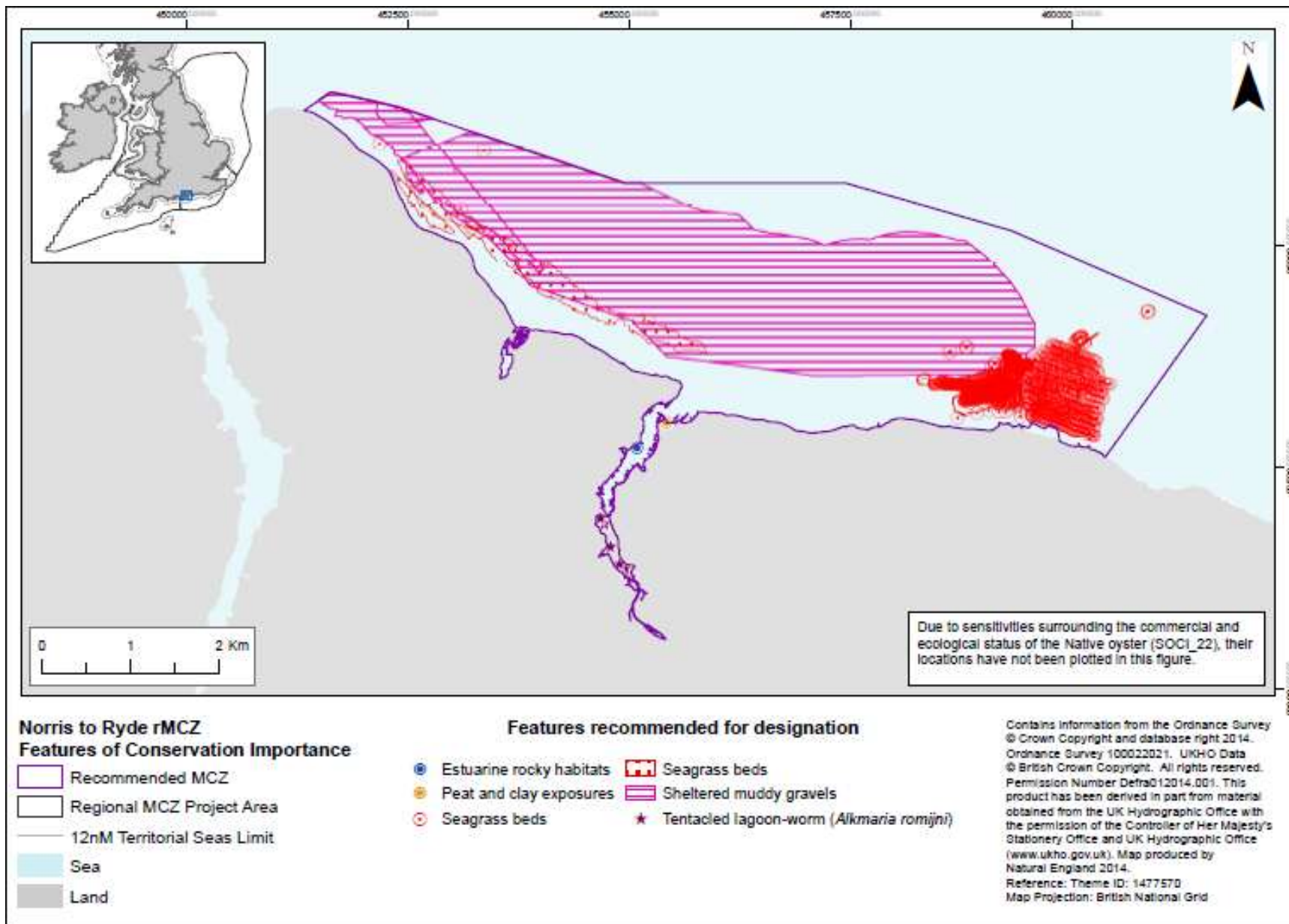
**Plate 2** Subtidal macrophyte-dominated sediment © Gavin Black, Natural England

Please note this photograph is an example photograph of the above habitat only and does not necessarily represent the habitat found at the site.

## A9.5.2 Site feature maps



**Figure 1** Location of mapped BSHs in Norris to Ryde rMCZ BS 19



**Figure 2** Location of mapped FOCI in Norris to Ryde rMCZ BS 19

### A9.5.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Norris to Ryde rMCZ BS 19

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A5.3 Subtidal mud	BSH	Tranche 2 advice	High	Moderate	Recover
Seagrass beds	HOCI	Tranche 2 advice	High	High	Recover
Tentacled lagoon worm ( <i>Alkmaria romijnii</i> )	SOCI	Tranche 2 advice	Low	Low	Maintain
A5.4 Subtidal mixed sediments	BSH	T2 new features	High	High	Recover
A5.5 Subtidal macrophyte-dominated sediment	BSH	T2 new features	High	High	Recover
Sheltered muddy gravels	HOCI	T2 new features	High	High	Recover
Native oyster ( <i>Ostrea edulis</i> )	SOCI	T2 new features	Moderate	Moderate	Recover

**Table 2** Supporting documentation, reference materials and relevant survey details for Norris to Ryde rMCZ BS 19

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00031	2012 EA MCZ Verification Survey - Norris to Ryde		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00055	WFD & NE Subtidal Benthic Infauna Survey 2011 Solent Maritime SAC		NE National GI <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00065	2011 WFD Intertidal Seagrass Survey 2011 - Solent (D_00065) - WFD_Seagrass_2012_v4		NE National GI <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>



Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00094	HIWWT Outlier Positives 2006–2013 points	HIWWT (2006) Ryde Sands Intertidal Survey	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	HIWWT (2007) Shoresearch Course Survey July 2007	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Ken Collins (Calshot & Wootton July 2007)	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Ken Collins (Ryde August 2006)	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Ken Collins (Ryde June 2006)	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Ken Collins (Ryde Shore August 2006)	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Ken Collins (Ryde Shore September 2007)	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP0 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Roger Herbert (2007) Marine Week	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Salacia towed video survey 2011	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00160	Marine Recorder snapshot 2013_06_24	2009 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00169	Marine Recorder snapshot 2013_06_24	2008 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00186	Marine Recorder snapshot 2013_06_24	2006 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00189	Marine Recorder snapshot 2013_06_24	2006 - PMNHS - Isle of Wight Field Trip	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00311	Marine Recorder snapshot 2013_06_24	1988 MNCR minor south-coast inlets in England survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00349	MESH Combined EUNIS 20140203	Solent and South Wight: mapping of intertidal and subtidal marine cSACs - littoral habitats, the Solent	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00366	MESH Combined EUNIS 20140203	Distribution of Zostera beds around Ryde Sands and Osborne Bay; northeast Isle of Wight	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00375	MESH Combined EUNIS 20140203	ENSIS (Marine SSSI data)	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00378	MESH Combined EUNIS 20140203	Intertidal mudflat layer for England	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00379	MESH Combined EUNIS 20140203	Survey of the Subtidal Sediments of the Solent Maritime SAC	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00394	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from MB102 layers by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00399	MB0116 - Hampshire_IoW_Zostera_Inventory_Polygons_region_MCZ (was M_00160)	Environment Agency 2008, Ryde Sands Zostera survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00401	MB0116 - Hampshire_IoW_Zostera_Inventory_Polygons_region_MCZ (was M_00160)	Hampshire and Isle of Wight Wildlife Trust (2009). Eelgrass survey Osborne Bay.	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00404	MB0116 - Hampshire_IoW_Zostera_Inventory_Polygons_region_MCZ (was M_00160)	Hampshire and Isle of Wight Wildlife Trust. (2009). Eelgrass survey Wootton.	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00431	ABPmer 2012 data collection - original data - dataset: BS (was M_00025)	Solent WFD benthic survey 2007	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00442	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00058)	English Heritage peat records	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00443	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00058)	2007–2009 BIOSYS extract EA WFD seagrass data	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00456	MB0116 - Various_MBA_MCZ (was M_00215)	Paul, M, Lefebvre, A, Manca, E, Almos, C.L (2011). An acoustic method for the remote measurement of seagrass metrics. Estuarine, Coastal and Shelf Science. 93, 68–79	<a href="http://eprints.soton.ac.uk/189445/">http://eprints.soton.ac.uk/189445/</a>
M_00026	ABPmer 2012 data collection - original data - dataset: BS	1900–2007 Environment Agency, <i>Alkmaria romijni</i>	Ian Humphreys, Senior Environmental Monitoring Officer, EA, Kent and South London Area, Orchard House, London Road, Addington, West Malling, Kent, ME13 5SH 01732 223286
M_00198	ABPmer 2012 data collection - new data - dataset: National_WFD_Benthic_EA_Data	National_WFD_Benthic_EA_Data	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>

#### A9.5.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Norris to Ryde rMCZ BS 19

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A5.3 Subtidal mud	Tranche 2 advice	Low	Low	High	Moderate	Confidence updated following Protocol E based on more recent data.
Seagrass beds	Tranche 2 advice	High	High	High	High	No change
Tentacled lagoon worm ( <i>Alkmaria romijni</i> )	Tranche 2 advice	Low	Low	Low	Low	No change
A5.4 Subtidal mixed sediments	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Sheltered muddy gravels	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Norris to Ryde rMCZ BS 19

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.3 Subtidal mud	Tranche 2 advice	Recover	Recover	No change
Seagrass beds	Tranche 2 advice	Recover	Recover	No change
Tentacled lagoon worm ( <i>Alkmaria romijni</i> )	Tranche 2 advice	Maintain	Maintain	No change
A5.4 Subtidal mixed sediments	T2 new features	N/A	Recover	New feature



Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	N/A	Recover	New feature
Sheltered muddy gravels	T2 new features	N/A	Recover	New feature
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	N/A	Recover	New feature

### A9.5.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A5.3 Subtidal mud	Tranche 2 advice	High	Current risk from fishing activity (trawling and dredging).	Moderate	
Seagrass beds	Tranche 2 advice	High	Current risk from coastal infrastructure (outfalls), shipping, fishing – dredging/trawling (not all of the seagrass records in the geodatabase are covered by the Southern IFCA red byelaw area), ports and harbours and recreational sailing and powerboating.	High	
Tentacled lagoon worm ( <i>Alkmaria romijni</i> )	Tranche 2 advice	Low		High	Current understanding indicates that this feature, although highly sensitive, would not be exposed to activities in the future that would trigger a high risk.
A5.4 Subtidal mixed sediments	T2 new features	High	Current risk from recreational sailing and powerboating and fisheries dredging/trawling causing abrasion and disturbance to the feature. Likely low intensity of dredge/trawl in this habitat.	Moderate	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	High	Current risk from coastal infrastructure (outfalls), shipping, fishing – dredging/trawling (not all of the seagrass records in the geodatabase are covered by the Southern IFCA red byelaw area), ports and harbours and recreational sailing and powerboating.	High	
Sheltered muddy gravels	T2 new features	High	Current risk from recreational sailing and powerboating and fisheries dredging/trawling causing abrasion and disturbance to the feature. Likely low intensity of dredge/trawl in this habitat.	High	
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	High	Current risk from recreational sailing and powerboating and fisheries dredging/trawling causing abrasion and disturbance to the feature. Likely low intensity of dredge/trawl in this habitat.	High	

## A9.5.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A5.3 Subtidal mud	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Seagrass beds	Tranche 2 advice	HOCl	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Tentacled lagoon worm ( <i>Alkmaria romijnii</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	No	No	Yes	Further consideration		
A1.3 Low energy intertidal rock	T2 new features	BSH	Yes	No	No	Move to Q2	No	No	Not assessed	Not assessed		
A5.1 Subtidal coarse sediment	T2 new features	BSH	No	No	No	Move to Q2	No	No	Not assessed	Not assessed	Yes	M_00018 EMU Limited 2007 subtidal sediments Solent SAC survey. Point data require input (MEDIN contract). To be available post consultation.

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A5.2 Subtidal sand	T2 new features	BSH	No	No	No	Move to Q2	Yes	No	Not assessed	Not assessed	Yes	M_00018 EMU Limited 2007 subtidal sediments Solent SAC survey. Point data require input (MEDIN contract). To be available post consultation.
A5.4 Subtidal mixed sediments	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Sheltered muddy gravels	T2 new features	HOCl	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		>10% overlap with designated SAC and partially estuarine site. Q2 has not been calculated.	Yes. Available data support at least one JNCC Big Gaps identified feature for designation.

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Yes. Available data support at least one JNCC Big Gaps identified feature for designation.	6	1,975	

## A9.5.7 Additional advice

### A9.5.7.1 Advice on specific features

No additional advice given to Defra on specific features for this site.

### A9.5.7.2 Advice on boundaries

Defra requested advice on potential changes to the site boundary around Osborne Bay and east of Ryde Pier.

Natural England advised the following:

- **Osborne Bay:** the exclusion of this popular anchorage area from the rMCZ boundaries would not result in the loss of any of the subtidal mud or sediment features. There is a seagrass bed positioned near the mouth of the bay, but the extent of this is much less than the larger seagrass bed towards Ryde
- **Ryde Pier:** there is a hovercraft that goes through the large seagrass bed just east of the pier, which has caused scarring. The scarring has already happened and evidence suggests it is not getting worse despite this being a commercial/public transport route. Therefore the exclusion of this channel would not be detrimental to the feature

Table 9 is not applicable to this site.

### A9.5.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00002	CCO Isle of Wight surveys	BS 19, BS 20, BS 22, BS 23	Multibeam	Uninterpreted remote sensing data and not received before data cut-off.
D_00011	Cefas MCZ Verification Survey - Norris to Ryde	BS 19	Multibeam	Not available before data cut-off.
D_00517	Yar Estuary (Yarmouth to Cowes rMCZ) and King's Quay / Brading Marshes to St Helen's Ledges (Norris to Ryde rMCZ and Bembridge rMCZ) - A biological survey of the intertidal sediments of Brading Marshes to St Helen's Ledges, King's Quay Shore and Yar Estuary Sites of Special Scientific Interest (SSSI), Isle of Wight, for the purpose of SSSI condition assessment, University of Brighton, 2009	BS 19, BS 22, BS 23	Phase 1 and Phase 2 surveys	Not available before data cut-off.

Survey ID	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00520	Hampshire and Isle of Wight Wildlife Trust Inventory of Eelgrass Beds in Hampshire and the Isle of Wight 2014 – polygonal data	BS 19, BS 20, BS 22, BS 23	Intertidal walkover survey and subtidal video survey	
M_00018	Emu Limited (2007). Survey of the Subtidal Sediments of the Solent Maritime SAC. Unpublished report to Natural England, Lyndhurst (M_00018)	BS 19 Norris to Ryde	Subtidal grab and drop-down video survey	Additional ground truthing data from this survey will be added to the evidence database post consultation.

## A9.6 The Needles rMCZ BS 20

### A9.6.1 Site description

The Needles rMCZ can be found at the most easterly point of the Isle of Wight and extends northwards along the coast from just south of the Needles at Scratchells Bay up to Cliff End at the south-west of Norton Village. This site has been recommended as an MCZ for a number of rare and fragile habitats, including subtidal chalk, infralittoral rock and soft sediments that support communities of algae, sponges, sea squirts and delicate anemones. Seagrass beds occur in both Totland Bay and Colwell Bay and support species such as the colourful sea hare, a small marine mollusc that can be found in the seagrass and surrounding soft sediments. Rare and threatened species such as the fan-shaped algae commonly known as peacock's tail (*Padina pavonica*) can be found in the intertidal areas at Colwell Bay and records of the tiny stalked jellyfish (*Lucernariopsis campanulata*) have been found at Alum Bay. The site is also important for the native oyster (*Ostrea edulis*), a species that has declined in numbers across the UK in recent years. The site is named after its most prominent landmark, The Needles – chalk stacks protruding from the land into the sea at the most easterly point of the Isle of Wight and that the rMCZ encompasses.



**Plate 1** Moderate energy infralittoral rock habitat © Paul Kay, Natural England

Please note this photograph is an example photograph of the above habitat only and does not necessarily represent the habitat found at the site.

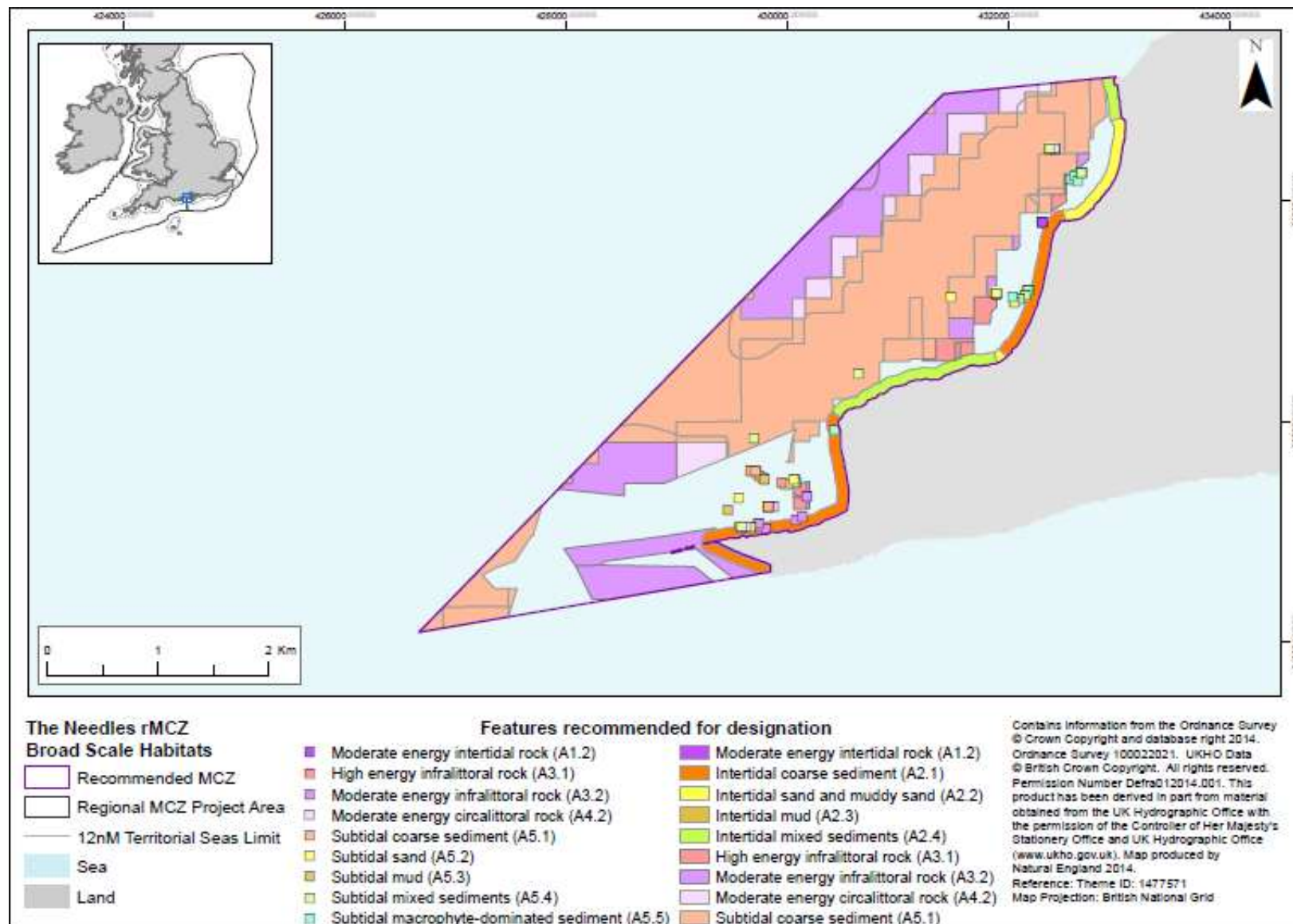


**Plate 2** Native oysters (*Ostrea edulis*) © Paul Kay, Natural England

Please note this photograph is an example photograph of the above feature only and does not necessarily represent the feature found at the site.



## A9.6.2 Site feature maps



**Figure 1** Location of mapped BSHs in The Needles rMCZ BS 20

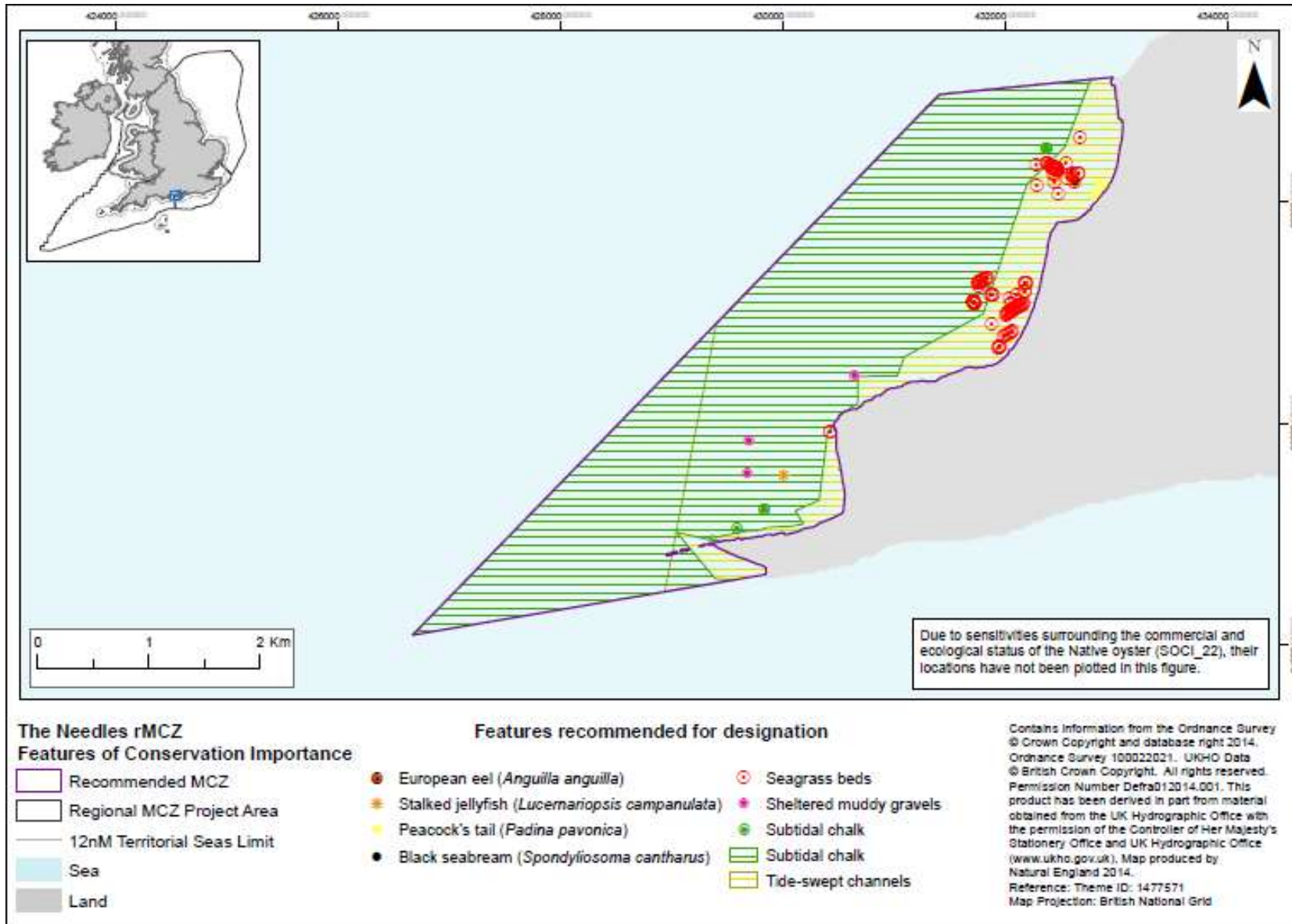


Figure 2 Location of mapped FOCI in The Needles rMCZ BS 20

### A9.6.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for The Needles rMCZ BS 20

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A5.4 Subtidal mixed sediments	BSH	Tranche 2 advice	High	Moderate	Recover
Seagrass beds	HOCI	Tranche 2 advice	Moderate	Moderate	Recover
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	SOCI	Tranche 2 advice	Moderate	Moderate	Maintain
Peacock's tail ( <i>Padina pavonica</i> )	SOCI	Tranche 2 advice	High	High	Recover
A1.2 Moderate energy intertidal rock	BSH	T2 new features	High	Low	Maintain
A3.1 High energy infralittoral rock	BSH	T2 new features	Moderate	Low	Maintain
A3.2 Moderate energy infralittoral rock	BSH	T2 new features	High	Moderate	Maintain
A4.2 Moderate energy circalittoral rock	BSH	T2 new features	Moderate	Moderate	Maintain
A5.1 Subtidal coarse sediment	BSH	T2 new features	High	Moderate	Recover
A5.2 Subtidal sand	BSH	T2 new features	High	Moderate	Recover
A5.3 Subtidal mud	BSH	T2 new features	Moderate	Moderate	Recover
A5.5 Subtidal macrophyte-dominated sediment	BSH	T2 new features	Moderate	Moderate	Recover
Sheltered muddy gravels	HOCI	T2 new features	Moderate	Moderate	Recover
Subtidal chalk	HOCI	T2 new features	Moderate	Moderate	Recover
Native oyster ( <i>Ostrea edulis</i> )	SOCI	T2 new features	High	High	Recover

**Table 2** Supporting documentation, reference materials and relevant survey details for The Needles rMCZ BS 20

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00092	Marine Recorder new data 2014_02_14	2013 Seastar Survey South Wight Maritime SAC Benthic Habitat Mapping Survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00094	HIWWT Outlier Positives 2006–2013 points	Hampshire and Isle of Wight Wildlife Trust (2010). Seasearch survey Totland Bay.	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Ken Collins (Totland August 2006)	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Roger Herbert (2006) Sea Safari Yarmouth & Norton Spit	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Salacia towed video survey 2011	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00099	Hampshire and the Isle of Wight Wildlife Trust/Seasearch MCZ Verification Photos		Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774407
D_00106	Marine Recorder new data 2014_02_14	2013 Seasearch Hampshire & Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00125	Marine Recorder snapshot 2013_06_24	2012 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00138	Marine Recorder snapshot 2013_06_24	2011 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00148	Marine Recorder snapshot 2013_06_24	2010 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00160	Marine Recorder snapshot 2013_06_24	2009 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00169	Marine Recorder snapshot 2013_06_24	2008 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00197	Marine Recorder snapshot 2013_06_24	2005 English Nature Survey of the littoral caves of the South Wight Maritime SAC	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00221	Marine Recorder snapshot 2013_06_24	1999 EN South Wight Maritime cSAC sublittoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00252	MESH Combined EUNIS 20140203 and Marine Recorder snapshot 2013_06_24	Mapping the distribution of benthic biotopes around the Isle of Wight. SW Isle of Wight, Lifeforms	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00318	1986 OPRU HRE Solent survey		NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00350	MESH Combined EUNIS 20140203	Solent and South Wight: mapping of intertidal and subtidal marine cSACs - habitats, South Wight	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00393	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from BGS and OS data by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00394	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from MB102 layers by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
M_00015	ABPmer 2012 data collection - original data - dataset: BS	Herbert, J H (2010). Padina area. Distribution of the marine alga Padina pavonica on the Isle of Wight. Medina Valley.	NE National GI

Survey ID code	MCZ source dataset	MCZ original survey	Location
M_00198	ABPmer 2012 data collection - new data - dataset: National_WFD_Benthic_EA_Data	National_WFD_Benthic_EA_Data	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>

#### A9.6.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for The Needles rMCZ BS 20

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A5.4 Subtidal mixed sediments	Tranche 2 advice	Low	Low	High	Moderate	Confidence updated following Protocol E based on more recent data.
Seagrass beds	Tranche 2 advice	High	High	Moderate	Moderate	Confidence updated following Protocol E based on more recent data.
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	Tranche 2 advice	Low	Low	Moderate	Moderate	Initial automated confidence result produced as high/high but subsequently manually downgraded to moderate/moderate due to duplication of records resulting in a higher confidence than should be attained.
Peacock's tail ( <i>Padina pavonica</i> )	Tranche 2 advice	High	High	High	High	No change
A1.2 Moderate energy intertidal rock	T2 new features	N/A	N/A	High	Low	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A3.1 High energy infralittoral rock	T2 new features	N/A	N/A	Moderate	Low	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A3.2 Moderate energy infralittoral rock	T2 new features	N/A	N/A	High	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A5.1 Subtidal coarse sediment	T2 new features	N/A	N/A	High	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A5.2 Subtidal sand	T2 new features	N/A	N/A	High	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A5.3 Subtidal mud	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Sheltered muddy gravels	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Subtidal chalk	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for The Needles rMCZ BS 20

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.4 Subtidal mixed sediments	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of recreational sailing and powerboating and fisheries dredging/trawling has led to a revised GMA.
Seagrass beds	Tranche 2 advice	Recover	Recover	No change

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	Tranche 2 advice	Maintain	Maintain	No change
Peacock's tail ( <i>Padina pavonica</i> )	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of recreational sailing and powerboating and fisheries dredging/trawling has led to a revised GMA.
A1.2 Moderate energy intertidal rock	T2 new features	N/A	Maintain	New feature
A3.1 High energy infralittoral rock	T2 new features	N/A	Maintain	New feature
A3.2 Moderate energy infralittoral rock	T2 new features	N/A	Maintain	New feature
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	Maintain	New feature
A5.1 Subtidal coarse sediment	T2 new features	N/A	Recover	New feature
A5.2 Subtidal sand	T2 new features	N/A	Recover	New feature
A5.3 Subtidal mud	T2 new features	N/A	Recover	New feature
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	N/A	Recover	New feature
Sheltered muddy gravels	T2 new features	N/A	Recover	New feature
Subtidal chalk	T2 new features	N/A	Recover	New feature
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	N/A	Recover	New feature



## A9.6.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A5.4 Subtidal mixed sediments	Tranche 2 advice	High	Current risk from recreational sailing and powerboating and fisheries dredging/trawling. The Needles is a westerly facing site of high mobility and high energy. Exposure to dredging and trawling and anchoring events are likely low impact due to high energy nature of site.	Moderate	
Seagrass beds	Tranche 2 advice	High	Current risk from coastal infrastructure (outfalls), shipping, fishing – dredging/trawling (not all of the seagrass records in the geodatabase are covered by the Southern IFCA red byelaw area), ports and harbours and recreational sailing and powerboating.	High	
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	Tranche 2 advice	Low		High	
Peacock's tail ( <i>Padina pavonica</i> )	Tranche 2 advice	High	Current risk from recreational sailing and powerboating (mooring and launching, recovery and participation) and fisheries dredging/trawling causing abrasion and disturbance to the feature.	High	
A1.2 Moderate energy intertidal rock	T2 new features	Low		Moderate	
A3.1 High energy infralittoral rock	T2 new features	Low		Moderate	
A3.2 Moderate energy infralittoral rock	T2 new features	Low		Moderate	
A4.2 Moderate energy circalittoral rock	T2 new features	Low		High	Current understanding indicates that this feature, although highly sensitive, would not be exposed to activities in the future that would trigger a high risk.

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A5.1 Subtidal coarse sediment	T2 new features	High	Current risk from recreational sailing and powerboating and fisheries dredging/trawling. The Needles is a westerly facing site of high mobility and high energy. Exposure to dredging and trawling and anchoring events are likely low impact due to high energy nature of site.	Moderate	
A5.2 Subtidal sand	T2 new features	High	Current risk from recreational sailing and powerboating (mooring and launching, recovery and participation) and fisheries dredging/trawling causing abrasion and disturbance to the feature.	High	The Needles is a westerly facing site of high mobility and high energy. Ongoing exposure to dredging and trawling and anchoring events are likely low impact due to high energy nature of site. Future moorings would be regulated by appropriate authorities.
A5.3 Subtidal mud	T2 new features	High	Recover GMA triggered due to moderate/high VA for recreational sailing and powerboating (mooring and launching, recovery and participation) and fisheries dredging/trawling. The Needles is a westerly facing site with high mobility and high energy. Exposure to dredging and trawling and anchoring events are likely low impact due to high energy nature of site.	Moderate	
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	High	Risk from recreational sailing and powerboating (mooring and launching, recovery and participation).	High	
Sheltered muddy gravels	T2 new features	High	Current risk from recreational sailing and powerboating (mooring and launching, recovery and participation) and fisheries dredging/trawling causing abrasion and disturbance to the feature.	High	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Subtidal chalk	T2 new features	High	Current risk from recreational sailing and powerboating (mooring and launching, recovery and participation) and fisheries dredging/trawling causing abrasion and disturbance to the feature.	High	
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	High	Recover GMA triggered due to moderate/high VA for recreational sailing and powerboating (mooring and launching, recovery and participation) and fisheries trawling and dredging. Although it is suggested that other features in this site are less affected by dredging or benthic trawling this is not the case for <i>Ostrea edulis</i> and advice remains as recover due to high sensitivity and commercial value. There is potential for this feature to be exploited and detrimentally affected if not given a recover objective.	High	

## A9.6.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A5.4 Subtidal mixed sediments	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Seagrass beds	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Peacock's tail ( <i>Padina pavonica</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A1.2 Moderate energy intertidal rock	T2 new features	BSH	Yes	No	No	Move to Q2	No	No	Not assessed	Not assessed		
A3.1 High energy infralittoral rock	T2 new features	BSH	Yes	No	No	Move to Q2	No	No	Not assessed	Not assessed		
A3.2 Moderate energy infralittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A4.2 Moderate energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A5.1 Subtidal coarse sediment	T2 new features	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A5.2 Subtidal sand	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.3 Subtidal mud	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Sheltered muddy gravels	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Subtidal chalk	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Native oyster ( <i>Ostrea edulis</i> )	T2 new features	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		>10% overlap with designated SAC – Q2 has not been calculated.	Yes

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Yes	13	1,102.1	

## A9.6.7 Additional advice

### A9.6.7.1 Advice on specific features

No additional advice given to Defra on specific features for this site.

### A9.6.7.2 Advice on boundaries

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### A9.6.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID code	Survey (identifying name or code)	rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00002	CCO Isle of Wight surveys	BS 19, BS 20, BS 22, BS 23	Multibeam	Uninterpreted remote sensing data and not received before data cut-off.
D_00510	NE South Wight multibeam survey	BS 20, BS 22	Multibeam	Used in D_00092
E_00008	NE South Wight multibeam Survey	BS 20, BS 22	Multibeam	Used in D_00092

## A9.7 Bembridge rMCZ BS 22

### A9.7.1 Site description

Bembridge rMCZ wraps around the east coast of the Isle of Wight and extends seaward towards the Nab shipping channel. While three-quarters of the site overlaps geographically with South Wight Maritime SAC, it is recommended as a MCZ for the exceptionally diverse habitats and species that are not afforded protection by the SAC. These include the reef-building Ross worm (*Sabellaria spinulosa*), native oyster (*Ostrea edulis*) and seagrass beds. The Ledges to the south of Bembridge Harbour are home to large 'fields' of the brown alga peacock's tail (*Padina pavonica*), which acts as the seeding population for other areas of peacock's tail around the Isle of Wight. The lagoon sand shrimp (*Gammarus insensibilis*) and starlet sea anemone (*Nematostella vectensis*) have been recorded in Bembridge Harbour and in adjacent areas above the mean high water mark. There are records of both species of seahorse (*Hippocampus hippocampus* and *Hippocampus guttulatus*) and the site is considered to provide suitable habitat for breeding populations of these species. Recent Natural England survey work has identified the only location of maerl (*Phymatolithon calcareum*) beds in the Balanced Seas project area in the slightly deeper waters around Culver Spit, where subtidal macrophyte-dominated sediments provide additional habitat for a variety of creatures. Other, earlier surveys recorded 1 of only 2 occurrences of the kaleidoscope jellyfish (*Haliclystus auricula*) in the project area, in waters further from the shore, where the seabed becomes predominantly subtidal mixed sediments, sands and gravels. The stalked jellyfish (*Lucernariopsis campanulata*) is also found within the site near Bembridge Ledges. In the northern part of the site, where there is no overlap with the South Wight Maritime SAC, subtidal mixed sediments and a large area of subtidal mud support a wide variety of benthic habitats and species, including communities of sea pens and burrowing megafauna.



**Plate 1** Stalked jellyfish (*Lucernariopsis campanulata*) July 2014 © Gavin Black, Natural England

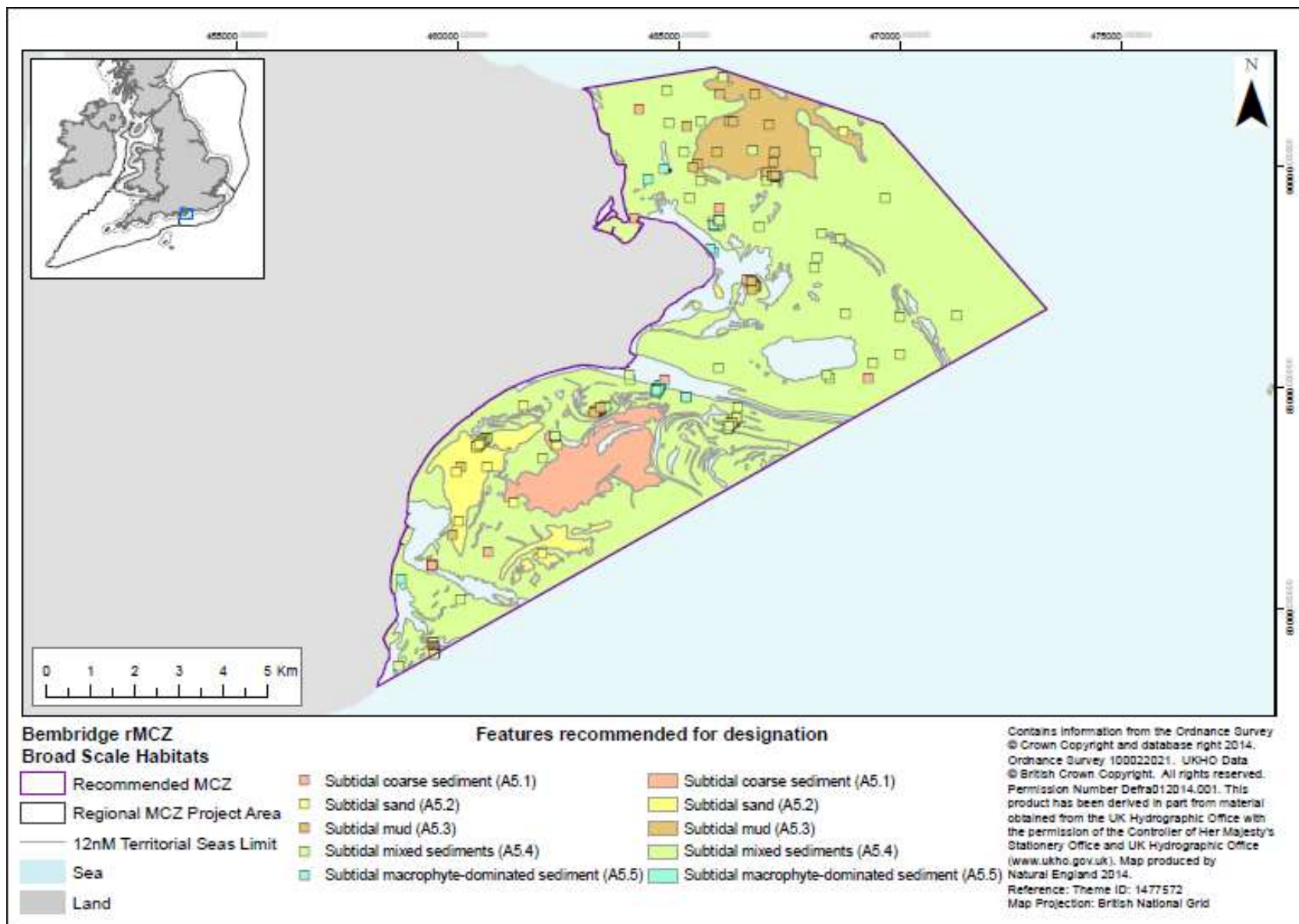




**Plate 2** Common maerl (*Phymatolithon calcareum*) © Paul Kay/Lin Baldock

Please note this photograph is an example photograph of the above habitat only and does not necessarily represent the habitat found at the site.

## A9.7.2 Site feature maps



**Figure 1** Location of mapped BSHs in Bembridge rMCZ BS 22

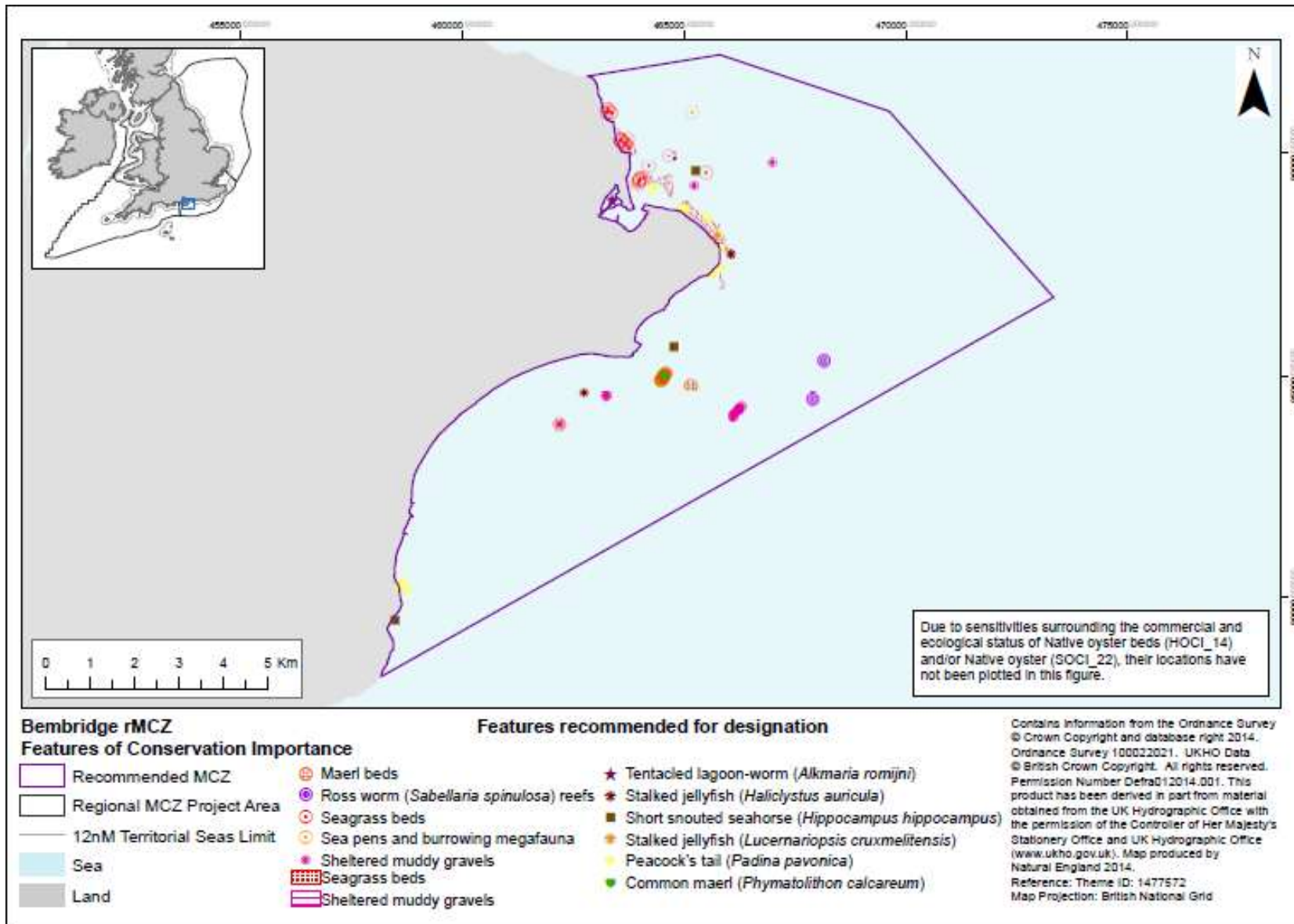


Figure 2 Location of mapped FOCI in Bembridge rMCZ BS 22

### A9.7.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Bembridge rMCZ BS 22

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A5.2 Subtidal sand	BSH	Tranche 2 advice	High	High	Recover
A5.3 Subtidal mud	BSH	Tranche 2 advice	High	High	Recover
A5.4 Subtidal mixed sediments	BSH	Tranche 2 advice	High	High	Maintain
Maerl beds	HOCI	Tranche 2 advice	High	Moderate	Recover
Mud habitats in deep water	HOCI	Tranche 2 advice	No confidence	No confidence	
Native oyster ( <i>Ostrea edulis</i> ) beds	HOCI	Tranche 2 advice	No confidence	No confidence	
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	HOCI	Tranche 2 advice	Low	Low	Recover
Seagrass beds	HOCI	Tranche 2 advice	Moderate	Moderate	Recover
Sea pens and burrowing megafauna	HOCI	Tranche 2 advice	Low	Low	Recover
Tentacled lagoon worm ( <i>Alkmaria romijni</i> )	SOCI	Tranche 2 advice	Low	Low	Maintain
Stalked jellyfish ( <i>Haliclystus auricula</i> )	SOCI	Tranche 2 advice	Moderate	Moderate	Recover
Long-snouted seahorse ( <i>Hippocampus guttulatus</i> )	SOCI	Tranche 2 advice	No confidence	No confidence	
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	SOCI	Tranche 2 advice	Moderate	Moderate	Recover
Starlet sea anemone ( <i>Nematostella vectensis</i> )	SOCI	Tranche 2 advice	No confidence	No confidence	

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
Native oyster ( <i>Ostrea edulis</i> )	SOCI	Tranche 2 advice	Moderate	Moderate	Recover
Peacock's tail ( <i>Padina pavonica</i> )	SOCI	Tranche 2 advice	High	High	Recover
Lagoon sand shrimp ( <i>Gammarus insensibilis</i> )	SOCI	Tranche 2 advice	No confidence	No confidence	
A5.1 Subtidal coarse sediment	BSH	T2 new features	High	High	Recover
A5.5 Subtidal macrophyte-dominated sediment	BSH	T2 new features	High	Moderate	Recover
Sheltered muddy gravels	HOCI	T2 new features	High	High	Recover
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	HOCI	T2 new features	High	High	Recover
Common maerl ( <i>Phymatolithon calcareum</i> )	SOCI	T2 new features	High	High	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Bembridge rMCZ BS 22

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00004	2012 Cefas MCZ Verification Survey - Bembridge		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00019	2012 EA MCZ Verification Survey - Bembridge		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00038	NE MCZ Verification Photos	NE Regional Staff MCZ Verification Photos	NE National GI

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00092	Marine Recorder new data 2014_02_14	2013 Seastar Survey South Wight Maritime SAC Benthic Habitat Mapping Survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00094	HIWWT Outlier Positives 2006–2013 points	Hampshire and Isle of Wight Wildlife Trust (2009) Eelgrass survey Bembridge.	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Hampshire and Isle of Wight Wildlife Trust (2009) Eelgrass survey Priory Bay	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	Hampshire and Isle of Wight Wildlife Trust (2013). Eelgrass survey Isle of Wight	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00094	HIWWT Outlier Positives 2006–2013 points	IWNAHS (2006) Sightings of Zostera spp reported by members	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00099	Hampshire and the Isle of Wight Wildlife Trust/Seasearch MCZ Verification Photos		Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00106	Marine Recorder new data 2014_02_14	2013 Seasearch Hampshire & Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00125	Marine Recorder snapshot 2013_06_24	2012 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00130	Marine Recorder snapshot 2013_06_24	2012 Intertidal surveys Hampshire & Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00138	Marine Recorder snapshot 2013_06_24	2011 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00141	Marine Recorder snapshot 2013_06_24	2011 Intertidal survey Hampshire & Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00148	Marine Recorder snapshot 2013_06_24	2010 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00160	Marine Recorder snapshot 2013_06_24	2009 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>



Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00169	Marine Recorder snapshot 2013_06_24	2008 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00177	Marine Recorder snapshot 2013_06_24	2007 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00186	Marine Recorder snapshot 2013_06_24	2006 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00189	Marine Recorder snapshot 2013_06_24	2006 PMNHS Isle of Wight Field Trip	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00194	Marine Recorder snapshot 2013_06_24	2005 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00204	Marine Recorder snapshot 2013_06_24	2004 Seasearch Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00232	Marine Recorder snapshot 2013_06_24	1997 MNCR south Isle of Wight sublittoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00252	Marine Recorder snapshot 2013_06_24	Mapping the distribution of benthic biotopes around the Isle of Wight. SE Isle of Wight, Lifeforms	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00314	Marine Recorder snapshot 2013_06_24	1987 OPRU HRE Newtown and Bembridge Harbours survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00318	Marine Recorder snapshot 2013_06_24	1986 OPRU HRE Solent survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00340	Marine Recorder snapshot 2013_06_24	1971 Kent, Hampshire, Dorset, Devon, Cornwall Polydora and Ostrea edulis investigation	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00341	Marine Recorder snapshot 2013_06_24	1970-present MarLIN UK expert sighting records	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00342	Marine Recorder snapshot 2013_06_24	1970–80 SMBA/MBA Great Britain littoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00349	MESH Combined EUNIS 20140203	Solent and South Wight: mapping of intertidal and subtidal marine cSACs – littoral habitats, the Solent	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00350	MESH Combined EUNIS 20140203	Solent and South Wight: mapping of intertidal and subtidal marine cSACs – habitats, South Wight	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00365	MESH Combined EUNIS 20140203	Distribution of Zostera beds around eastern tip of Isle of Wight	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00378	MESH Combined EUNIS 20140203	Intertidal mudflat layer for England	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00386	2004 English Nature East Wight Rocky Shores intertidal mapping		EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00393	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from BGS and OS data by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00394	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from MB102 layers by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00400	MB0116 - Hampshire IoW Zostera Inventory Polygons region MCZ (was M_00160)	Hampshire and Isle of Wight Wildlife Trust (2009). Eelgrass survey Bembridge	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00403	MB0116 - Hampshire IoW Zostera Inventory Polygons region MCZ (was M_00160)	Hampshire and Isle of Wight Wildlife Trust (2009). Eelgrass survey Priory Bay	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00431	ABPmer 2012 data collection - original data - dataset: BS (was M_00025)	Solent WFD benthic survey 2007	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00453	MB0116 - HIWWT_FOCI_Records_120502_MCZ (was M_00126)	HIWWT 2011 rMCZ Intertidal Survey Isle of Wight	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400
D_00454	MB0116 - HIWWT_FOCI_Records_120502_MCZ (was M_00126)	HIWWT Seasearch 2010	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774400



Survey ID code	MCZ source dataset	MCZ original survey	Location
M_00009	ABPmer 2012 data collection - original data - dataset: BS	Seahorse Trust	NE National GI/The Seahorse Trust, 36 Greatwood Terrace, Topsham, Devon EX3 0EB info@theseahorsetrust.org
M_00015	ABPmer 2012 data collection - original data - dataset: BS	Herbert, J H (2010). Padina Area. Distribution of the marine alga Padina pavonica on the Isle of Wight. Medina Valley	NE National GI
M_00019	ABPmer 2012 data collection - original data - dataset: BS	Seastar 2010 South Wight survey still image biotope points. Report to Natural England	NE National GI/Natural England
M_00026	ABPmer 2012 data collection - original data - dataset: BS	1900–2007 Environment Agency, <i>Alkmaria romijni</i>	Ian Humphreys, Senior Environmental Monitoring Officer, EA, Kent and South London Area, Orchard House, London Road, Addington, West Malling, Kent, ME13 5SH Tel: 01732 223286
M_00089	ABPmer 2012 data collection - original data - dataset: REC	South Coast REC	MALSF
M_00101	ABPmer 2012 data collection - new data - dataset: Cefas	Cefas Habitat Data	Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
M_00225	MB0116 - EID_15_16_MCZ	Delle Chiaje (1828). The status, distribution and ecology of Paludinella littorina (Gastropoda: Assimineidae) in the British Isles	<a href="http://www.marbef.org/data/eurobis/search.php">http://www.marbef.org/data/eurobis/search.php</a>
M_00361	NE regional staff MCZ Verification Photos		NE

#### A9.7.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Bembridge rMCZ BS 22

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A5.2 Subtidal sand	Tranche 2 advice	Low	Low	High	High	Confidence updated following Protocol E based on more recent data.
A5.3 Subtidal mud	Tranche 2 advice	High	Low	High	High	Confidence updated following Protocol E based on more recent data.
A5.4 Subtidal mixed sediments	Tranche 2 advice	Low	Low	High	High	Confidence updated following Protocol E based on more recent data.
Maerl beds	Tranche 2 advice	High	High	High	Moderate	Confidence updated following Protocol E based on more recent data.
Mud habitats in deep water	Tranche 2 advice	High	Low	No confidence	No confidence	2 data points removed due to incorrect tagging.
Native oyster ( <i>Ostrea edulis</i> ) beds	Tranche 2 advice	Low	Low	No confidence	No confidence	Manually downgraded to no data as D_00439 does not meet criteria for oyster beds and so untagged for HOCl and tagged for SOCI.
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	Low	Low	Low	Low	No change
Seagrass beds	Tranche 2 advice	High	High	Moderate	Moderate	Confidence updated following Protocol E based on more recent data.
Sea pens and burrowing megafauna	Tranche 2 advice	High	Low	Low	Low	Manually downgraded confidence to low/low due to removal of records tagged for this HOCl as they do not meet the definition of this habitat.
Tentacled lagoon worm ( <i>Alkmaria romijni</i> )	Tranche 2 advice	Moderate	Moderate	Low	Low	Confidence updated following Protocol E based on more recent data.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
Stalked jellyfish ( <i>Haliclystus auricula</i> )	Tranche 2 advice	Moderate	Moderate	Moderate	Moderate	No change
Long-snouted seahorse ( <i>Hippocampus guttulatus</i> )	Tranche 2 advice	Low	Low	No confidence	No confidence	Confidence updated following Protocol E based on more recent data.
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	Moderate	Moderate	Moderate	Moderate	No change
Starlet sea anemone ( <i>Nematostella vectensis</i> )	Tranche 2 advice	Low	Low	No confidence	No confidence	Confidence updated following Protocol E based on more recent data.
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	High	High	Moderate	Moderate	Confidence updated following Protocol E based on more recent data.
Peacock's tail ( <i>Padina pavonica</i> )	Tranche 2 advice	High	High	High	High	No change
Lagoon sand shrimp ( <i>Gammarus insensibilis</i> )	Tranche 2 advice	Low	Low	No confidence	No confidence	Confidence updated following Protocol E based on more recent data.
A5.1 Subtidal coarse sediment	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	N/A	N/A	High	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Sheltered muddy gravels	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Common maerl ( <i>Phymatolithon calcareum</i> )	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Bembridge rMCZ BS 22

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels to military activities has led to a revised GMA.
A5.3 Subtidal mud	Tranche 2 advice	Recover	Recover	No change
A5.4 Subtidal mixed sediments	Tranche 2 advice	Maintain	Maintain	No change
Maerl beds	Tranche 2 advice	Recover	Recover	No change
Mud habitats in deep water	Tranche 2 advice	Recover	N/A	No GMA advised in 2014 for features with no confidence.
Native oyster ( <i>Ostrea edulis</i> ) beds	Tranche 2 advice	Recover	N/A	No GMA advised in 2014 for features with no confidence.
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	Recover	Recover	No change
Seagrass beds	Tranche 2 advice	Recover	Recover	No change
Sea pens and burrowing megafauna	Tranche 2 advice	Recover	Recover	No change
Tentacled lagoon worm ( <i>Alkmaria romijni</i> )	Tranche 2 advice	Maintain	Maintain	No change
Stalked jellyfish ( <i>Haliclystus auricula</i> )	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of recreational sailing and powerboating, low levels of shore-based angling and the potential maintenance of an outfall pipe has led to a revised GMA.
Long-snouted seahorse ( <i>Hippocampus guttulatus</i> )	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for features with no confidence.
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of recreational sailing and powerboating has led to a revised GMA.
Starlet sea anemone ( <i>Nematostella vectensis</i> )	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for features with no confidence.

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Recover	Recover	No change
Peacock's tail ( <i>Padina pavonica</i> )	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of recreational sailing and powerboating has led to a revised GMA.
Lagoon sand shrimp ( <i>Gammarus insensibilis</i> )	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for features with no confidence.
A5.1 Subtidal coarse sediment	T2 new features	N/A	Recover	New feature
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	N/A	Recover	New feature
Sheltered muddy gravels	T2 new features	N/A	Recover	New feature
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	T2 new features	N/A	Recover	New feature
Common maerl ( <i>Phymatolithon calcareum</i> )	T2 new features	N/A	Maintain	New feature

### A9.7.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A5.2 Subtidal sand	Tranche 2 advice	High	Current risk from military activities causing abrasion and disturbance of the substrate on the seabed and change to the seabed type. Level of military activities unknown but could increase with increased capacity for naval fleet at Portsmouth.	High	
A5.3 Subtidal mud	Tranche 2 advice	High	Current risk from St Helens Road commercial shipping anchorage site, which eclipses this feature, and bottom-towed fishing gears. This feature is not currently protected by the bottom-towed gear byelaw; however, it is predominantly otter trawling that occurs in this area.	Moderate	
A5.4 Subtidal mixed sediments	Tranche 2 advice	Low		Moderate	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Maerl beds	Tranche 2 advice	High	Current risk from tourism and recreation activities. There is a wreck located within the point records for this feature, which is a popular diving spot along with the adjacent reef ledges therefore risk from anchoring associated with recreational diving.	High	
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	High	Current risk from tourism and recreation, especially recreational boating. However, no mooring areas overlap with the feature records and there is unlikely to be any anchoring at such a distance from the shore. There is the potential for a low level of anchoring from recreational diving.	High	
Seagrass beds	Tranche 2 advice	High	Current risk from coastal infrastructure. Undetermined pipelines or cables extend into the seagrass beds. Maintenance or removal of these could have an effect on the feature. Maintenance of buoyed channel and navigational markers could cause disturbance/penetration to the seabed and have an effect on the feature. Recreational sailing and powerboating mooring areas and introduction of invasive non-native species all have the potential to affect the feature.	High	
Sea pens and burrowing megafauna	Tranche 2 advice	High	Current risk from benthic trawling. Potential risk from anchoring at the St Helens anchorage; however, records for this feature are low and currently there is no direct overlap between the anchorage and existing data points.	High	
Tentacled lagoon worm ( <i>Alkmaria romijni</i> )	Tranche 2 advice	Low		High	
Stalked jellyfish ( <i>Haliclystus auricula</i> )	Tranche 2 advice	High	Current risk from the use of recreational vessels in the area and risk of spread of invasive non-native species.	High	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	High	Current risk from berths, moorings and anchorages and recreational vessels in the areas of supporting habitat. There is a risk of death by collision with recreational vessels and shipping activity relating to ports and harbours.	High	
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	High	Current risk from benthic trawling activity and recreational boating through abrasion/penetration and disturbance of the seabed.	High	
Peacock's tail ( <i>Padina pavonica</i> )	Tranche 2 advice	High	Current risk from recreational boating activity through anchoring and to a lesser extent from launching and recovery of vessels. Feature is vulnerable to the spread of non-native invasive species through recreational vessel use in the area.	High	
A5.1 Subtidal coarse sediment	T2 new features	High	Current risk from coastal infrastructure, shipping anchorages, military activities, and bottom-towed fishing gears (although the majority of the feature records are located within the bottom-towed gear closed area byelaw). Also, some risk posed by high levels of shipping and spread of non-native invasive species, although subtidal habitats at low risk from known invasive non-native species currently in the area.	Moderate	
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	High	Current risk from coastal infrastructure. Undetermined pipelines or cables extend into the seagrass beds. Maintenance or removal of these could have an effect on the feature. Maintenance of buoyed channel and navigational markers could cause disturbance/penetration to the seabed and have an effect on the feature. Recreational sailing and powerboating mooring areas and introduction of invasive non-native species all have the potential to affect the feature.	High	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Sheltered muddy gravels	T2 new features	High	Current risk from military activities and from recreational sailing and powerboating causing abrasion/penetration to the seabed through overlap with the feature at one point record close to shore. Other point data are in subtidal waters with no known mooring areas; however, recreational anchoring may have an effect, especially as one other record is close to a popular wreck and diving location. There is also a risk posed by high levels of shipping and spread of invasive non-native species.	High	
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	T2 new features	High	Current risk from recreational vessels through moorings and anchoring and low levels of shore-based angling. Recreational vessels pose a risk of spreading invasive non-native species. The species is found next to an outfall pipe. Maintenance of this structure poses a risk of causing abrasion/penetration or disturbance to the seabed or through habitat structure changes due to seabed extraction.	High	
Common maerl ( <i>Phymatolithon calcareum</i> )	T2 new features	Low		High	



## A9.7.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation / ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A5.2 Subtidal sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.3 Subtidal mud	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes IF – Depth 10-75 m – mod. energy	N/A	N/A	N/A		
A5.4 Subtidal mixed sediments	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Maerl beds	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Mud habitats in deep water	Tranche 2 advice	HOCI	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
Native oyster ( <i>Ostrea edulis</i> ) beds	Tranche 2 advice	HOCI	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation / ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	HOCI	No	No	No	Move to Q2	Yes	No	Yes	Further consideration		
Seagrass beds	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Sea pens and burrowing megafauna	Tranche 2 advice	HOCI	No	No	No	Move to Q2	Yes	No	Yes	Further consideration		
Tentacled lagoon worm ( <i>Alkmaria romijni</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	No	No	Yes	Further consideration		
Stalked jellyfish ( <i>Haliclystus auricula</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Long-snouted seahorse ( <i>Hippocampus guttulatus</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	Yes	No	Not assessed	Not assessed		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation / ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Starlet sea anemone ( <i>Nematostella vectensis</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Peacock's tail ( <i>Padina pavonica</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Lagoon sand shrimp ( <i>Gammarus insensibilis</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
A5.1 Subtidal coarse sediment	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation / ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Sheltered muddy gravels	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	T2 new features	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Common maerl ( <i>Phymatolithon calcareum</i> )	T2 new features	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		>10% overlap with designated SAC – Q2 has not been calculated.	Yes. Available data support at least one JNCC Big Gaps identified feature for designation.

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Yes. Available data support at least one JNCC Big Gaps identified feature for designation.	14	8,482.4	The combination of big gap filling ability, number of features with reasonable confidence, and size make this site one of the strong candidates among the inshore sites that could contribute to the network.

## A9.7.7 Additional advice

### A9.7.7.1 Advice on specific features

No additional advice given to Defra on specific features for this site.

### A9.7.7.2 Advice on boundaries

Defra requested advice on potential changes to the boundary to St Helens Road anchorage.

Natural England advised that the majority of the subtidal mud habitat in Bembridge rMCZ is eclipsed by St Helen's Road anchorage. Excluding the anchorage area from the rMCZ by reducing the northern boundary of the site (ie drawing a line east from Node's Point) would result in the exclusion of the majority of this feature from the site. However, subtidal mud is also a proposed feature of Norris to Ryde rMCZ. This is the largest area of subtidal mud in all the Isle of Wight sites and would therefore adequately fill the gap in the network for this feature. Reducing the northern boundary in this way would also exclude a significant proportion of the seagrass beds, unless they were retained by redrawing the boundary to include a corridor along the intertidal, from the north of the rMCZ to Node's Point, before extending east to exclude St Helen's Road anchorage. However, *Zostera* communities are a notified feature of Ryde Sands and Wootton Creek SSSI, while intertidal sand flats are a notified feature of Brading Marshes to St Helen's Ledges SSSI. The seagrass beds are also a supporting habitat of Solent and Southampton SPA and are afforded protection under Southern IFCA's seagrass byelaw.

**Table 9** Implications of boundary changes in Bembridge rMCZ for feature viability

Site	Feature	Approximate loss of known extent from rMCZ with revised boundary	Implications for viability
Bembridge	A5.3 Subtidal mud	Majority of the feature	Probably not viable
Bembridge	Seagrass beds	Significant proportion lost	Probably not viable unless an inshore corridor is included in the boundary.

### A9.7.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00002	CCO Isle of Wight surveys	BS 19, BS 20, BS 22, BS 23	Multibeam	Uninterpreted remote sensing data and not received before data cut-off.
D_00510	NE South Wight Multibeam Survey	BS 20, BS 22	Multibeam	Used in D_00092.
D_00517	Yar Estuary (Yarmouth to Cowes rMCZ) and King's	BS 19, BS 22, BS 23	Phase 1 and Phase 2 Surveys	Not available before data cut-off.

Survey ID	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
	Quay / Brading Marshes to St Helen's Ledges (Norris to Ryde rMCZ and Bembridge rMCZ) - A biological survey of the intertidal sediments of Brading Marshes to St Helen's Ledges, King's Quay Shore and Yar Estuary Sites of Special Scientific Interest (SSSI), Isle of Wight, for the purpose of SSSI condition assessment, University of Brighton, 2009			
D_00518	SSSI IOW lagoon surveys 2010	BS 22, BS 23		Not available before data cut-off.
D_00519	SSSI IOW lagoon surveys 2013	BS 22, BS 23		Not available before data cut-off.

## A9.8 Yarmouth to Cowes rMCZ BS 23

### A9.8.1 Site description

Yarmouth to Cowes rMCZ runs along the north-west coast of the Isle of Wight, stretching from Sconce Point west of Yarmouth to the Gurnard headland west of Cowes and includes Newtown Harbour but not the Western Yar Estuary. The site has been recommended as a MCZ because it contains a large number and variety of features, including some of the best examples of peat and clay exposures on the south coast as well as restricted habitats such as intertidal underboulder communities. Many boulders on the intertidal foreshore host a variety of sponges, anemones, sea squirts and crustaceans together with numerous piddocks (a bivalve mollusc specially adapted for boring into rocks), which are present on the clay exposures. Some very good examples of seagrass beds occur along this coastline and, together with the other sites around the Isle of Wight, this is an important area for native oyster (*Ostrea edulis*). The site also encompasses the Bouldnor Cliff geological feature, which includes a 4 m high underwater cliff containing a rich flora and fauna of fossilised mammals, reptiles, birds and tree remnants.



**Plate 1** Peat and clay exposures, Hamstead Ledge © Angela Gall  
Photograph from Hampshire and Isle of Wight Wildlife Trust rMCZ 23 site report March 2013.



**Plate 2** Intertidal underboulder communities, Thorness Bay © Jolyon Chesworth  
Photograph from Hampshire and Isle of Wight Wildlife Trust rMCZ 23 site report. March 2013.



## A9.8.2 Site feature maps

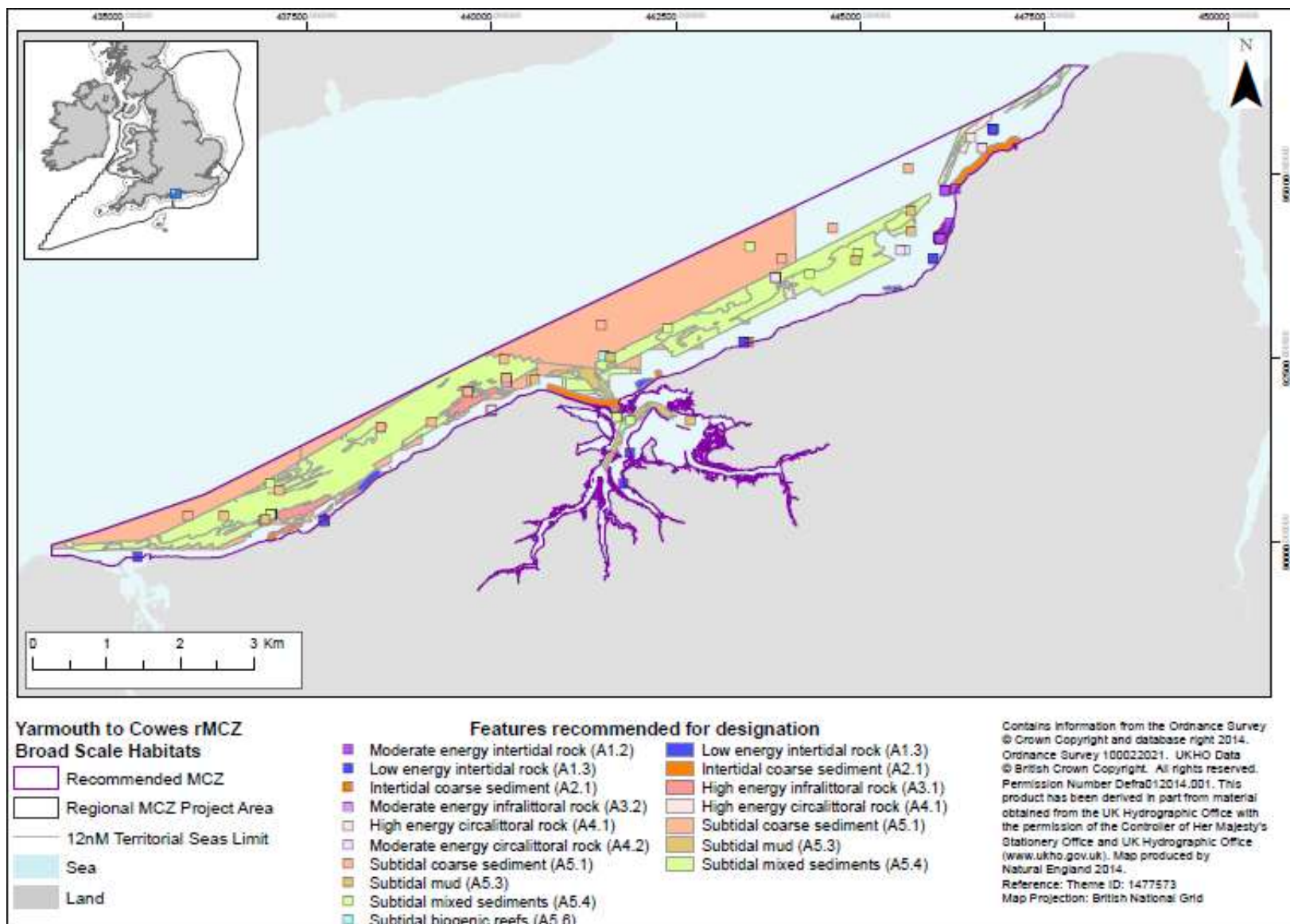


Figure 1 Location of mapped BSHs in Yarmouth to Cowes rMCZ BS 23

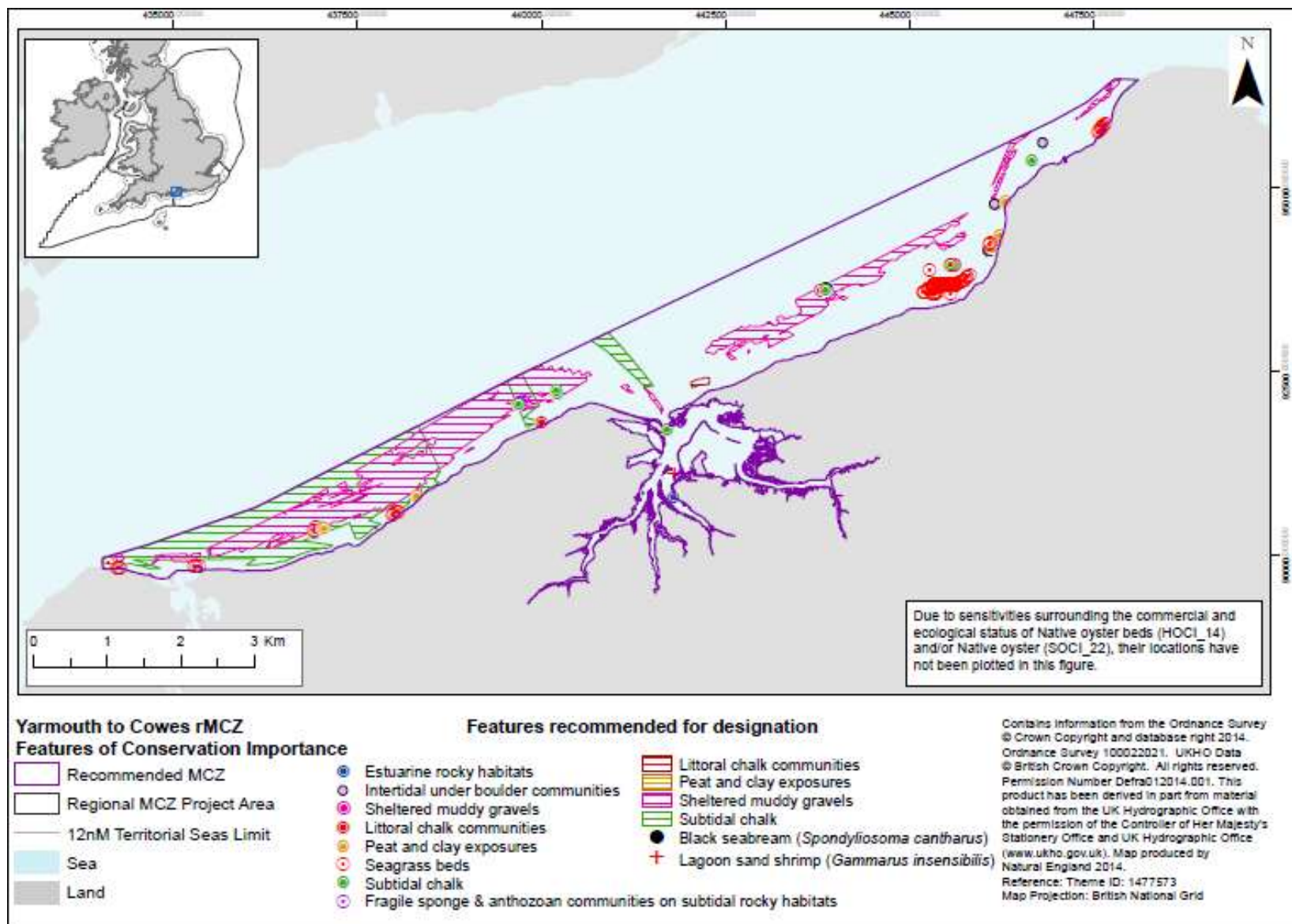


Figure 2 Location of mapped FOCI in Yarmouth to Cowes rMCZ BS 23

### A9.8.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Yarmouth to Cowes rMCZ BS 23

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.3 Low energy Intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A2.1 Intertidal coarse sediment	BSH	Tranche 2 advice	Low	Low	Maintain
A3.2 Moderate energy infralittoral rock	BSH	Tranche 2 advice	Moderate	Moderate	Recover
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	High	Moderate	Recover
G14 Bouldnor Cliff geological feature	Geological	Tranche 2 advice	High	High	Maintain
Intertidal underboulder communities	HOCI	Tranche 2 advice	High	Moderate	Recover
Native oyster ( <i>Ostrea edulis</i> ) beds	HOCI	Tranche 2 advice	No confidence	No confidence	N/A
Peat and clay exposures	HOCI	Tranche 2 advice	High	High	Recover
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	HOCI	Tranche 2 advice	No confidence	No confidence	N/A
Seagrass beds	HOCI	Tranche 2 advice	Moderate	Moderate	Recover
Estuarine rocky habitats	HOCI	Tranche 2 advice	Low	Low	Recover
Native oyster ( <i>Ostrea edulis</i> )	SOCI	Tranche 2 advice	High	High	Recover
Lagoon sand shrimp ( <i>Gammarus insensibilis</i> )	SOCI	Tranche 2 advice	Low	Low	Recover
A1.2 Moderate energy intertidal rock	BSH	T2 new features	High	High	Recover
A3.1 High energy infralittoral rock	BSH	T2 new features	Moderate	Moderate	Recover

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A4.1 High energy circalittoral rock	BSH	T2 new features	Moderate	Moderate	Recover
A4.2 Moderate energy circalittoral rock	BSH	T2 new features	High	Moderate	Recover
A5.3 Subtidal mud	BSH	T2 new features	High	Moderate	Recover
A5.4 Subtidal mixed sediments	BSH	T2 new features	High	High	Recover
A5.6 Subtidal biogenic reefs	BSH	T2 new features	Low	Low	Recover
Littoral chalk communities	HOCI	T2 new features	High	High	Recover
Sheltered muddy gravels	HOCI	T2 new features	Moderate	Moderate	Recover
Subtidal chalk	HOCI	T2 new features	High	Moderate	Recover

**Table 2** Supporting documentation, reference materials and relevant survey details for Yarmouth to Cowes rMCZ BS 23

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00036	2012 EA MCZ Verification Survey - Yarmouth to Cowes (D_00036)		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00055	WFD & NE Subtidal Benthic Infauna Survey 2011 - Solent Maritime SAC		NE National GI <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00091	2011 Solent Maritime SAC intertidal survey - (D_00091) - Biotope Polygons	2011 Solent Maritime SAC intertidal survey - (D_00091)	NE National GI <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00094	HIWWT Outlier Positives 2006–2013 points	Hampshire and Isle of Wight Wildlife Trust (2010). Eelgrass survey Bouldner, Isle of Wight.	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774407

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00094	HIWWT Outlier Positives 2006–2013 points	Hampshire and Isle of Wight Wildlife Trust (2010). Eelgrass survey Thorness Bay and Gurnard area, Isle of Wight.	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774407
D_00094	HIWWT Outlier Positives 2006–2013 points	Hampshire and Isle of Wight Wildlife Trust (2010). Eelgrass survey Thorness Bay, Isle of Wight.	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774407
D_00094	HIWWT Outlier Positives 2006–2013 points	Hampshire and Isle of Wight Wildlife Trust. 2010. Eelgrass survey Yarmouth, Isle of Wight.	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774407
D_00094	HIWWT Outlier Positives 2006–2013 points	IWNAHS (2006) Sightings of Zostera spp reported by members	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774407
D_00094	HIWWT Outlier Positives 2006–2013 points	Roger Herbert (2007) Marine Week	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP. 01489 774407
D_00094	HIWWT Outlier Positives 2006–2013 points	Salacia towed video survey 2011	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774407
D_00094	HIWWT Outlier Positives 2006–2013 points	Salacia towed video survey 2012	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774407
D_00099	Hampshire and the Isle of Wight Wildlife Trust/Seasearch MCZ Verification Photos		Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774407
D_00106	Marine Recorder new data 2014_02_14	2013 Seasearch Hampshire & Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00125	Marine Recorder snapshot 2013_06_24	2012 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00141	Marine Recorder snapshot 2013_06_24	2011 Intertidal survey Hampshire & Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00148	Marine Recorder snapshot 2013_06_24	2010 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00189	Marine Recorder snapshot 2013_06_24	2006 PMNHS Isle of Wight Field Trip	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00198	Marine Recorder snapshot 2013_06_24	2005 English Nature Solent Intertidal Survey August to September 2005	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00216	Marine Recorder snapshot 2013_06_24	2002 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00299	Marine Recorder snapshot 2013_06_24	1990 NRA Newtown Harbour sublittoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00311	Marine Recorder snapshot 2013_06_24	1988 MNCR minor south-coast inlets in England survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00314	Marine Recorder snapshot 2013_06_24	1987 OPRU HRE Newtown and Bembridge Harbours survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00318	Marine Recorder snapshot 2013_06_24	1986 OPRU HRE Solent survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00349	MESH Combined EUNIS 20140203	Solent and South Wight: mapping of intertidal and subtidal marine cSACs – littoral habitats, the Solent	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00375	MESH Combined EUNIS 20140203	ENSIS (Marine SSSI data)	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00378	MESH Combined EUNIS 20140203	Intertidal mudflat layer for England	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>



Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00379	MESH Combined EUNIS 20140203	Survey of the Subtidal Sediments of the Solent Maritime SAC	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00393	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from BGS and OS data by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00394	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from MB102 layers by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00431	ABPmer 2012 data collection - original data - dataset: BS (was M_00025)	Solent WFD benthic survey 2007	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00442	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00058)	English Heritage peat records	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00450	MB0116 - EID14_EUROBIS_MCZ (was M_00122)	Fautin, D G (2010). Hexacorallians of the world. <a href="http://geoportal.kgs.ku.edu/hexacoral/ane/mone2/index.cfm">http://geoportal.kgs.ku.edu/hexacoral/ane/mone2/index.cfm</a>	<a href="http://www.eurobis.org/eurobissearch.php">http://www.eurobis.org/eurobissearch.php</a>
D_00453	MB0116 - HIWWT_FOCI_Records_120502_MCZ (was M_00126)	HIWWT 2011 rMCZ Intertidal Survey Isle of Wight	Hampshire and Isle of Wight Wildlife Trust, Beechcroft House, Vicarage Lane, Curdridge, Hampshire, SO32 2DP 01489 774419
M_00018	ABPmer 2012 data collection - original data - dataset: BS	Emu Limited (2007). Survey of the Subtidal Sediments of the Solent Maritime SAC. Unpublished report to Natural England, Lyndhurst	NE National GINE

Survey ID code	MCZ source dataset	MCZ original survey	Location
M_00024	ABPmer 2012 data collection - original data - dataset: BS	Species data for <i>Gammarus insensibilis</i> – Balanced Seas regional MCZ project	NE <a href="http://publications.naturalengland.org.uk/publication/2080291">http://publications.naturalengland.org.uk/publication/2080291</a>
M_00198	ABPmer 2012 data collection - new data - dataset: National_WFD_Benthic_EA_Data	National_WFD_Benthic_EA_Data	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>

#### A9.8.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Yarmouth to Cowes rMCZ BS 23

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.3 Low energy Intertidal rock	Tranche 2 advice	High	High	High	High	No change
A2.1 Intertidal coarse sediment	Tranche 2 advice	Moderate	Moderate	Low	Low	Manually downgraded to Low/Low based on expert judgement as based on parent feature alone.
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Moderate	Moderate	Moderate	Moderate	No change
A5.1 Subtidal coarse sediment	Tranche 2 advice	High	High	High	Moderate	Confidence updated following Protocol E based on more recent data.
Bouldnor Cliff geological feature	Tranche 2 advice	High	High	High	High	No change
Intertidal underboulder communities	Tranche 2 advice	High	High	High	Moderate	Confidence updated following Protocol E based on more recent data.
Native oyster ( <i>Ostrea edulis</i> ) beds	Tranche 2 advice	High	High	No confidence	No confidence	Manually downgraded as D_00439 does not meet criteria for oyster beds and so untagged for HOCl and tagged for SOCl.
Peat and clay exposures	Tranche 2 advice	High	High	High	High	No change



Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	Moderate	Moderate	No confidence	No confidence	Confidence updated following Protocol E based on more recent data.
Seagrass beds	Tranche 2 advice	High	High	Moderate	Moderate	Confidence updated following Protocol E based on more recent data.
Estuarine rocky habitats	Tranche 2 advice	Low	Low	Low	Low	No change
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	High	High	High	High	No change
Lagoon sand shrimp ( <i>Gammarus insensibilis</i> )	Tranche 2 advice	Low	Low	Low	Low	No change
A1.2 Moderate energy intertidal rock	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs. Very small example of BSH – consider viability.
A3.1 High energy infralittoral rock	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A4.1 High energy circalittoral rock	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	N/A	High	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A5.3 Subtidal mud	T2 new features	N/A	N/A	High	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A5.4 Subtidal mixed sediments	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A5.6 Subtidal biogenic reefs	T2 new features	N/A	N/A	Low	Low	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
Littoral chalk communities	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs. Very small example of HOCl – consider viability.
Sheltered muddy gravels	T2 new features	N/A	N/A	Moderate	Moderate	Manually downgraded following application of protocol E clarification from 1 ground truth point to 2.
Subtidal chalk	T2 new features	N/A	N/A	High	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Yarmouth to Cowes rMCZ BS 23

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A1.3 Low energy Intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A2.1 Intertidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Recover	Recover	No change
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of fisheries, maintenance of port and harbour structures, maintenance of coastal infrastructure (outfalls) and recreational sailing and powerboating has led to a revised GMA.
Bouldnor Cliff geological feature	Tranche 2 advice	Maintain	Maintain	No change
Intertidal underboulder communities	Tranche 2 advice	Recover	Recover	No change
Native oyster ( <i>Ostrea edulis</i> ) beds	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for features with no confidence.
Peat and clay exposures	Tranche 2 advice	Recover	Recover	No change

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	Recover	N/A	No GMA advised in 2014 for features with no confidence.
Seagrass beds	Tranche 2 advice	Recover	Recover	No change
Estuarine rocky habitats	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of recreational sailing and powerboating has led to a revised GMA.
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of recreational sailing and powerboating moorings has led to a revised GMA.
Lagoon sand shrimp ( <i>Gammarus insensibilis</i> )	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of recreational sailing and powerboating has led to a revised GMA.
A1.2 Moderate energy intertidal rock	T2 new features	N/A	Recover	New feature
A3.1 High energy infralittoral rock	T2 new features	N/A	Recover	New feature
A4.1 High energy circalittoral rock	T2 new features	N/A	Recover	New feature
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	Recover	New feature
A5.3 Subtidal mud	T2 new features	N/A	Recover	New feature
A5.4 Subtidal mixed sediments	T2 new features	N/A	Recover	New feature
A5.6 Subtidal biogenic reefs	T2 new features	N/A	Recover	New feature
Littoral chalk communities	T2 new features	N/A	Recover	New feature
Sheltered muddy gravels	T2 new features	N/A	Recover	New feature
Subtidal chalk	T2 new features	N/A	Recover	New feature

## A9.8.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.3 Low energy Intertidal rock	Tranche 2 advice	Low		Moderate	
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low		Moderate	
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	High	Current risk from recreational sailing and powerboating and fishing activities. Fisheries exposure is low in reality as vessels are unlikely to dredge/trawl in this habitat but recreational sailing and powerboating activities do pose a high current risk to this feature.	Moderate	
A5.1 Subtidal coarse sediment	Tranche 2 advice	High	Current risk from coastal infrastructure, ports and harbours, recreational sailing and powerboating and bottom-towed fishing gears. There is also some risk posed by high levels of shipping and recreational vessels and spread of invasive non-native species.	Moderate	
G14 Bouldnor Cliff geological feature	Tranche 2 advice	Low		Unknown	Future risk narrative not provided for geological features as sensitivity to pressures determined by expert judgement only and not currently included in sensitivity matrix.
Intertidal underboulder communities	Tranche 2 advice	High	Current risk from recreational sailing and powerboating causing abrasion, penetration and disturbance of the intertidal habitat.	Moderate	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Peat and clay exposures	Tranche 2 advice	High	Recover GMA is triggered due to moderate/high VA for fishing (dredging/benthic trawling). The peat and clay exposures are both subtidal and intertidal and not covered by the Southern IFCA byelaw.	High	
Seagrass beds	Tranche 2 advice	High	Current risk from to maintenance and operation of outfalls and slipways that extend into the seagrass beds, including undetermined pipelines or cables that extend into the seagrass beds. Maintenance of navigational channels and markers at Yarmouth and Newtown Harbour and the use of anchorages could cause disturbance/ penetration to the seabed and have an effect on the feature. Bottom-towed fishing gears also poses a risk to this feature as not all of the seagrass records are covered by the existing Southern IFCA red byelaw area. Recreational sailing and powerboating have the potential to affect the feature.	High	
Estuarine rocky habitats	Tranche 2 advice	High	Current risk from mooring of powerboats and sailing boats and the introduction and spread of non-native species from sailing, powerboating and fisheries.	Moderate	
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	High	Current risk from mooring of powerboats and sailing boats and the introduction and spread of non-native species from sailing, powerboating and fisheries.	High	
Lagoon sand shrimp ( <i>Gammarus insensibilis</i> )	Tranche 2 advice	High	Current risk from mooring of powerboats and sailing and the introduction of non-native species from sailing, powerboating and fisheries.	High	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.2 Moderate energy intertidal rock	T2 new features	High	Current risk from risk of introduction or spread of non-indigenous species from recreational sailing and powerboating.	Moderate	
A3.1 High energy infralittoral rock	T2 new features	High	High current risk from recreational sailing and powerboating and fishing activities. Fisheries exposure is low in reality as vessels are unlikely to dredge/trawl in this habitat but recreational sailing and powerboating activities do pose a high current risk to this feature.	Moderate	
A4.1 High energy circalittoral rock	T2 new features	High	High current risk from recreational sailing and powerboating and fishing activities. Fisheries exposure is low in reality as vessels are unlikely to dredge/trawl in this habitat but recreational sailing and powerboating activities do pose a high current risk to this feature.	Moderate	
A4.2 Moderate energy circalittoral rock	T2 new features	High	High current risk from recreational sailing and powerboating and fishing activities. Fisheries exposure is low in reality as vessels are unlikely to dredge/trawl in this habitat but recreational sailing and powerboating activities do pose a high current risk to this feature.	High	
A5.3 Subtidal mud	T2 new features	High	Current risk from coastal infrastructure (maintenance of outfalls), ports and harbours (maintenance of structures), recreational sailing and powerboating (mooring and launching, recovery and participation) and bottom-towed fishing gears.	Moderate	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A5.4 Subtidal mixed sediments	T2 new features	High	Current risk from coastal infrastructure (outfalls), fishing, shipping (anchorages), ports and harbours (maintenance dredging, anchorages and maintenance of structures) and recreational sailing and powerboating (mooring and launching, recovery and participation).	Moderate	
Littoral chalk communities	T2 new features	High	Current risk from recreational sailing and powerboating (mooring and launching, recovery and participation) and fishing activities and the introduction or spread of non-indigenous species.	Moderate	
Sheltered muddy gravels	T2 new features	High	Current risk from coastal infrastructure (outfalls) and ports and harbour structures, maintenance of navigable channels and markers and the use of anchorages, bottom-towed fishing gears and recreational sailing and powerboating. There is also some risk posed by shipping and spread of invasive non-native species, although subtidal habitats are at low risk from known invasives currently in the area.	High	
Subtidal chalk	T2 new features	High	Current risk from moorings for powerboats and sailing and the introduction of non-native species from sailing, powerboating and fisheries. The use of recreational vessels and fisheries in the area pose a risk of the spread of invasive non-native species.	High	

## A9.8.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A1.3 Low energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.1 Intertidal coarse sediment	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation		
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
G14 Bouldnor Cliff geological feature	Tranche 2 advice	Geological	Geological features are not subject to data sufficiency analysis									
Intertidal underboulder communities	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Native oyster ( <i>Ostrea edulis</i> ) beds	Tranche 2 advice	HOCI	No	No	No	Move to Q2	Yes	No	Not assessed	Not assessed		



Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Peat and clay exposures	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	HOCI	No	No	No	Move to Q2	Yes	No	Not assessed	Not assessed		
Seagrass beds	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Estuarine rocky habitats	Tranche 2 advice	HOCI	No	No	No	Move to Q2	Yes	No	Yes	Further consideration		
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Lagoon sand shrimp ( <i>Gammarus insensibilis</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	No	No	Yes	Further consideration		
A1.2 Moderate energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A3.1 High energy infralittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A4.1 High energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.2 Moderate energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.3 Subtidal mud	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.4 Subtidal mixed sediments	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.6 Subtidal biogenic reefs	T2 new features	BSH	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
Littoral chalk communities	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Sheltered muddy gravels	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Subtidal chalk	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		>10% overlap with designated SAC and partially estuarine site – Q2 has not been calculated.	No

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
No	16	1,689.1	

## A9.8.7 Additional advice

### A9.8.7.1 Advice on specific features

No additional advice given to Defra on specific features for this site.

### A9.8.7.2 Advice on boundaries

Defra requested advice on potential changes to the site boundary around the Yarmouth and Saltmead anchorages and Newtown Harbour.

Natural England advised the following:

- **Yarmouth anchorage**: Most of the anchorage outside Yarmouth Harbour is sheltered muddy gravels (HOCl 19), which is a widespread feature throughout the remainder of the site. Therefore, excluding the Yarmouth anchorage area from the rMCZ would not result in the loss of this feature from the site. There are also small areas of subtidal chalk (HOCl 20) and A5.4 subtidal mixed sediment in the Yarmouth anchorage, both of which are widespread across the remainder of the site.
- **Newtown Harbour**: Removal of the harbour from the rMCZ would remove the following features completely from the site; however, these features both have low confidence for presence and extent:
  - HOCl 5 Estuarine rocky habitats
  - SOCl 9 *Gammarus insensibilis* – protected in the lagoon by SAC/SSSI designation

Other features present in Newtown Harbour are listed below, but these are either widespread throughout the remainder of the site and/or protected by the SAC/SSSI:

- A5.3 Subtidal mud
- A5.4 Subtidal mixed sediments
- SOCl 22 Native oyster (*Ostrea edulis*)
- **Saltmead anchorage**: Natural England does not have GI mapping for this anchorage (it would be useful to obtain this from ABP) but removal of this area from the site would likely affect the following features that are present in this area but are also widespread throughout the remainder of the site:
  - A5.4 Subtidal mixed sediments
  - A5.1 Subtidal coarse sediment
  - SOCl 22 Native oyster (*Ostrea edulis*)
  - A4.2 Moderate energy circalittoral rock

**Table 9** Implications of boundary changes in Yarmouth to Cowes rMCZ for feature viability

Site	Feature	Approximate loss of known extent from rMCZ with revised boundary	Implications for viability
Yarmouth to Cowes (Yarmouth anchorage)	Sheltered muddy gravels	Less than a quarter	Still viable
Yarmouth to Cowes (Yarmouth anchorage)	Subtidal chalk	Less than a quarter	Still viable
Yarmouth to Cowes (Yarmouth anchorage)	A5.4 Subtidal mixed sediment	Less than a quarter	Still viable

Yarmouth to Cowes (Newtown Harbour)	Estuarine rocky habitats	Completely removed	Not viable
Yarmouth to Cowes (Newtown Harbour)	<i>Gammarus insensibilis</i>	Completely removed	Not viable
Yarmouth to Cowes (Newtown Harbour)	A5.3 Subtidal mud	Less than a quarter	Still viable
Yarmouth to Cowes (Newtown Harbour)	A5.4 Subtidal mixed sediment	Less than a quarter	Still viable
Yarmouth to Cowes (Newtown Harbour)	Native oyster ( <i>Ostrea edulis</i> )	Less than a quarter	Still viable
Yarmouth to Cowes (Saltmead anchorage)	A5.1 Subtidal coarse sediment	Small area	Still viable
Yarmouth to Cowes (Saltmead anchorage)	A5.4 Subtidal mixed sediment	Small area	Still viable
Yarmouth to Cowes (Saltmead anchorage)	Native oyster ( <i>Ostrea edulis</i> )	Small area	Still viable

### A9.8.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00002	CCO Isle of Wight surveys	BS 19, BS 20, BS 22, BS 23	Multibeam	Uninterpreted remote sensing data and not received before data cut-off.
D_00015	Cefas MCZ Verification Survey – Yarmouth to Cowes	BS 23	Multibeam	Not available before data cut-off.
D_00516	Thorness Bay (Yarmouth to Cowes rMCZ) - A biological survey of the intertidal sediments of Lee-on-the-Solent to Itchen Estuary, Medina Estuary, North Solent, Thanet Coast and Thorness Bay Sites of Special Scientific Interest (SSSI) for the purpose of SSSI condition assessment, University of Brighton, 2009	BS 23	Phase 1 and Phase 2 surveys	Not available before data cut-off.

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00517	Yar Estuary (Yarmouth to Cowes rMCZ) and King's Quay / Brading Marshes to St Helen's Ledges (Norris to Ryde rMCZ and Bembridge rMCZ) - A biological survey of the intertidal sediments of Brading Marshes to St Helen's Ledges, King's Quay Shore and Yar Estuary Sites of Special Scientific Interest (SSSI), Isle of Wight, for the purpose of SSSI condition assessment, University of Brighton, 2009	BS 19, BS 22, BS 23	Phase 1 and Phase 2 surveys	Not available before data cut-off.
D_00518	SSSI IOW lagoon surveys 2010	BS 22, BS 23	Lagoon survey	Not available before data cut-off.
D_00519	SSSI IOW lagoon surveys 2013	BS 22, BS 23	Lagoon survey	Not available before data cut-off.
D_00520	Hampshire and Isle of Wight Wildlife Trust Inventory of Eelgrass Beds in Hampshire and the Isle of Wight 2014 – polygonal data	BS 19, BS 20, BS 22, BS 23	Intertidal walkover survey and subtidal video survey	Not available before data cut-off.

## A9.9 Utopia rMCZ BS 28

### A9.9.1 Site description

Utopia is an inshore site measuring 2.71 km<sup>2</sup> and is located 20 km east of the Isle of Wight coast. This patch of sea has been recommended as a MCZ because of the fragile coral and sponge communities found here as well as the existence of several BSHs. Lying beneath the sea the Utopia reef consists of an area of bedrock and large boulders that host rich communities of sponges, anthozoans, hydroids and bryozoans. The reef is surrounded by sediment consisting mainly of gravel and sand. The communities of animals that live in Utopia are dominated by large, slow growing species such as branching sponges and Ross coral, a type of bryozoan or sea-moss that has hard, crinkly 'petals' that provide hiding places for small fish, crabs and prawns. The area was named after the tope shark as it partly makes up a pupping ground for this species.



**Plate 1** Utopia Reef



**Plate 2** Utopia Reef

Both plates 1 and 2 are from surveys undertaken by the aggregates industry (Tarmac Marine Dredging and Kendal Brothers) and are in the paper, 'Proposal to Balanced Seas RSG for an Extension to rMCZ 28 – Utopia', Hampshire and Isle of Wight Wildlife Trust 18 April 2011.

## A9.9.2 Site feature map

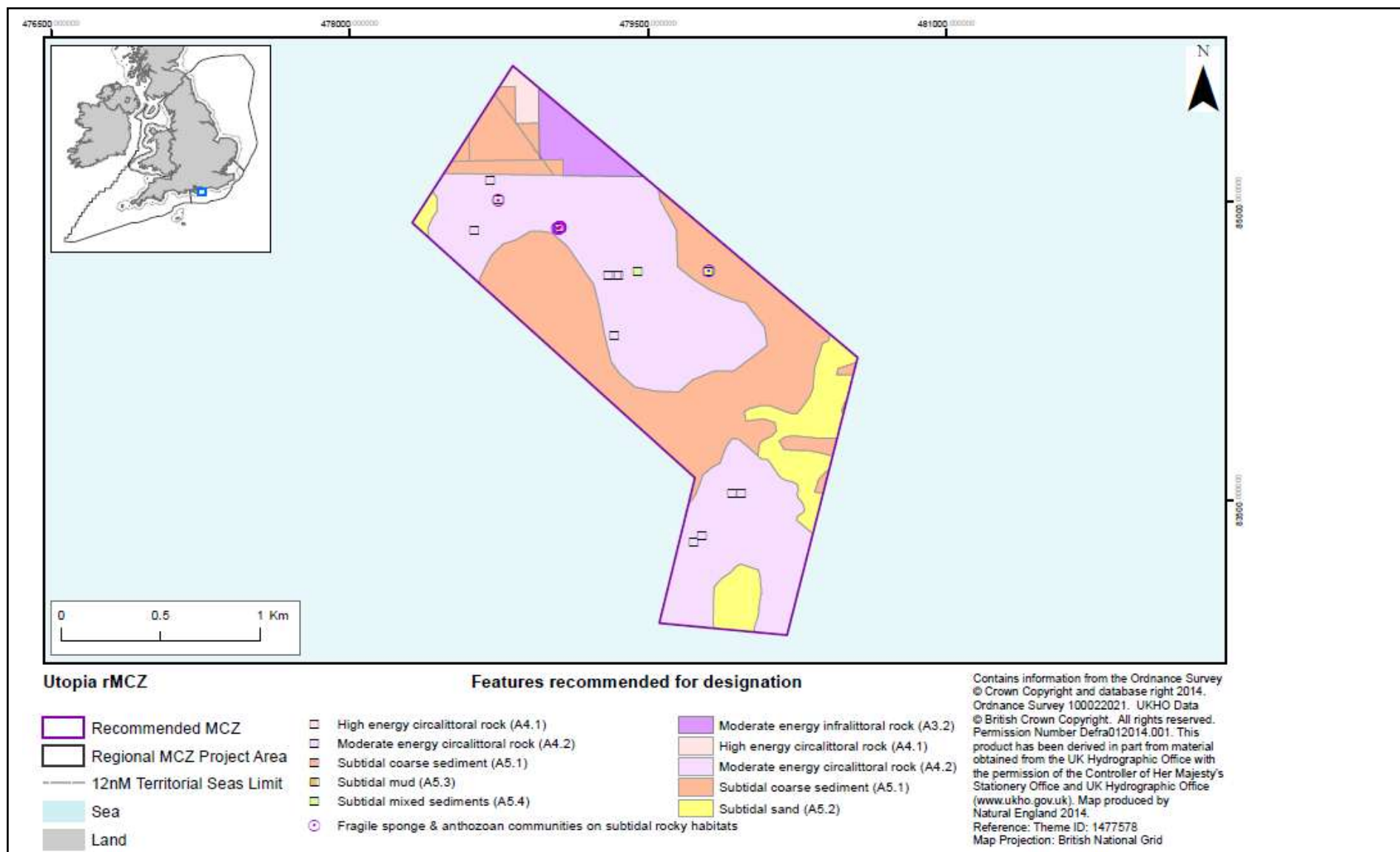


Figure 1 Location of mapped BSHs and HOCl in Utopia rMCZ BS 28



### A9.9.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Utopia rMCZ BS 28

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
Fragile sponge and anthozoan communities on subtidal rocky habitats	HOCI	Tranche 2 advice	Moderate	Moderate	Recover
A4.1 High energy circalittoral rock	BSH	T2 new features	Moderate	Moderate	Recover
A4.2 Moderate energy circalittoral rock	BSH	T2 new features	High	High	Recover
A5.1 Subtidal coarse sediment	BSH	T2 new features	Moderate	Moderate	Recover
A5.2 Subtidal sand	BSH	T2 new features	Moderate	Moderate	Recover
A5.4 Subtidal mixed sediments	BSH	T2 new features	Moderate	Moderate	Recover

**Table 2** Supporting documentation, reference materials and relevant survey details for Utopia rMCZ BS 28

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00035	2012 EA MCZ Verification Survey - Utopia		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00106	Marine Recorder new data 2014_02_14	2013 Seasearch Hampshire & Isle of Wight	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00125	Marine Recorder snapshot 2013_06_24	2012 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00138	Marine Recorder snapshot 2013_06_24	2011 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00194	Marine Recorder snapshot 2013_06_24	2005 Seasearch Hampshire and Isle of Wight	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00367	MESH Combined EUNIS 20140203	Facies map Isle of Wight Nab Tower	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102	BGS	<a href="https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00394	ABPmer 2012 data collection - original data - dataset: MB102	Derived from MB102 layers by MarLIN	<a href="https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00398	ABPmer 2012 data collection - original data - dataset: MB102	GB200002	<a href="https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme</a>

#### A9.9.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Utopia rMCZ BS 28

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
Fragile sponge and anthozoan communities on subtidal rocky habitats	Tranche 2 advice	High	High	Moderate	Moderate	Confidence updated following Protocol E based on more recent data.
A4.1 High energy circalittoral rock	T2 new features	N/A	N/A	Moderate	Moderate	
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	N/A	High	High	
A5.1 Subtidal coarse sediment	T2 new features	N/A	N/A	Moderate	Moderate	

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A5.2 Subtidal sand	T2 new features	N/A	N/A	Moderate	Moderate	
A5.4 Subtidal mixed sediments	T2 new features	N/A	N/A	Moderate	Moderate	

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Utopia rMCZ BS 28

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
Fragile sponge and anthozoan communities on subtidal rocky habitats	Tranche 2 advice	Recover	Recover	Automated VA in 2014 has resulted in recover GMA and no local knowledge to advise otherwise.
A4.1 High energy circalittoral rock	T2 new features	N/A	Recover	N/A
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	Recover	N/A
A5.1 Subtidal coarse sediment	T2 new features	N/A	Recover	N/A
A5.2 Subtidal sand	T2 new features	N/A	Recover	N/A
A5.4 Subtidal mixed sediments	T2 new features	N/A	Recover	N/A

#### A9.9.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Fragile sponge and anthozoan communities on subtidal rocky habitats	Tranche 2 advice	High	Current risk from pressures associated with fishing dredges. Benthic trawling and static gear (potting) activities were not included within the vulnerability assessment but local adviser knowledge suggests that these activities may be occurring within	High	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
			the site. Natural England advisers have relied on the automated VA in absence of further information to inform exposure levels.		
A4.1 High energy circalittoral rock	T2 new features	High	Current risk from pressures from benthic trawling and fishing dredges. Natural England advisers have relied on the automated VA in absence of further information to inform exposure levels.	Moderate	
A4.2 Moderate energy circalittoral rock	T2 new features	High	Current risk from pressures associated with benthic trawling and fishing dredges. Natural England advisers have relied on the automated VA in absence of further information to inform exposure levels.	High	
A5.1 Subtidal coarse sediment	T2 new features	High	Current risk from pressures associated with aggregate extraction, recreational boating and ports and harbour operation. Natural England advisers have relied on the automated VA in absence of further information to inform exposure levels.	Moderate	
A5.2 Subtidal sand	T2 new features	High	Current risk from pressures associated with benthic trawling, fishing dredges, aggregate extraction, recreational boating and ports and harbour operation. Natural England advisers have relied on the automated VA in absence of further information to inform exposure levels.	High	
A5.4 Subtidal mixed sediments	T2 new features	High	Current risk from pressures associated with benthic trawling, fishing dredges, aggregate extraction, ports and harbour operation and recreational boating. Natural England advisers have relied on the automated VA in absence of further information to inform exposure levels.	Moderate	

## A9.9.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Fragile sponge and anthozoan communities on subtidal rocky habitats	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.1 High energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	Cefas verification reporting due in draft 30/06/2014. Reporting will provide polygonal data of high mesh to support subtidal BSH.
A4.2 Moderate energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	Cefas verification reporting due in draft 30/06/2014. Reporting will provide polygonal data of high mesh to support subtidal BSH.

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A5.1 Subtidal coarse sediment	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	Cefas verification reporting due in draft 30/06/2014. Reporting will provide polygonal data of high mesh to support subtidal BSH.
A5.2 Subtidal sand	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	Cefas verification reporting due in draft 30/06/2014. Reporting will provide polygonal data of high mesh to support subtidal BSH.
A5.4 Subtidal mixed sediments	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	Cefas verification reporting due in draft 30/06/2014. Reporting will provide polygonal data of high mesh to support subtidal BSH,

**Table 7** Site data sufficiency assessment

<b>Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?</b>	<b>Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)</b>	<b>Comment on Q2 assessment</b>	<b>Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>
No	96%		No, did not fill gap originally.

**Table 8** Site level commentary

<b>Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>	<b>Number of features with at least moderate confidence in both presence and extent (T2 new sites only)</b>	<b>Site area (ha)</b>	<b>Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)</b>
No, did not fill big gap originally.		271.4	

## **A9.9.7 Additional advice**

### **A9.9.7.1 Advice on specific features**

No additional advice given to Defra on specific features for this site.

### **A9.9.7.2 Advice on boundaries**

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### **A9.9.7.3 Evidence not used**

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

<b>Survey ID code</b>	<b>Survey (identifying name or code)</b>	<b>T2 rMCZs (rMCZ to which the survey relates)</b>	<b>Data collection methods</b>	<b>Reason for non-inclusion</b>
D_00509	Eastern Approaches to the Nab Channel	BS 28, BSRA 13	Multibeam	Uninterpreted remote sensing data



## A9.10 Studland Bay rMCZ FS 15

### A9.10.1 Site description

Studland Bay is located a few kilometres to the south of Poole Harbour. The shallow, sandy bay curves approximately 5 km around from north to south and faces in a westerly direction towards the larger Poole Bay south of Bournemouth. This site has been recommended as a MCZ because of the extensive seagrass bed found in the intertidal and shallow subtidal waters. It is one of two significantly large seagrass beds in Dorset and the only large bed in the east of Dorset, supporting a rich combination of marine biota not found in other habitats. Both intertidal seagrass beds (predominantly *Zostera noltii*) and subtidal seagrass beds (predominantly *Zostera marina*) are key habitats with high rates of primary production and are a main source of food for overwintering wildfowl. They act as a nursery ground for juvenile fish and provide shelter for a wide range of species including the long- and short-snouted seahorses (*Hippocampus guttulatus* and *Hippocampus hippocampus*), undulate rays (*Raja undulata*) and cuttlefish (*Sepia officinalis*) – the cuttlefish lay their eggs on the eelgrass.



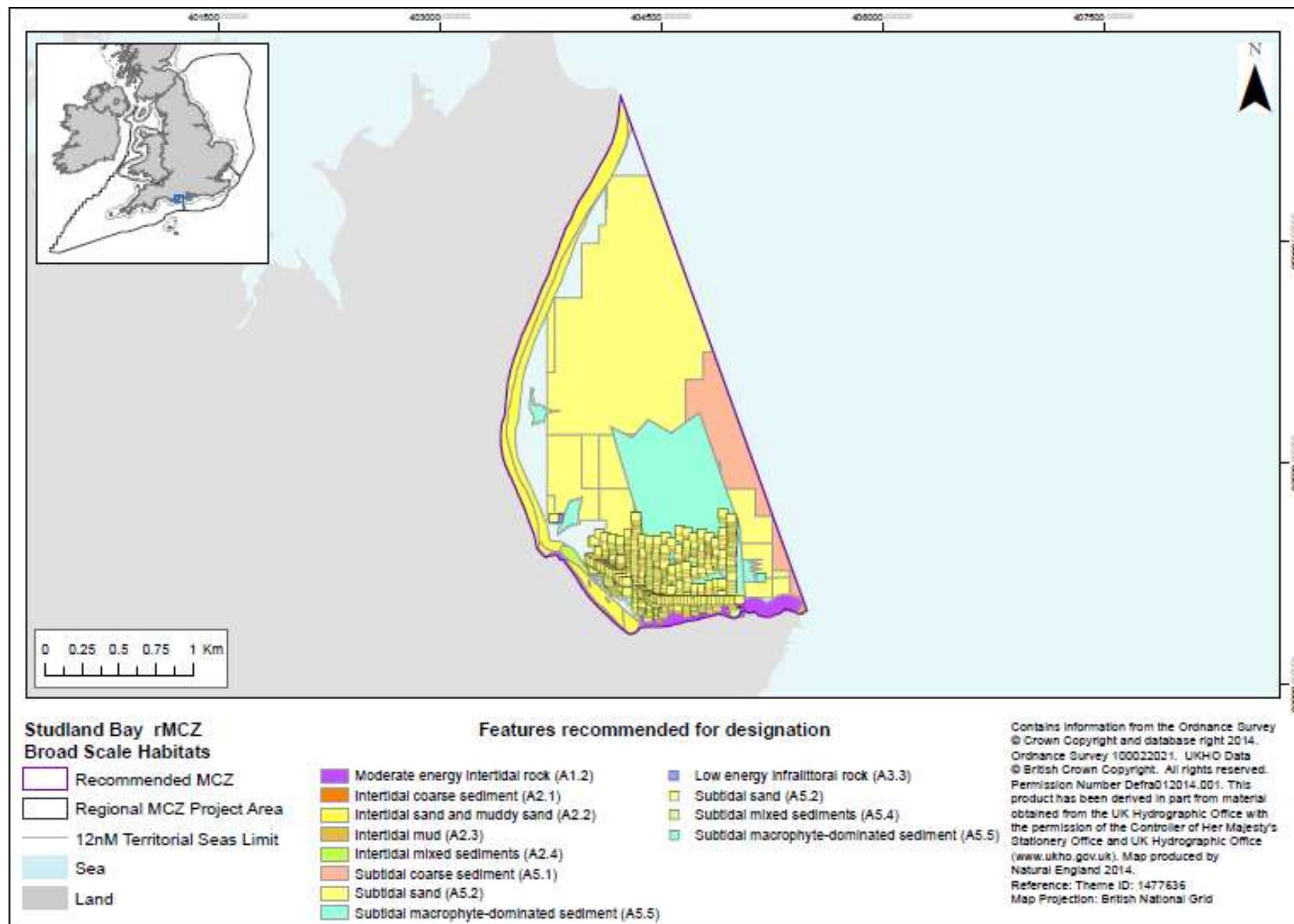
**Plate 1** Long-snouted seahorse (*Hippocampus guttulatus*) © Steve Trehwella/Lin Baldock



**Plate 2** Subtidal sand habitat © Steve Trehwella/Lin Baldock

Please note the two photographs above are example photographs of the above habitat and feature only and do not necessarily represent the habitats and features found at the site.

## A9.10.2 Site feature maps



**Figure 1** Location of mapped BSHs in Studland Bay rMCZ FS 15

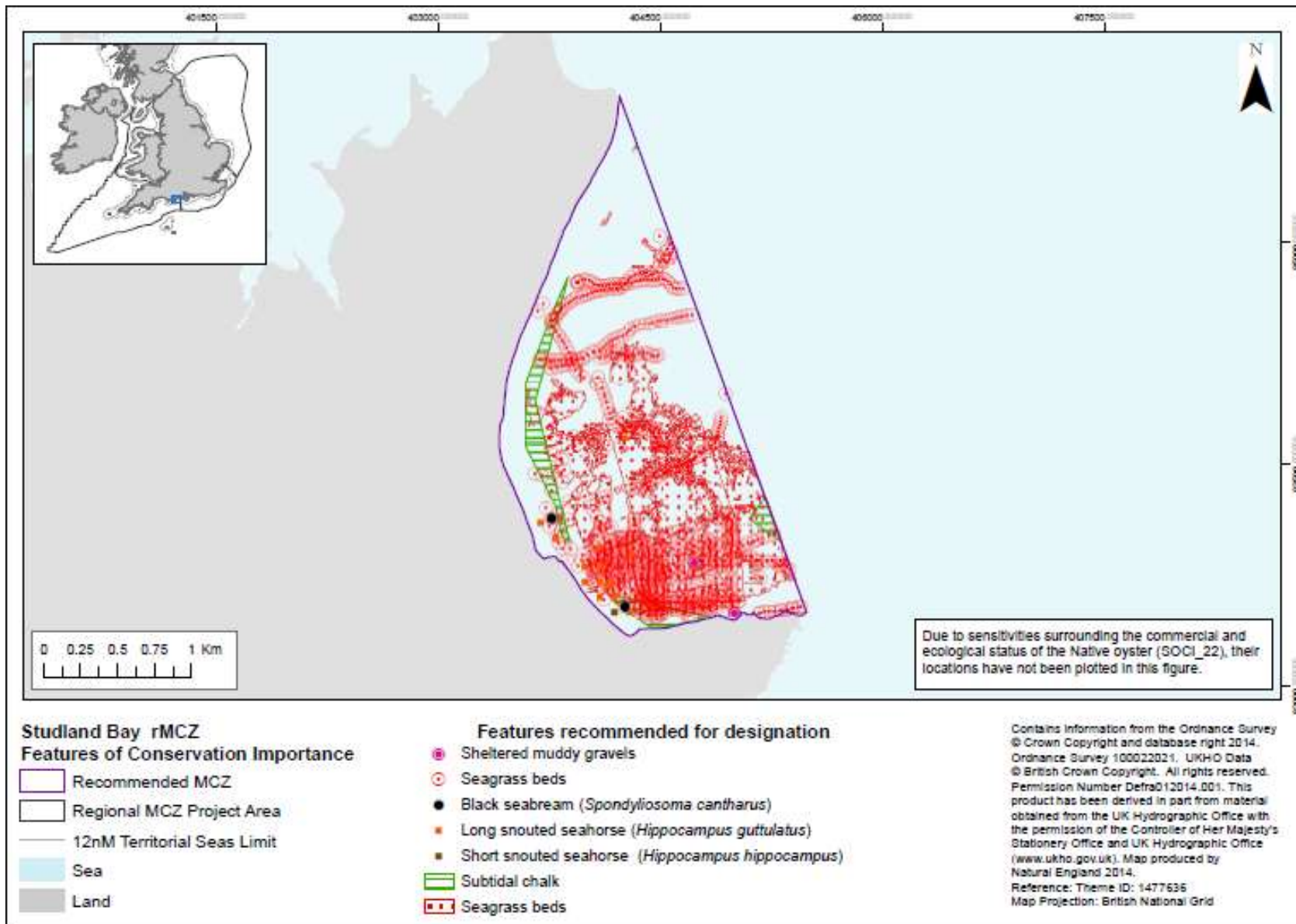


Figure 2 Location of mapped FOCI in Studland Bay rMCZ FS 15

### A9.10.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Studland Bay rMCZ FS 15

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A2.2 Intertidal sand and muddy sand	BSH	Tranche 2 advice	High	High	Maintain
A2.3 Intertidal mud	BSH	Tranche 2 advice	Low	Low	Maintain
A5.2 Subtidal sand	BSH	Tranche 2 advice	Moderate	Moderate	Recover
A5.4 Subtidal mixed sediments	BSH	Tranche 2 advice	Low	Low	Recover
Seagrass beds	HOCl	Tranche 2 advice	High	High	Recover
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	SOCI	Tranche 2 advice	Low	Low	N/A
Native oyster ( <i>Ostrea edulis</i> )	SOCI	Tranche 2 advice	Moderate	Moderate	Recover
Undulate ray ( <i>Raja undulata</i> )	SOCI	Tranche 2 advice	No confidence	No confidence	No data for this feature currently. See Annex 6 on this feature.
A1.2 Moderate energy intertidal rock	BSH	T2 new features	High	High	Maintain
A2.1 Intertidal coarse sediment	BSH	T2 new features	High	High	Maintain
A5.5 Subtidal macrophyte-dominated sediment	BSH	T2 new features	Moderate	Moderate	Recover
Long-snouted seahorse ( <i>Hippocampus guttulatus</i> )	SOCI	T2 new features	Moderate	Moderate	Recover

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
Black seabream ( <i>Spondyllosoma cantharus</i> )	Not listed as part of the ENG unless breeding.	T2 new features	Moderate	Moderate	Although the evidence for this feature is moderate based on Protocol E, there is no evidence that the habitats in Studland are critical to completion of key parts of its life stages, eg as a nesting site, and therefore whether this feature should go forward.

**Table 2** Supporting documentation, reference materials and relevant survey details for Studland Bay rMCZ FS 15

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00052	2013 Natural England MCZ Verification Survey - Studland Bay (D_00052)		NE National GI
D_00071	2012 Survey and monitoring of seagrass beds at Studland Bay (D_00071) – Stills data	Axelsson, M, Allen, C and Dewey, S (2012). Survey and monitoring of seagrass beds at Studland Bay, Dorset – second seagrass monitoring report. Report to The Crown Estate and Natural England by Seastar Survey Ltd, June 2012	The Crown Estate <a href="http://www.thecrownestate.co.uk/media/5290/Seastar%20survey%20Studland%20Bay%20second%20seagrass%20monitoring%20report.pdf">http://www.thecrownestate.co.uk/media/5290/Seastar%20survey%20Studland%20Bay%20second%20seagrass%20monitoring%20report.pdf</a>
D_00116	Marine Recorder new data 2014_02_14	2013 Dorset Seasearch	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00119	Marine Recorder snapshot 2013_06_24	2012 Seasearch survey of Studland Bay rMCZ	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00131	Marine Recorder snapshot 2013_06_24	2012 Dorset Seasearch (	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00143	Marine Recorder snapshot 2013_06_24	2011 Dorset Seasearch	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00164	Marine Recorder snapshot 2013_06_24	2009 Dorset Seasearch	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00191	Marine Recorder snapshot 2013_06_24	2005 Seasearch Survey of Dorset	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>



Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00245	Marine Recorder snapshot 2013_06_24	1995–2002 Dorset Seasearch	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00364	MESH Combined EUNIS 20140203	Devon and Dorset map of Zostera beds	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 BGS (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00393	ABPmer 2012 data collection - Derived from BGS and OS data by MarLIN (was M_00059)	Derived from BGS and OS data by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00438	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00058)	1999–2006 Poole channel deepening study	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00455	MB0116 - Various_MBA_MCZ (was M_00215)	Garrick-Maidment, N, Newman, J, and Durant, D (2010). Movement of a pair of spiny seahorses ( <i>Hippocampus guttulatus</i> ) seen during the summer 2010 at Studland Bay in Dorset.	The Seahorse Trust <a href="http://www.theseahorsetrust.org/userfiles/Movement_of_a_pair_of_Seahorse_during_the_summer_of_2010.pdf">http://www.theseahorsetrust.org/userfiles/Movement_of_a_pair_of_Seahorse_during_the_summer_of_2010.pdf</a>
D_00475	Dorset Wildlife Trust seahorse data submission (D_00475)	Steve Trehwella and Julie Hatcher sighting records 2004–2010	NE National GI
M_00265 and M_00266	MB0116 - StudlandSeagrassPoint_MCZ (M_00265) MB0116 - StudlandSeagrassPoly_MCZ - Marine Biological Association (M_00266)	Jackson, E L, Griffiths, C, Durkin, O and Collins, K (2012). An assessment of anthropogenic impact on angiosperm habitat. Reference 23599. Report by The Marine Biological Association of the UK: Evidence for Conservation Management and Policy Team	NE National GI

#### A9.10.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Studland Bay rMCZ FS 15

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Low	Low	High	High	Confidence updated following Protocol E based on more recent data.
A2.3 Intertidal mud	Tranche 2 advice	Low	Low	Low	Low	Manually downgraded to low/low based on expert judgement as based on parent feature alone.
A5.2 Subtidal sand	Tranche 2 advice	High	High	Moderate	Moderate	Confidence updated following Protocol E based on more recent data.
A5.4 Subtidal mixed sediments	Tranche 2 advice	High	High	Low	Low	Manually downgraded to low/low based on expert judgement as based on parent feature alone.
Seagrass beds	Tranche 2 advice	High	Moderate	High	High	Confidence updated following Protocol E based on more recent data.
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	Low	Low	Low	Low	No change. Initial results of no confidence manually upgraded to low/low as 1 record from Dorset Wildlife Trust added from 2008.
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Low	Low	Moderate	Moderate	Confidence updated following Protocol E based on more recent data.
Undulate ray ( <i>Raja undulata</i> )	Tranche 2 advice	Low	Low	No confidence	No confidence	2 photos of 1 individual received after data cut-off and will be included post consultation.
A1.2 Moderate energy intertidal rock	T2 new features			High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.

Feature name	Feature status	2012 confidence advice assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A2.1 Intertidal coarse sediment	T2 new features			High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A5.5 Subtidal macrophyte-dominated sediment	T2 new features			Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Long-snouted seahorse ( <i>Hippocampus guttulatus</i> )	T2 new features			Moderate	Moderate	Initial result of high/high downgraded to moderate/moderate due to removal of duplicates in data.
Black seabream ( <i>Spondyllosoma cantharus</i> )	T2 new features			Moderate	Moderate	Maintain. Although the evidence for this feature is moderate based on Protocol E there is no evidence that the habitats in Studland are critical to completion of key parts of its life stages, eg as a nesting site, and therefore whether this feature should go forward.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Studland Bay rMCZ FS 15

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Maintain	Maintain	No change
A2.3 Intertidal mud	Tranche 2 advice	Maintain	Maintain	No change
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of recreational sailing and powerboating and fisheries dredging/trawling has led to a revised GMA.



Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.4 Subtidal mixed sediments	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of recreational sailing and powerboating and fisheries dredging/trawling has led to a revised GMA.
Seagrass beds	Tranche 2 advice	Recover	Recover	No change
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	Recover	N/A <sup>1</sup>	N/A
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Maintain	Recover	Current understanding of exposure levels of recreational sailing and powerboating and fisheries dredging/trawling has led to a revised GMA.
Undulate ray ( <i>Raja undulata</i> )	Tranche 2 advice	N/A	N/A <sup>2</sup>	N/A
A1.2 Moderate energy intertidal rock	T2 new features	N/A	Maintain	New feature
A2.1 Intertidal coarse sediment	T2 new features	N/A	Maintain	New feature
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	N/A	Recover	New feature
Long-snouted seahorse ( <i>Hippocampus guttulatus</i> )	T2 new features	N/A	Recover	New feature
Black seabream ( <i>Spondyliosoma cantharus</i> )	T2 new features	N/A	Maintain. Although the evidence for this feature is moderate based on Protocol E there is a question mark over how and whether this species utilise habitats at Studland and therefore whether this feature should go forward.	New feature

<sup>1</sup> As we have low confidence in the presence and extent of this feature a vulnerability assessment was not conducted.

<sup>2</sup> As there is no current spatial distribution data for this feature, Natural England was unable to conduct a vulnerability assessment to assign a GMA for this feature. See Annex 6 for further information.

## A9.10.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Low		Moderate	
A2.3 Intertidal mud	Tranche 2 advice	Low		High	
A5.2 Subtidal sand	Tranche 2 advice	High	Current risk from recreational sailing and powerboating and fisheries dredging. However, exposure to fishing pressures is likely to be low due to low intensity of dredge/trawl. Individual anchoring events are short lived although numerous.	High	Any future moorings would be regulated by appropriate authorities.
A5.4 Subtidal mixed sediments	Tranche 2 advice	High	Current risk from recreational sailing and powerboating and fisheries dredging. However, exposure to fishing pressures is likely to be low due to low intensity of dredge/trawl. Individual anchoring events are short lived although numerous.	Moderate	
Seagrass beds	Tranche 2 advice	High	Current risk from recreational sailing and powerboating and fisheries dredging. However, exposure to fishing pressures is likely to be low due to low intensity of dredge/trawl. Individual anchoring events are short lived although numerous.	High	
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	N/A	N/A	N/A	N/A

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	High	Current risk from recreational sailing and powerboating and fisheries dredging. However, exposure to fishing pressures is likely to be low due to low intensity of dredge/trawl. Individual anchoring events are short lived although numerous.	High	
Undulate ray ( <i>Raja undulata</i> )	Tranche 2 advice	N/A	N/A	N/A	N/A
A1.2 Moderate energy intertidal rock	T2 new features	Low		Moderate	
A2.1 Intertidal coarse sediment	T2 new features	Low		Moderate	
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	High	Current risk from recreational sailing and powerboating and fisheries dredging. However, exposure to fishing pressures is likely to be low due to low intensity of dredge/trawl. Individual anchoring events are short lived although numerous.	High	
Long-snouted seahorse ( <i>Hippocampus guttulatus</i> )	T2 new features	High	Current risk from recreational sailing and powerboating and fishing activities causing abrasion, damage or removal of the feature. Bottom-gear fisheries exposure likely to be low as unlikely to dredge/trawl in the supporting habitat but the recreational pressures and other fisheries pressures are still valid.	High	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Black seabream ( <i>Spondyliosoma cantharus</i> )	T2 new features	Low		Unknown	Future risk narrative not provided for non-ENG features as sensitivity to pressures determined by expert judgement only and not currently included in sensitivity matrix.

## A9.10.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.3 Intertidal mud	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	Yes	Further consideration		
A5.2 Subtidal sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A5.4 Subtidal mixed sediments	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	Yes	Further consideration		
Seagrass beds	Tranche 2 advice	HOCl	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
Short-snouted seahorse ( <i>Hippocampus hippocampus</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	Yes	No	Yes. This is based on the risk identified for <i>Hippocampus guttulatus</i> at this site.	Further consideration	Yes	There is a possibility that more records may become available that we have not assessed.
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Undulate ray ( <i>Raja undulata</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	Yes	No	Not assessed	Not assessed	Yes	2 photos of 1 individual received along with anecdotal evidence to be included post consultation. Cefas study into undulate ray in development and progressing.

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
A1.2 Moderate energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.1 Intertidal coarse sediment	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.5 Subtidal macrophyte-dominated sediment	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Long-snouted seahorse ( <i>Hippocampus guttulatus</i> )	T2 new features	SOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Black seabream ( <i>Spondyllosoma cantharus</i> )	T2 new features	Non-ENG	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No	86%		Yes. Available data support at least one JNCC Big Gaps identified feature for designation and new data coming.

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Yes, Available data support at least one JNCC Big Gaps identified feature for designation and new data coming.	9	397.4	



## A9.10.7 Additional advice

### A9.10.7.1 Advice on specific features

Defra requested further clarification from Natural England on the short-snouted seahorse (*Hippocampus hippocampus*) and our confidence in presence and extent, which we provided as low/low.

For black seabream (*Spondyllosoma cantharus*) we provided further advice relating to the ENG criteria. Although the evidence for this feature is moderate based on Protocol E there is a question mark over how and whether this species utilise habitats at Studland, and therefore whether this feature should go forward.

We provided a separate advice note for the undulate ray (*Raja undulata*) as evidence is currently limited on this feature, but there is survey work being planned to gather evidence to improve confidence in presence and extent.

### A9.10.7.2 Advice on boundaries

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### A9.10.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00070	EA Studland seagrass survey	FS 15	Echosounder and drop-down camera	Not available before data cut-off.

## A9.11 Mount's Bay rMCZ FS 33

### A9.11.1 Site description

Mount's Bay rMCZ is centred on the village of Marazion, approximately 5km east of Penzance, and includes the area around the iconic tidal island of St Michael's Mount. The site contains a range of intertidal and subtidal habitats, including areas of sand and soft sediments, rocky habitat with different levels of wave exposure and seagrass beds in more sheltered areas. This diversity of habitats leads to a wide diversity of plant and animal species that can be found within the site, including dense kelp forests, seagrass beds, worms and bivalves living in soft sediments and rocky shores covered in sea snails, anemones, crabs, sponges and sea squirts. The site is notable for seagrass and stalked jellyfish. Seagrass is actually a flowering plant, and not a seaweed, and serves several important ecological functions, including stabilising sediments and preventing erosion, providing a food source for water birds, and providing shelter and nursery areas for a range of species such as cuttlefish and juvenile fish. Stalked jellyfish are small relations of true jellyfish and sea anemones, which typically spend their life attached to seaweed or seagrass. Three stalked jellyfish species, which are proposed for protection, have been recorded here and the site is of particular importance for the species *Lucernariopsis campanulata* within the region. The site is also home to the giant goby, a protected species of fish, and areas within the site are thought to serve important nursery functions for species of sharks, sea trout and other commercially caught shellfish and fish species.



**Plate 1** Seaweeds and limpets on intertidal rock, Mount's Bay © Rob Seebold, Natural England



**Plate 2** Seagrass bed © Paul Kay, Natural England

Please note this photograph is an example photograph of the above habitat only and does not necessarily represent the habitat found at the site found at the site.

## A9.11.2 Site feature maps

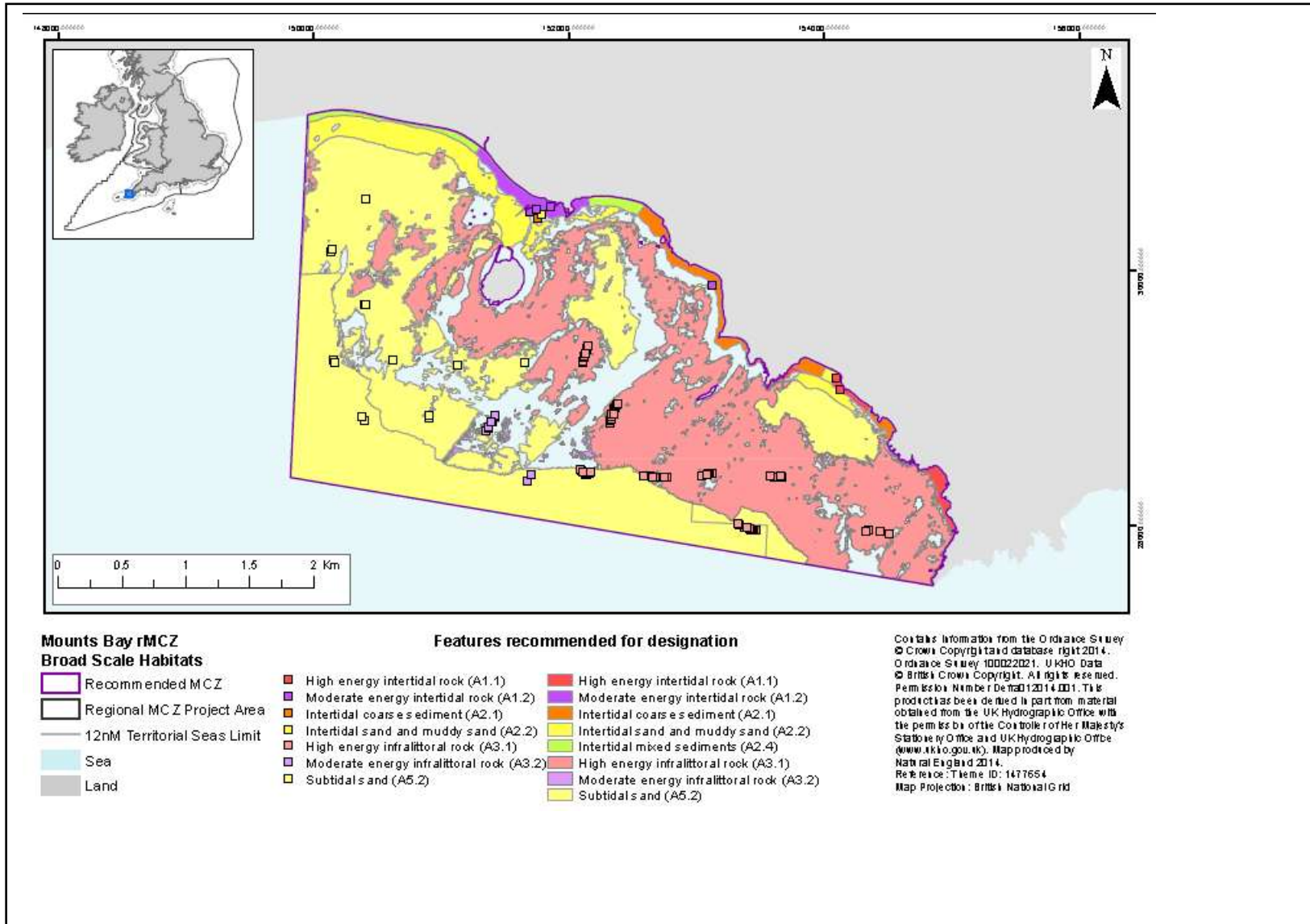


Figure 1 Location of mapped BSHs in Mount's Bay rMCZ FS 33

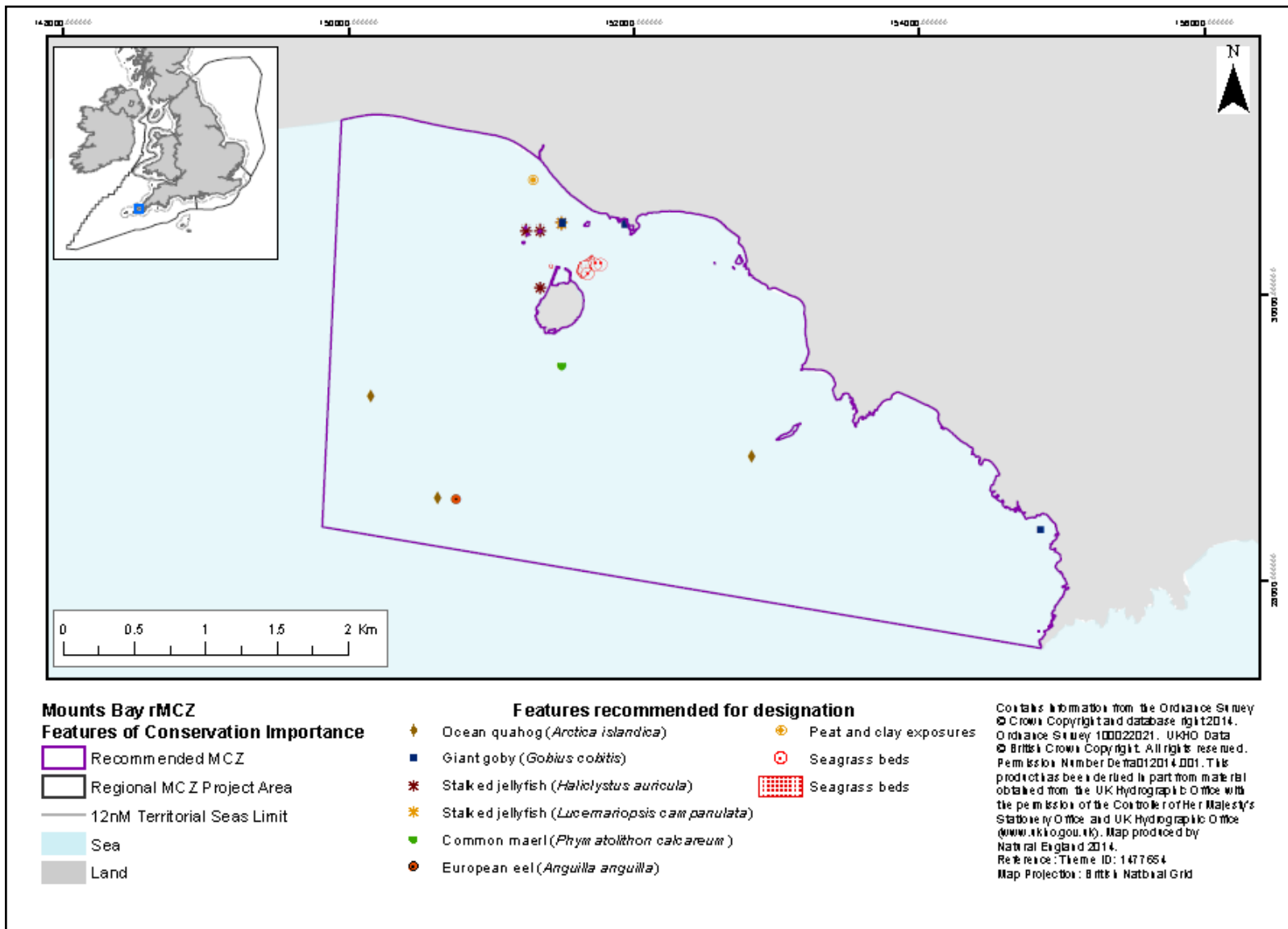


Figure 2 Location of mapped FOCI in Mount's Bay rMCZ FS 33

### A9.11.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Mount's Bay rMCZ FS 33

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.1 High energy intertidal rock	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A1.2 Moderate energy intertidal rock	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A2.1 Intertidal coarse sediment	BSH	Tranche 2 advice	Low	Low	Maintain
A2.2 Intertidal sand and muddy sand	BSH	Tranche 2 advice	Low	Low	Maintain
A2.4 Intertidal mixed sediments	BSH	Tranche 2 advice	Low	Low	Maintain
A3.1 High energy infralittoral rock	BSH	Tranche 2 advice	High	High	Maintain
A5.2 Subtidal sand	BSH	Tranche 2 advice	High	High	Maintain
A5.4 Subtidal mixed sediments	BSH	Tranche 2 advice	No confidence	No confidence	Maintain
Seagrass beds	HOCl	Tranche 2 advice	High	Moderate	Maintain
Giant goby ( <i>Gobius cobitis</i> )	SOCI	Tranche 2 advice	Moderate	Moderate	Maintain
Stalked jellyfish ( <i>Haliclystus auricula</i> )	SOCI	Tranche 2 advice	Low	Low	Maintain
Stalked jellyfish ( <i>Lucernariopsis cruxmelitensis</i> )	SOCI	Tranche 2 advice	No confidence	No confidence	Maintain
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	SOCI	Tranche 2 advice	Low	Low	Maintain
Ocean quahog ( <i>Arctica islandica</i> )	SOCI	Tranche 2 advice	Low	Low	Maintain

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A3.2 Moderate energy infralittoral rock	BSH	T2 new features	High	High	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Mount's Bay rMCZ FS 33

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00029	2012 EA MCZ Verification Survey - Mount's Bay		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT <a href="mailto:lowlibrary@cefas.co.uk">lowlibrary@cefas.co.uk</a> <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00038	NE MCZ Verification Photos	NE Regional Staff MCZ feature verification photos	NE National GI
D_00109	Marine Recorder new data 2014_02_14	2013 Seasearch Cornwall Surveys of Penzance to Land's End	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00281	Marine Recorder snapshot 2013_06_24	1992 PMNHS Cornwall Field Trip	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00363	MESH Combined EUNIS 20140203	Cornwall <i>Zostera</i> beds map	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
M_00007	ABPmer 2012 data collection - original data - dataset: BS	English Heritage	English Heritage/NE National GI Chris Pater, Marine Planner, English Heritage <a href="mailto:chris.pater@english-heritage.org.uk">chris.pater@english-heritage.org.uk</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
M_00045	ABPmer 2012 data collection - original data - dataset: FS	Cornwall_FOCI_Species2 – various data collected by ERCCIS	Environmental Records Centre for Cornwall and the Isles of Scilly <a href="http://www.erccis.org.uk">http://www.erccis.org.uk</a>
M_00228	ABPmer 2012 data collection - new data 4_5	ERCCIS FOCI_April_09	Environmental Records Centre for Cornwall and the Isles of Scilly <a href="http://www.erccis.org.uk">http://www.erccis.org.uk</a>

#### A9.11.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Mount's Bay rMCZ FS 33

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.1 High energy intertidal rock	Tranche 2 advice	High	Low	Moderate	Moderate	Intertidal verification survey has yet to report. New data from data source unavailable in 2012: NE regional staff MCZ feature verification photos (D_00038).
A1.2 Moderate energy intertidal rock	Tranche 2 advice	High	Low	Moderate	Moderate	Intertidal verification survey has yet to report. New data from data source unavailable in 2012: NE regional staff MCZ feature verification photos (D_00038).
A2.1 Intertidal coarse sediment	Tranche 2 advice	High	Low	Low	Low	Intertidal verification survey has yet to report.
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	High	Low	Low	Low	Intertidal verification survey has yet to report.
A2.4 Intertidal mixed sediments	Tranche 2 advice	High	Low	Low	Low	Intertidal verification survey has yet to report.
A3.1 High energy infralittoral rock	Tranche 2 advice	Low	Low	High	High	New data from data source unavailable in 2012: 2012 EA MCZ verification survey Mount's Bay/D_00029.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A5.2 Subtidal sand	Tranche 2 advice	Low	Low	High	High	New data from data source unavailable in 2012: 2012 EA MCZ verification survey Mount's Bay/D_00029.
A5.4 Subtidal mixed sediments	Tranche 2 advice	Low	Low	No confidence	No confidence	Low confidence modelled dataset, covers the feature. 2012 EA subtidal verification survey (D_00029) found a sediment complex of subtidal coarse sediment (A5.1) and subtidal mixed sediments (A5.4), but was unable to distinguish between them.
Seagrass beds	Tranche 2 advice	Low	Low	High	Moderate	New data from data source unavailable in 2012: NE regional staff MCZ feature verification photos (D_00038).
Giant goby ( <i>Gobius cobitis</i> )	Tranche 2 advice	Moderate	Moderate	Moderate	Moderate	
Stalked jellyfish ( <i>Haliclystus auricula</i> )	Tranche 2 advice	Low	Low	Low	Low	
Stalked jellyfish ( <i>Lucernariopsis cruxmelitensis</i> )	Tranche 2 advice	Low	Low	No confidence	No confidence	New data coming will increase confidence in feature: Shoresearch surveys (inc. participation from NE advisers) yet to be input into Marine Recorder. Further photographic evidence pending from later site visit by NE advisers and with species specialist.
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	Tranche 2 advice	Low	Low	Low	Low	



Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
Ocean quahog ( <i>Arctica islandica</i> )	Tranche 2 advice	Low	Low	Low	Low	Manually downgraded from initial 2014 assessment moderate/moderate to low/low as of 4 records 1 is from 1885, and the last 6 year record is juvenile leaving only 2 records older than 12 years old thus resulting in low/low.
A3.2 Moderate energy infralittoral rock	T2 new features	N/A	N/A	High	High	New data from data source unavailable in 2012: 2012 EA MCZ Verification Survey Mount's Bay/D_00029.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Mount's Bay rMCZ FS 33

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A1.1 High energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A2.1 Intertidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Maintain	Maintain	No change
A2.4 Intertidal mixed sediments	Tranche 2 advice	Maintain	Maintain	No change
A3.1 High energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Maintain	No change
A5.4 Subtidal mixed sediments	Tranche 2 advice	Maintain	Maintain*	No change
Seagrass beds	Tranche 2 advice	Maintain	Maintain	No change

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
Giant goby ( <i>Gobius cobitis</i> )	Tranche 2 advice	Maintain	Maintain	No change
Stalked jellyfish ( <i>Haliclystus auricula</i> )	Tranche 2 advice	Maintain	Maintain	No change
Stalked jellyfish ( <i>Lucernariopsis cruxmelitensis</i> )	Tranche 2 advice	Maintain	Maintain	No change
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	Tranche 2 advice	Maintain	Maintain*	No change
Ocean quahog ( <i>Arctica islandica</i> )	Tranche 2 advice	Maintain	Maintain	No change

\* GMA not determined by a VA. See Section A5.1.7.

#### A9.11.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.1 High energy intertidal rock	Tranche 2 advice	Low		Moderate	
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Low		Moderate	
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low		Moderate	
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Low		Moderate	
A2.4 Intertidal mixed sediments	Tranche 2 advice	Low		Moderate	
A3.1 High energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A5.2 Subtidal sand	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
					within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
A5.4 Subtidal mixed sediments	Tranche 2 advice	N/A*	N/A*	N/A*	N/A*
Seagrass beds	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
Giant goby ( <i>Gobius cobitis</i> )	Tranche 2 advice	Low		Moderate	
Stalked jellyfish ( <i>Haliclystus auricula</i> )	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
Stalked jellyfish ( <i>Lucernariopsis cruxmelitensis</i> )	Tranche 2 advice	N/A*	N/A*	N/A*	N/A*
Stalked jellyfish ( <i>Lucernariopsis campanulata</i> )	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
					risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
Ocean quahog ( <i>Arctica islandica</i> )	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.

\* Current and future risk not assessed for this feature as features are not subject to a VA. See Section A9.1.7.

## A9.11.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have a confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A1.1 High energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	NE contracted intertidal verification survey outputs in final preparation. Should be available by end of July 2014 providing point and polygonal data in support of intertidal features. To be included post consultation.
A1.2 Moderate energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	NE contracted intertidal verification survey outputs in final preparation. Should be available by end of July 2014 providing point and polygonal data in support of intertidal features. To be included post consultation.
A2.1 Intertidal coarse sediment	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation	Yes	NE contracted intertidal verification survey outputs in final preparation. Should be available by end of July

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have a confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
												2014 providing point and polygonal data in support of intertidal features. To be included post consultation.
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation	Yes	NE contracted intertidal verification survey outputs in final preparation. Should be available by end of July 2014 providing point and polygonal data in support of intertidal features. To be included post consultation.
A2.4 Intertidal mixed sediments	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation	Yes	NE contracted intertidal verification survey outputs in final preparation. Should be available by end of July 2014 providing point and polygonal data in support of intertidal features. To be included post consultation.
A3.1 High energy	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	NE contracted intertidal verification survey outputs in final preparation. Should

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have a confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
infralittoral rock												be available by end of July 2014 providing point and polygonal data in support of intertidal features. To be included post consultation.
A5.2 Subtidal sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Further recent multibeam survey data are available from a CCO survey; however, with no further ground truth survey work habitat maps to further resolve features cannot be produced.
A5.4 Subtidal mixed sediments	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	Not assessed	Not assessed	Yes	Further recent multibeam survey data are available from a CCO survey; however, with no further ground truth survey work habitat maps to further resolve features cannot be produced
Seagrass beds	Tranche	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	NE contracted intertidal verification survey outputs

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have a confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
	2 advice											in final preparation. Should be available by end of July 2014 providing point and polygonal data in support of intertidal features. To be included post consultation.
Giant goby ( <i>Gobius cobitis</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Stalked jellyfish ( <i>Haliclystus auricula</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	No	No	Yes	Further consideration		
Stalked jellyfish ( <i>Lucerna-riopsis crux-melitensis</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	Yes	No	Not assessed	Not assessed	Yes	Shoresearch surveys (inc. participation from NE advisers) yet to be input into Marine Recorder. Further photographic evidence pending from later site visit by NE advisers and with species specialist.
Stalked jellyfish ( <i>Lucerna-riopsis</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	Yes	No	Yes	Further consideration		



Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have a confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
<i>campan-ulata</i> )												
Ocean quahog ( <i>Arctica islandica</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	No	No	Yes	Further consideration		
A3.2 Moderate energy infralittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No	76%		Maybe. Available data support at least one JNCC Big Gaps identified feature for designation.

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Maybe. Available data support at least one JNCC Big Gaps identified feature for designation.	7	1,124.1	

## **A9.11.7 Additional advice**

### **A9.11.7.1 Advice on specific features**

#### **Features with no confidence in presence and extent**

Two features in the site that currently have no confidence in presence or extent and that would otherwise be excluded from our VA have been confirmed anecdotally as being present and/or we are aware that stakeholders are collecting data targeted specifically at these features. As this information has been collated after our data cut-off and is unconfirmed, we are unable to include it in our formal assessment of confidence, but have provided separate informal narrative assessments below to support Defra's decision making.

#### **Subtidal mixed sediments**

Situation summary: Subtidal mixed sediments are a proposed feature of the rMCZ, which originally came forward during the regional MCZ project process. Assessment of confidence in this feature's presence and extent using Protocol E resulted in a no confidence score for both presence and extent.

Confidence in presence and extent for this feature has been reduced to no confidence in 2014 (from low confidence in 2012) following the 2012 EA subtidal verification survey (MB 0120). This survey found a sediment complex of subtidal coarse sediment (A5.1) and subtidal mixed sediments (A5.4), observed via drop-down video transects. No PSA samples exist for either sediment category however. Therefore due to the very similar nature of these substrates, subtidal coarse and mixed sediments were described as a sediment complex. It should be noted that subtidal coarse sediment (A5.1) is not a proposed feature of the site. We are unaware of any future evidence collection surveys that may confirm the presence of subtidal mixed sediments (A5.4), but this cannot be ruled out and we therefore advise the GMA below should Defra wish to progress this feature.

GMA: As there is currently no confidence in the presence or extent of this feature, we were unable to conduct a VA to assign a GMA for this feature. However, the spatial distribution of the A5.1/A5.4 complex has been mapped. Based on this distribution and known exposure to activities, we can advise a GMA of maintain at this stage. This is further supported by the fact that adjacent proposed features subtidal sand (A5.2) and high energy infralittoral rock (A3.1), which have been assessed in the 2014 VA, also have a recommended GMA of maintain.

#### **SOCI 19 Stalked jellyfish (*Lucernariopsis cruxmelitensis*)**

Situation summary: The stalked jellyfish (*Lucernariopsis cruxmelitensis*) is a proposed feature of the rMCZ, which originally came forward during the regional MCZ project process. Assessment of confidence in this feature's presence and extent using Protocol E resulted in a no confidence score for both presence and extent.

However, we are now aware of new data indicating that the feature exists in the site. The feature has been observed within the site in 2014 by stakeholders and Natural England advisers and, in addition, georeferenced photo evidence exists. However, this evidence missed the formal data cut-off for Natural England's pre-consultation advice to Defra and therefore could not be considered. Confidence in feature presence and extent is therefore likely to improve when the new data are taken into account. We advise that this feature is considered further, being mindful of the significant data collection activity being undertaken by stakeholders (notably Cornwall Wildlife Trust) in the belief that there will be an opportunity for submission of this prior/during formal consultation.

GMA: As there are no currently available spatial distribution data for this feature, we were unable to conduct a VA to assign a GMA for this feature. However, based on local knowledge of the feature's distribution within the site and known exposure to activities, Natural England is comfortable at this stage in recommending a GMA of maintain. This is further supported by the fact that similar proposed features (including the stalked jellyfish (*Lucernariopsis campanulata*) and (*Haliclystus auricula*)), which have been

assessed in the 2014 VA, also have a recommended GMA of maintain.

#### **A9.11.7.2 Advice on boundaries**

Defra requested advice on a proposed boundary change to the site.

Situation summary: Information received from a local stakeholder suggested that an area of seagrass would be omitted from the site, by a matter of metres, if the current western boundary were to be adopted. It was also suggested that this area of seagrass and adjacent reef contained a significant stalked jellyfish population. Defra sought Natural England's advice on the proposal under consideration.

Natural England advised that to the best of our knowledge the western boundary was originally redrawn by Finding Sanctuary to address issues around a nearby disposal site and anchorages outside Newlyn Harbour and was conveniently, rather than specifically, redrawn. Extending the boundary to include this habitat would also potentially address other stakeholder concerns over inclusion of known areas of seagrass habitat within the site. Natural England is unaware of any specific evidence that supports the assertion that this is the 'most significant' stalked jellyfish population in Mount's Bay. However, based on best available information there appears to be benefit in considering the area of habitat in question for inclusion within the boundary and it is of a size to be viable.

Following further discussions Defra proposed an extension to the western boundary (see Figure 3 below).

Natural England has reviewed this proposal and advised that based on best available knowledge and a preliminary visual analysis, the proposed change should encompass the majority of the additional area of seagrass around Long Rock, and possibly all of it. More precise GI analysis may show that further refinements to the boundary are required to completely capture the Long Rock seagrass, particularly when a more precise map of this seagrass bed is available.

Table 9 is not applicable to this site.



**Mounts Bay rMCZ Boundary**

- Revised Recommended MCZ
- Recommended MCZ (Finding Sanctuary)
- Regional MCZ project area
- MCZ boundary co-ordinates
- 12nM Territorial Seas Limit
- Land
- SPAs
- SSSIs

Point	Lat	Long
A	50°7' 38.874" N	5°30' 29.888" W
B	50°5' 49.451" N	5°25' 44.998" W
C	50°6' 9.392" N	5°30' 0.000" W
D	50°7' 7.323" N	5°30' 0.000" W
E	50°7' 6.492" N	5°30' 27.500" W

**Depth Areas (metres)**

-20.0 - -10.0	25.1 - 50.0
-9.9 - -5.0	50.1 - 100.0
-4.9 - 0.0	100.1 - 250.0
0.1 - 5.0	250.1 - 500.0
5.1 - 10.0	500.1 - 1000.0
10.1 - 25.0	

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**NOT TO BE USED FOR NAVIGATION.**  
 Map produced by Natural England 2014.  
 Reference: Theme ID: 1477654  
 Map Projection: British National Grid

**Figure 3** Boundary change proposed by Defra for rMCZ Mount's Bay FS 33

### A9.11.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00050	Natural England MCZ Verification Survey – Mount's Bay	FS 33	Lot 1 and Lot 2 (rock and sediment), Phase 1 biotope mapping, Phase 2 transects and sediment cores	Not available before data cut-off.
D_00075	CCO Aerial Photography 2001–2013	FS 20, FS 21, FS 23, FS 25, FS 26, FS 33, FS 34, FS 37, FS 39, FS 40, FS 42, FS 43	Aerial photographs	Uninterpreted remote sensing data.
D_00076	CCO Lidar survey 2011–2014	FS 20, FS 21, FS 23, FS 25, FS 26, FS 33, FS 34, FS 37, FS 39, FS 40, FS 42, FS 43	Lidar	Uninterpreted remote sensing data.
D_00512	Lizard Point to Land's End (CCO BSW4)	FS 33, FS 34	Multibeam	Uninterpreted remote sensing data.

## A9.12 Runnel Stone (Land's End) rMCZ FS 34

### A9.12.1 Site description

Runnel Stone (Land's End) rMCZ covers a coastal and inshore area centred on the Runnelstone reef; a series of granite pinnacles that are carpeted in animal and plant life. The site is in an area of higher than average species diversity. The site's position at the end of the Land's End peninsula exposes it to the full force of the Atlantic, creating excellent examples of very exposed rocky shore communities. Upper shores are dominated by barnacles, limpets and winkles. Low shores are carpeted with the pink tufted coralline alga (*Corallina officinalis*) and overlain with the kelp (*Alaria esculenta*). Beneath the surface a dense kelp forest is found and is home to a wide variety of animal and algal species. Below this, animal turf communities take over. There are walls of anemones, corals, sponges and hydroids all taking advantage of the food delivered by the site's strong currents. In areas of greater depth or more sheltered from the waves, pink sea fans (rare cold-water corals) can be found in among the animal turf. Surrounding the rocks, both on the shore and below the surface, are vast sandy habitats.



**Plate 1** Anemone gardens, Runnel Stone reef © Cat Wildling, Cornwall Wildlife Trust



**Plate 2** Porthcurno Beach, Land's End peninsula © Kate Sugar, Natural England



## A9.12.2 Site feature map

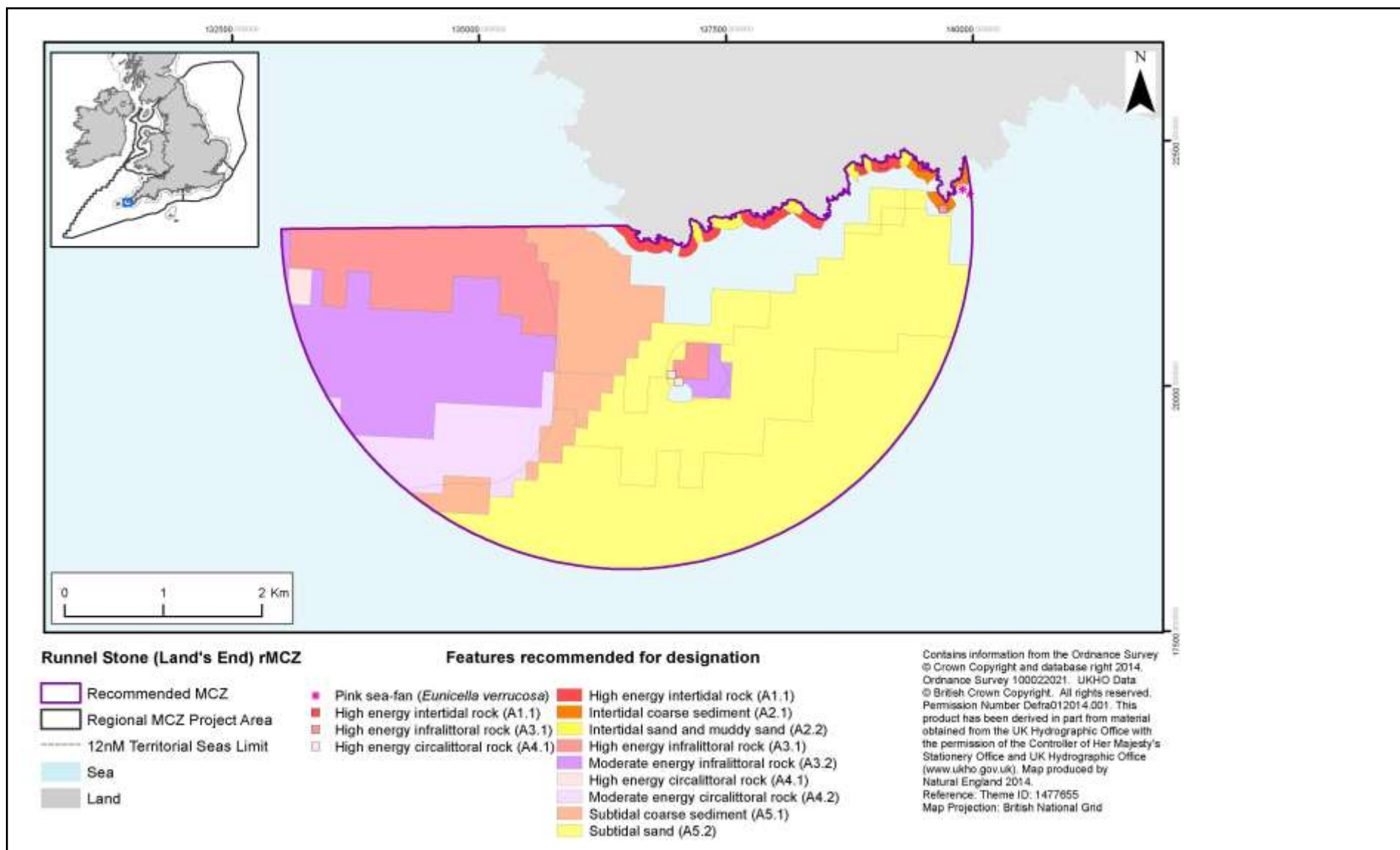


Figure 1 Location of mapped BSHs in Runnel Stone (Land's End) rMCZ FS 34



### A9.12.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Runnel Stone (Land's End) rMCZ FS 34

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.1 High energy intertidal rock	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A2.1 Intertidal coarse sediment	BSH	Tranche 2 advice	Low	Low	Maintain
A2.2 Intertidal sand and muddy sand	BSH	Tranche 2 advice	Low	Low	Maintain
A2.3 Intertidal mud	BSH	Tranche 2 advice	No confidence	No confidence	Maintain
A3.1 High energy infralittoral rock	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A3.2 Moderate energy infralittoral rock	BSH	Tranche 2 advice	Low	Low	Maintain
A4.1 High energy circalittoral rock	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A4.2 Moderate energy circalittoral rock	BSH	Tranche 2 advice	Low	Low	Maintain
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	Low	Low	Maintain
A5.2 Subtidal sand	BSH	Tranche 2 advice	Low	Low	Maintain
Pink sea fan ( <i>Eunicella verrucosa</i> )	SOCI	Tranche 2 advice	Moderate	Moderate	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Runnel Stone (Land's End) rMCZ FS 34

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00038	NE MCZ Verification Photos	NE Regional Staff MCZ Verification Photos	NE National GI
D_00151	Marine Recorder snapshot 2013_06_24	2010 MCS Cornwall Survey of South Penwith Area	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00192	Marine Recorder snapshot 2013_06_24	2005 Seasearch Penzance and Land's End	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00209	Marine Recorder snapshot 2013_06_24	2003 Seasearch Penzance and Land's End	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00333	Marine Recorder snapshot 2013_06_24	1981 J.G. James, South Cornwall sublittoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00394	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from MB102 layers by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
M_00045	ABPmer 2012 data collection - original data - dataset: FS	Cornwall_FOCI_Species2 – various data collected by ERCCIS	Environmental Records Centre for Cornwall and the Isles of Scilly <a href="http://www.ercis.org.uk">http://www.ercis.org.uk</a>

#### A9.12.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Runnel Stone (Land's End) rMCZ FS 34

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.1 High energy intertidal rock	Tranche 2 advice	High	Low	Moderate	Moderate	New data collected; georeferenced photos (D_00038).
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low	Low	Low	Low	N/A
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	High	Low	Low	Low	New data expected from recent verification survey and parent feature level photographic evidence to be included post consultation.
A2.3 Intertidal mud	Tranche 2 advice	0	0	No confidence	No confidence	New data from recent verification survey has confirmed this feature is not present within the site and should not be taken forward to consultation.
A3.1 High energy infralittoral rock	Tranche 2 advice	Low	Low	Moderate	Moderate	New data from data source unavailable in 2012: MCS dive survey added in 2014 (D_00151).
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low	Low	Low	Low	New data expected from recent verification survey to be included post consultation.
A4.1 High energy circalittoral rock	Tranche 2 advice	Low	Low	Moderate	Moderate	New data from data source unavailable in 2012: MCS dive survey added in 2014 (D_00151).
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Low	Low	Low	Low	New data expected from recent verification survey to be included post consultation.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low	Low	Low	Low	New data expected from recent verification survey to be included post consultation.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A5.2 Subtidal sand	Tranche 2 advice	Low	Low	Low	Low	New data expected from recent verification survey to be included post consultation.
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	Moderate	Moderate	Moderate	Moderate	New data expected from recent verification survey and 2014 Seasearch surveys to be included post consultation.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Runnel Stone (Land's End) rMCZ FS 34

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A1.1 High energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A2.1 Intertidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Maintain	Maintain	No change
A3.1 High energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A4.1 High energy circalittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Maintain	No change
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	Maintain	Maintain	No change

## A9.12.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.1 High energy intertidal rock	Tranche 2 advice	Low		Moderate	
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low		Moderate	
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Low		Moderate	
A3.1 High energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A4.1 High energy circalittoral rock	Tranche 2 advice	Low		Moderate	
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low		Moderate	
A5.2 Subtidal sand	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.

## A9.12.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A1.1 High energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	NE contracted intertidal verification survey outputs in final preparation. Should be available by end of July 2014 providing point and polygonal data in support of intertidal features. To be included post consultation.
A2.1 Intertidal coarse sediment	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation	Yes	NE contracted intertidal verification survey outputs in final preparation. Should be available by end of July 2014 providing point and polygonal data in support of intertidal features. To be included post consultation.
A2.2 Intertidal sand and	Tranche	BSH	No	No	No	Move to	No	No	No	No	Yes	NE contracted intertidal verification survey outputs

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
muddy sand	2 advice					Q2				designation		in final preparation. Should be available by end of July 2014 providing point and polygonal data in support of intertidal features. To be included post consultation. Parent level photographic evidence will also support feature post consultation.
A3.1 High energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	EA point data for subtidal habitats to be reported by Cefas by 31/07/2014 – point data only.
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation	Yes	EA point data for subtidal habitats to be reported by Cefas by 31/07/2014 – point data only.
A4.1 High energy circalittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	Yes	EA point data for subtidal habitats to be reported by Cefas by 31/07/2014 – point data only.



Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	Yes	Further consideration	Yes	EA point data for subtidal habitats to be reported by Cefas by 31/07/2014 – point data only.
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation	Yes	EA point data for subtidal habitats to be reported by Cefas by 31/07/2014 – point data only.
A5.2 Subtidal sand	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	Yes	Further consideration	Yes	EA point data for subtidal habitats to be reported by Cefas by 31/07/2014 – point data only.
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		Assessment based predominantly on point data – Q2 has not been calculated.	No, did not fill gap originally.

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
No, did not fill big gap originally.	4	2,004.5	

## A9.12.7 Additional advice

### A9.12.7.1 Advice on specific features

No additional advice given to Defra on specific features for this site. Natural England has, however, advised that the name of the rMCZ be changed to Runnel Stone (Land's End) rMCZ, for geographical clarification, and to avoid confusion between the rMCZ site and Land's End and Cape Bank candidate SAC.

### A9.12.7.2 Advice on boundaries

Defra requested advice on potential to straighten the curve in the boundary, due to the curve covering a large section of the site.

Natural England advised that this would have significant impact on the integrity of the site.

Natural England also advised that the National Coastwatch Institution Building on Gwennap Head would be a suitable landmark to match with the site boundary central co-ordinate to assist in enforcement.

Table 9 is not applicable to this site.

### A9.12.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00026	EA MCZ Verification Survey – Land's End	FS 34	Drop-down camera	Not available before data cut-off.
D_00049	Natural England MCZ Verification Survey – Land's End	FS 34	Lot 1 and Lot 2 (rock and sediment), Phase 1 biotope mapping, Phase 2 transects and sediment cores	Not available before data cut-off.
D_00075	CCO Aerial Photography 2001–2013	FS 20, FS 21, FS 23, FS 25, FS 26, FS 33, FS 34, FS 37, FS 39, FS 40, FS 42, FS 43	Aerial photographs	Uninterpreted remote sensing data.
D_00076	CCO Lidar survey 2011–2014	NG 13, FS 20, FS 21, FS 23, FS 25, FS 26, FS 33, FS 34, FS 37, FS 39, FS 40, FS 42, FS 43	Lidar	Uninterpreted remote sensing data.
D_00511	Western Approaches to English Channel	FS 24, FS 34	Multibeam	Uninterpreted remote sensing data.
D_00512	Lizard Point to Land's End (CCO BSW4)	FS 33, FS 34	Multibeam	Uninterpreted remote sensing data.

## **A9.13 Newquay and the Gannel rMCZ FS 37**

### **A9.13.1 Site description**

Newquay and the Gannel rMCZ is found on the north Cornwall coast, around the fishing harbour and popular resort town of Newquay. The site encompasses the beaches around Newquay, extending along the high water mark from Kelsey Head (west of Crantock Beach) to Trevelgue Head at Porth Beach, as well as the estuary area of the Gannel (as far inland as the tidal limit). The site has been recommended for protection as an MCZ partly to protect the wide range of intertidal habitats found in the area – from exposed sandy beaches and diverse rocky shores, home to important species such as the giant goby, to the more sheltered, low energy rock, mud and salt marsh habitats found in the estuary area of the Gannel. Estuaries are of recognised importance in terms of their productivity as well as their ecological function as nursery areas for various species. Offshore the seaward boundary of the site extends roughly 1 km, covering areas of subtidal sediment and biologically rich rocky reef habitats.



**Plate 1** Newquay coastline © Dr Hazel Selley, Natural England



**Plate 2** The Gannel estuary © Dr Hazel Selley, Natural England

## A9.13.2 Site feature maps

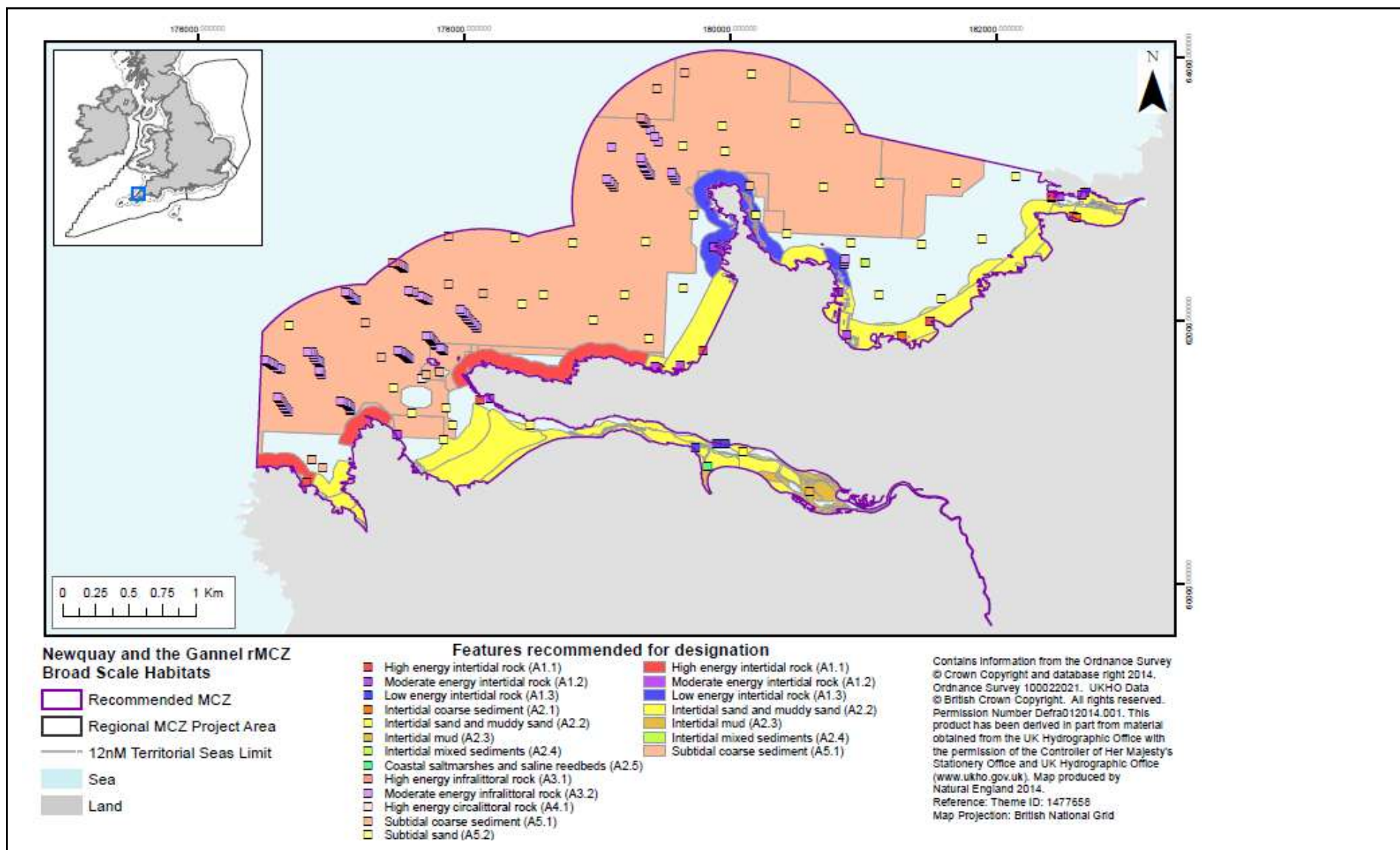
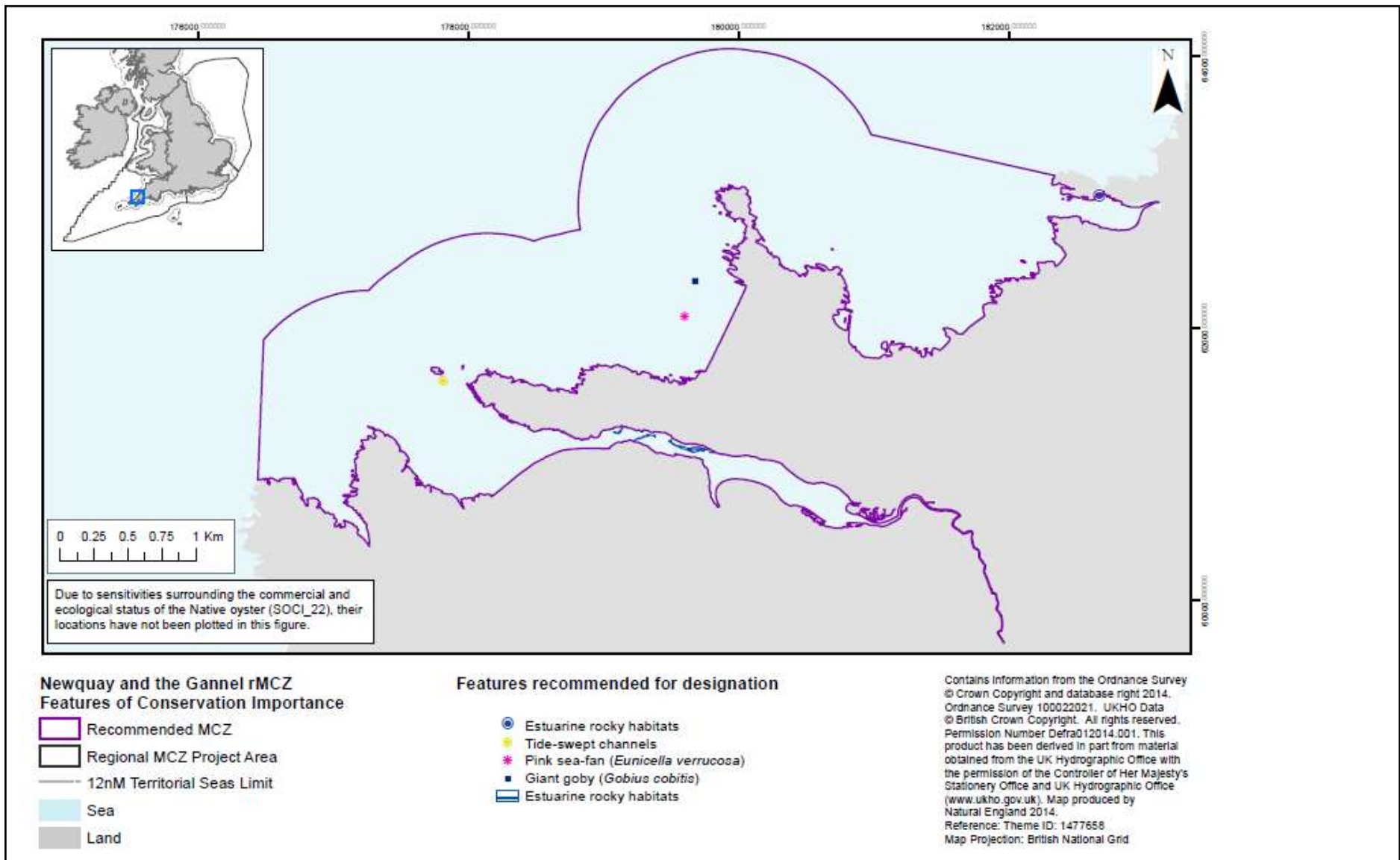


Figure 1 Location of mapped BSHs in Newquay and the Gannel rMCZ FS 37



**Figure 2** Location of mapped FOCl in Newquay and the Gannel rMCZ FS 37

### A9.13.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Newquay and the Gannel rMCZ FS 37

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.1 High energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A1.2 Moderate energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A1.3 Low energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A2.1 Intertidal coarse sediment	BSH	Tranche 2 advice	Low	Low	Maintain
A2.2 Intertidal sand and muddy sand	BSH	Tranche 2 advice	High	High	Maintain
A2.3 Intertidal mud	BSH	Tranche 2 advice	High	High	Maintain
A2.5 Coastal salt marshes and saline reedbeds	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	High	Moderate	Maintain
A5.2 Subtidal sand	BSH	Tranche 2 advice	High	Moderate	Maintain
A5.3 Subtidal mud	BSH	Tranche 2 advice	No confidence	No confidence	No GMA advised in 2014 for no confidence features.
Giant goby ( <i>Gobius cobitis</i> )	SOCI	Tranche 2 advice	Low	Low	Maintain
Native oyster ( <i>Ostrea edulis</i> )	SOCI	Tranche 2 advice	Low	Low	Maintain

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
Pink sea fan ( <i>Eunicella verrucosa</i> )	SOCI	Tranche 2 advice	Low	Low	Maintain
A2.4 Intertidal mixed sediments	BSH	T2 new features	High	High	Maintain
A3.1 High energy infralittoral rock	BSH	T2 new features	High	Moderate	Maintain
A3.2 Moderate energy infralittoral rock	BSH	T2 new features	High	Moderate	Maintain
Estuarine rocky habitats	HOCl	T2 new features	High	High	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Newquay and the Gannel rMCZ FS 37

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00030	2013 EA MCZ Verification Survey - Newquay and the Gannel		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00038	NE Regional Staff MCZ Verification Photos	NE Regional Staff MCZ Verification Photos	NE National GI
D_00051	2013 Natural England MCZ Verification Survey - Newquay and the Gannel		NE National GI
D_00128	Marine Recorder snapshot 2013_06_24	2012 Seasearch Cornwall Surveys of North Coast	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00139	Marine Recorder snapshot 2013_06_24	2011 Seasearch Cornwall Surveys of North Coast	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>



Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00270	Marine Recorder snapshot 2013_06_24	1992-1993 JNCC <i>Gobius cobitis</i> survey south west Britain	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00286	Marine Recorder snapshot 2013_06_24	1991 NRA Gannel Estuary littoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSEaMap 2012	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00357	MESH Combined EUNIS 20140203	MNCR Area Summaries - Inlets in the Bristol Channel and approaches	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00378	MESH Combined EUNIS 20140203	Intertidal mudflat layer for England	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
M_00045	ABPmer 2012 data collection - original data - dataset: FS	Cornwall_FOCI_Species2 – various data collected by ERCCIS	Environmental Records Centre for Cornwall and the Isles of Scilly <a href="http://www.ercis.org.uk">http://www.ercis.org.uk</a>

#### A9.13.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Newquay and the Gannel rMCZ FS 37

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.1 High energy intertidal rock	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
A1.2 Moderate energy intertidal rock	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.3 Low energy intertidal rock	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
A2.1 Intertidal coarse sediment	Tranche 2 advice	High	Low	Low	Low	Manually downgraded to low/low based on expert judgement as based on parent feature alone.
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
A2.3 Intertidal mud	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
A2.5 Coastal salt marshes and saline reedbeds	Tranche 2 advice	High	Low	Moderate	Moderate	Updated following Protocol E based on more recent data.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low	Low	High	Moderate	NE has high confidence in feature extent in west of site but not over entire site.
A5.2 Subtidal sand	Tranche 2 advice	Low	Low	High	Moderate	Updated following Protocol E based on more recent data.
A5.3 Subtidal mud	Tranche 2 advice	Low	Low	No confidence	No confidence	Manually downgraded to no confidence based on expert judgement as original evidence for feature was based on parent feature alone.
Giant goby ( <i>Gobius cobitis</i> )	Tranche 2 advice	Low	Low	Low	Low	New data from photos expected.
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Low	Low	Low	Low	
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	Low	Low	Low	Low	

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A2.4 Intertidal mixed sediments	T2 new features	N/A	N/A	High	High	
A3.1 High energy infralittoral rock	T2 new features	N/A	N/A	High	Moderate	
A3.2 Moderate energy infralittoral rock	T2 new features	N/A	N/A	High	Moderate	
Estuarine rocky habitats	T2 new features	N/A	N/A	High	High	

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Newquay and the Gannel rMCZ FS 37

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A1.1 High energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A1.3 Low energy Intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A2.1 Intertidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Maintain	Maintain	No change
A2.3 Intertidal mud	Tranche 2 advice	Maintain	Maintain	No change
A2.5 Coastal salt marshes and saline reedbeds	Tranche 2 advice	Maintain	Maintain	No change
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Maintain	No change
A5.3 Subtidal mud	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for no confidence features.
Giant goby ( <i>Gobius cobitis</i> )	Tranche 2 advice	Maintain	Maintain	No change
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Maintain	Maintain	No change
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	Maintain	Maintain	No change
A2.4 Intertidal mixed sediments	T2 new features	N/A	Maintain	New feature
A3.1 High energy infralittoral rock	T2 new features	N/A	Maintain	New feature
A3.2 Moderate energy infralittoral rock	T2 new features	N/A	Maintain	New feature
Estuarine rocky habitats	T2 new features	N/A	Maintain	New feature

### A9.13.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.1 High energy intertidal rock	Tranche 2 advice	Low		Moderate	
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Low		Moderate	
A1.3 Low energy Intertidal rock	Tranche 2 advice	Low		Moderate	
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low		Moderate	
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Low		Moderate	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A2.3 Intertidal mud	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
A2.5 Coastal salt marshes and saline reedbeds	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low		Moderate	
A5.2 Subtidal sand	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
Giant goby ( <i>Gobius cobitis</i> )	Tranche 2 advice	Low		Moderate	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
A2.4 Intertidal mixed sediments	T2 new features	Low		Moderate	
A3.1 High energy infralittoral rock	T2 new features	Low		Moderate	
A3.2 Moderate energy infralittoral rock	T2 new features	Low		Moderate	
Estuarine rocky habitats	T2 new features	Low		Moderate	

### A9.13.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
A1.1 High energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.2 Moderate energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.3 Low energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.1 Intertidal coarse sediment	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation		
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
A2.3 Intertidal mud	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.5 Coastal salt marshes and saline reedbeds	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A5.2 Subtidal sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.3 Subtidal mud	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
Giant goby ( <i>Gobius cobitis</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	Yes	No	No	No designation	Yes	New internal photographic evidence of SOCI presence verified by specialists. Will be added post consultation.



Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
Native oyster ( <i>Ostrea edulis</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	Yes	No	Yes	Further consideration		
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	SOCI	No	No	No	Move to Q2	No	No	Yes	Further consideration		
A2.4 Intertidal mixed sediments	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A3.1 High energy infralittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A3.2 Moderate energy infralittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.1 High energy circalittoral rock	T2 new features	BSH	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
Tide-swept channels	T2 new features	HOCI	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		

<b>Feature name</b>	<b>Feature status</b>	<b>Feature type</b>	<b>Q1a. Confidence score of at least moderate for feature presence?</b>	<b>Q1b. Is 1a based only on parent habitat being present?</b>	<b>Q1c. Confidence score of at least moderate for extent/distribution?</b>	<b>Outcome from question 1 assessment: Are there enough data to support feature designation?</b>	<b>Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?</b>	<b>Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?</b>	<b>Q2b: Is the feature at high risk of damage?</b>	<b>Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?</b>	<b>Are new data coming that are likely to improve feature confidence</b>	<b>Comments regarding 'new data coming'</b>
Estuarine rocky habitats	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		Estuarine site – Q2 has not been calculated.	No, but new data coming.

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
No, but new data coming.	12	2,141.4	

### **A9.13.7 Additional advice**

#### **A9.13.7.1 Advice on specific features**

No additional advice given to Defra on specific features for this site.

#### **A9.13.7.2 Advice on boundaries**

Defra requested advice on the implications for protection for the proposed features for the site if the curved portions of the existing seaward boundary were to be straightened.

Natural England is currently working with Defra on their proposals for boundary alterations. The proposed boundary changes (figure 3) are expected to be minor alterations, and would not be expected to significantly alter the protection offered for features by the site overall, or impact analysis of the levels of activities taking place within the site.

Table 9 is not applicable to this site.

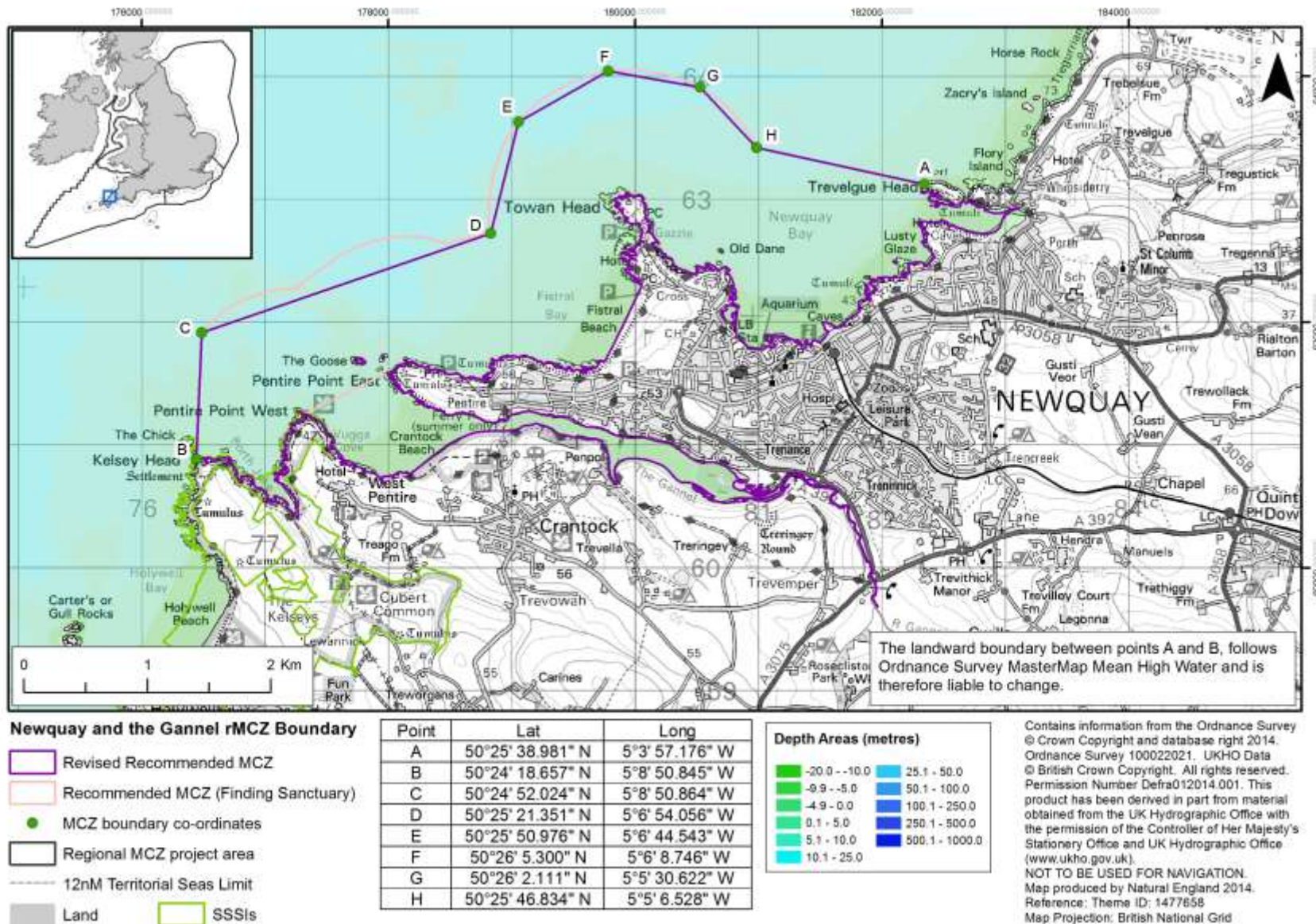


Figure 3 Boundary change proposed by Defra for Newquay and the Gannel rMCZ FS 37

### A9.13.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00075	CCO Aerial Photography 2001–2013	FS 20, FS 21, FS 23, FS 25, FS 26, FS 33, FS 34, FS 37, FS 39, FS 40, FS 42, FS 43	Aerial photographs	Uninterpreted remote sensing data.
D_00076	CCO Lidar survey 2011–2014	NG 13, FS 20, FS 21, FS 23, FS 25, FS 26, FS 33, FS 34, FS 37, FS 39, FS 40, FS 42, FS 43	Lidar	Uninterpreted remote sensing data.
D_00080	Intertidal Discovery Project ERCCIS 2013–2014	FS 37, FS 39, FS 40	Phase 1 biotope mapping	Not available before data cut-off.
D_00513	Hartland Point to Land's End	FS 36, FS 37, FS 38, FS 40	Multibeam	Uninterpreted remote sensing data.

## A9.14 Hartland Point to Tintagel rMCZ FS 40

### A9.14.1 Site description

Hartland Point to Tintagel rMCZ covers an area of 304 km<sup>2</sup> and extends from the shoreline to depths of approximately 50 m. The site boundary follows the coastline from Hartland Point in Devon southwards to Tintagel Head in Cornwall. It is made up of 3 distinct areas exposed to high levels of wave energy and is characterised by steep rocky cliffs, sea caves and stretches of sandy surf beaches. The rMCZ intersects with an area of higher than average benthic habitats and species diversity. It is being proposed for a wide range of features that include 13 BSHs, 2 HOCl and 1 SOCl, which are important at a regional and national scale. The site contributes the largest area of 3 intertidal habitats in the region and is also crucial for connectivity along the North Coast of Devon and Cornwall. The site contains exceptional colonies of honeycomb worm reefs (*Sabellaria alveolata*). This site's reef-building tubeworm populations are considered to be among the finest in Britain. The rare pink sea fan (*Eunicella verrucosa*) coral can also be found within the site.



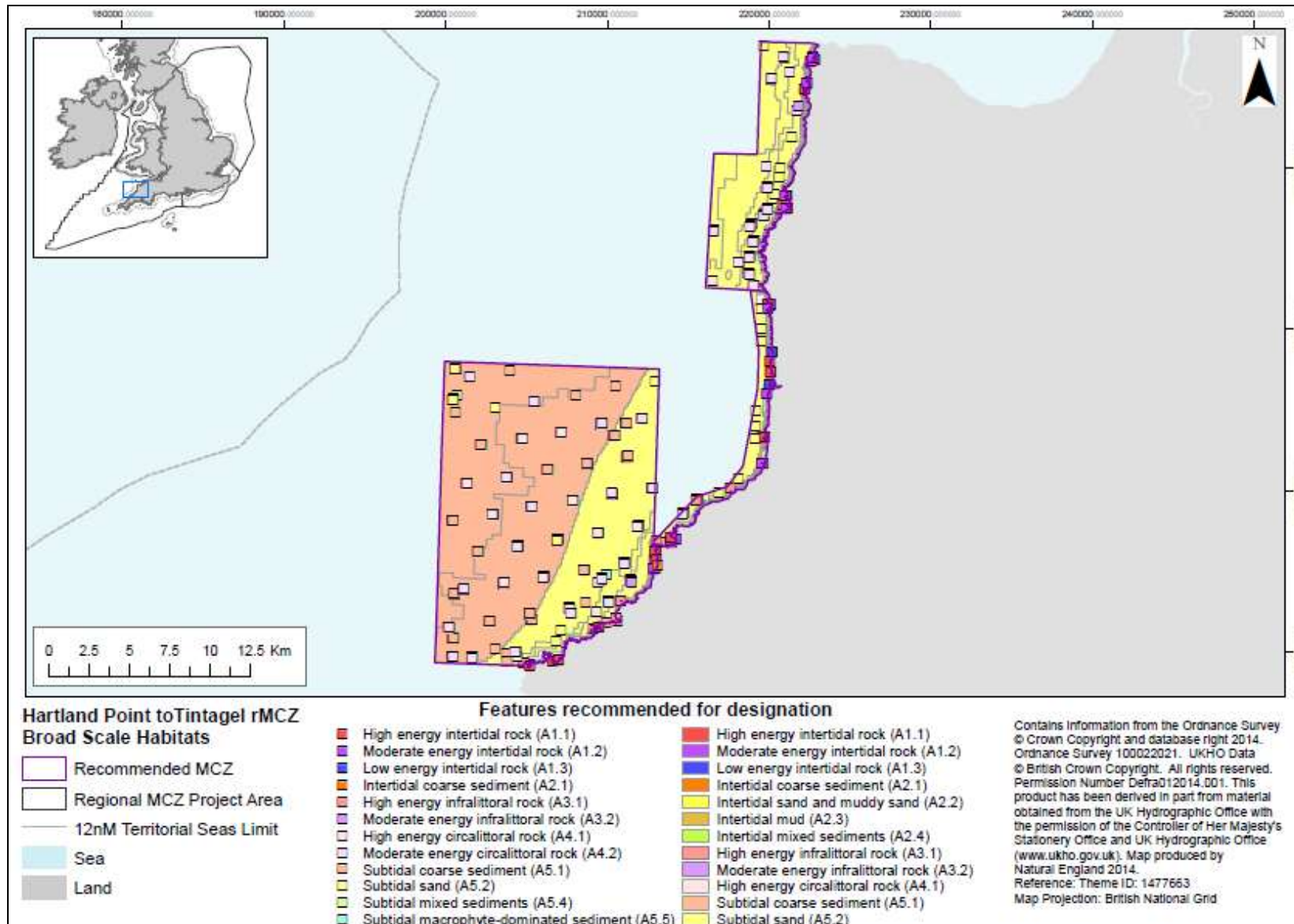
**Plate 1** Honeycomb worm reefs (*Sabellaria alveolata*), Widemouth Beach © Lucia Mascorda, Natural England



**Plate 2** High energy rock beach from Hartland Point © Lucia Mascorda, Natural England



## A9.14.2 Site feature maps



**Figure 1** Location of mapped BSHs in Hartland Point to Tintagel rMCZ FS 40



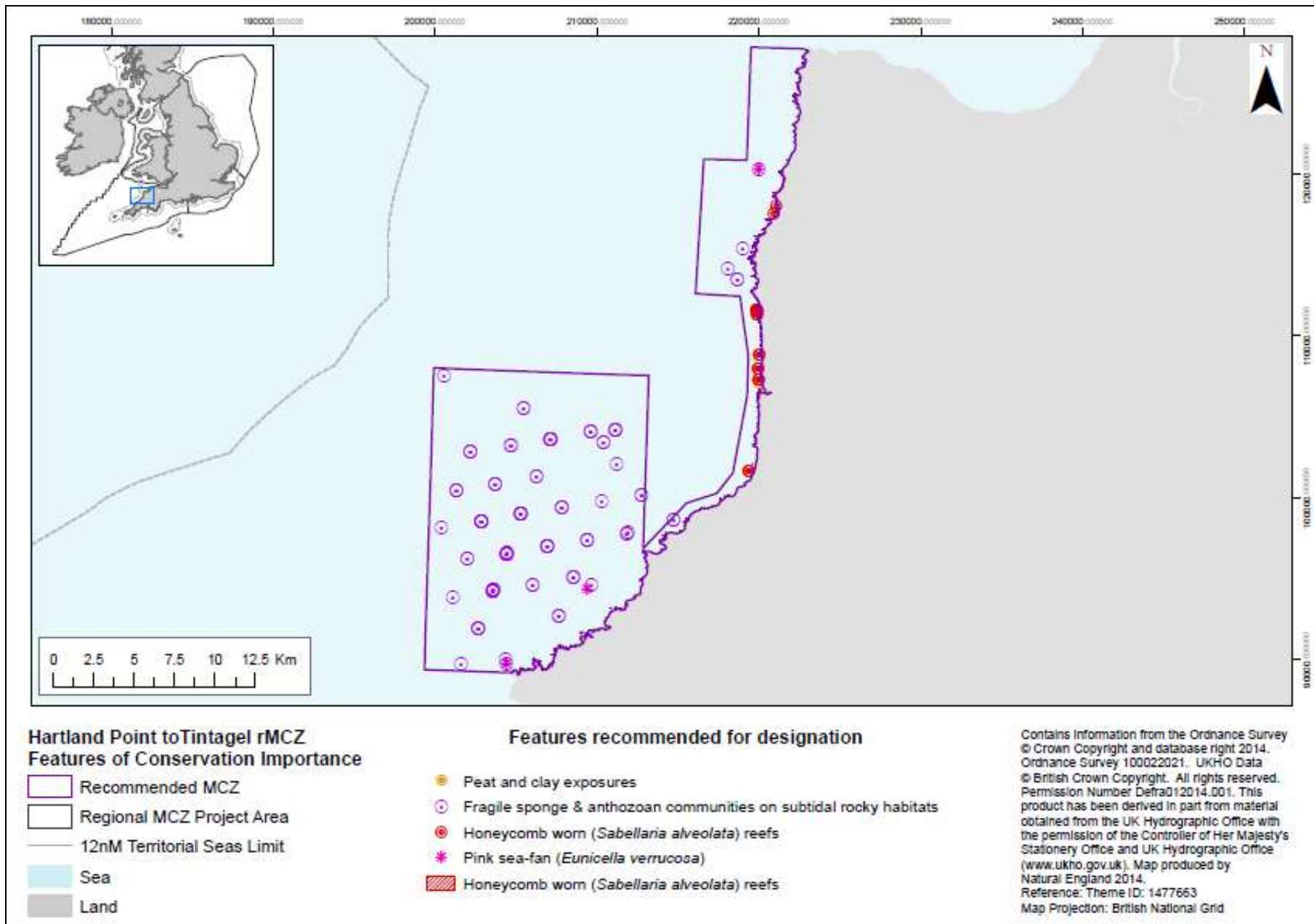


Figure 2 Location of mapped FOCI in Hartland Point to Tintagel rMCZ FS 40

### A9.14.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Hartland Point to Tintagel rMCZ FS 40

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.1 High energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A1.2 Moderate energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A2.1 Intertidal coarse sediment	BSH	Tranche 2 advice	High	High	Maintain
A2.2 Intertidal sand and muddy sand	BSH	Tranche 2 advice	High	High	Maintain
A2.3 Intertidal mud	BSH	Tranche 2 advice	Low	Low	Maintain
A2.4 Intertidal mixed sediment	BSH	Tranche 2 advice	Low	Low	Maintain
A2.5 Coastal salt marshes and saline reedbeds	BSH	Tranche 2 advice	No confidence	No confidence	N/A
A3.1 High energy infralittoral rock	BSH	Tranche 2 advice	High	Moderate	Maintain
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	High	High	Recover
A5.2 Subtidal sand	BSH	Tranche 2 advice	High	High	Recover
Fragile sponge and anthozoan communities on subtidal rocky habitats	HOCI	Tranche 2 advice	High	Moderate	Recover
Honeycomb worm reef ( <i>Sabellaria alveolata</i> )	HOCI	Tranche 2 advice	High	High	Maintain
Peacock's tail ( <i>Padina pavonica</i> )	SOCI	Tranche 2 advice	No confidence	No confidence	N/A
Pink sea fan ( <i>Eunicella verrucosa</i> )	SOCI	Tranche 2 advice	Moderate	Low	Recover
A1.3 Low energy intertidal rock	BSH	T2 new features	High	High	Maintain
A3.2 Moderate energy infralittoral rock	BSH	T2 new features	High	Moderate	Maintain

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A4.1 High energy circalittoral rock	BSH	T2 new features	High	Moderate	Recover
A4.2 Moderate energy circalittoral rock	BSH	T2 new features	High	Moderate	Recover

**Table 2** Supporting documentation, reference materials and relevant survey details for Hartland Point to Tintagel rMCZ FS 40

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00024	2013 EA MCZ verification survey Hartland Point to Tintagel		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00038	NE MCZ verification photos	NE regional staff MCZ verification photos	NE National GI
D_00048	2013 NE MCZ verification survey Hartland Point to Tintagel		NE National GI
D_00162	Marine Recorder snapshot 2013_06_24	2009 Seasearch Devon survey of North Devon Coast	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00185	Marine Recorder snapshot 2013_06_24	2006 Seasearch North Cornwall	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00269	Marine Recorder snapshot 2013_06_24	1992–1993 DWT Hartland Quay littoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00334	Marine Recorder snapshot 2013_06_24	1979 SWBSS Tintagel Head to the Devon border survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00394	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from MB102 layers by MarLIN	<a href="https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00442	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00058)	English Heritage peat records	<a href="https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organizations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
M_00045	ABPmer 2012 data collection - original data - dataset: FS	Cornwall_FOCI_Species2 – various data collected by ERCCIS	Environmental Records Centre for Cornwall and the Isles of Scilly <a href="http://www.ercis.org.uk">http://www.ercis.org.uk</a>

#### A9.14.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Hartland Point to Tintagel rMCZ FS 40

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.1 High energy intertidal rock	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
A1.2 Moderate energy intertidal rock	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
A2.1 Intertidal coarse sediment	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Moderate	Low	High	High	Updated following Protocol E based on more recent data.
A2.3 Intertidal mud	Tranche 2 advice	0	0	Low	Low	Manually downgraded to low/low based on expert judgement as based on parent feature alone.
A2.4 Intertidal mixed sediment	Tranche 2 advice	Moderate	Low	Low	Low	Manually downgraded to low/low based on expert judgement as based on parent feature alone.
A2.5 Coastal salt marshes and saline reedbeds	Tranche 2 advice	Moderate	Low	No confidence	No confidence	Updated following Protocol E based on more recent data.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A3.1 High energy infralittoral rock	Tranche 2 advice	Low	Low	High	Moderate	Updated following Protocol E based on more recent data.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low	Low	High	High	Extent manually increased to high due to well-distributed sample data covering >50% of feature as per Protocol E.
A5.2 Subtidal sand	Tranche 2 advice	Low	Low	High	High	Extent manually increased to high due to well-distributed sample data covering >50% of feature as per Protocol E.
Fragile sponge and anthozoan communities on subtidal rocky habitats	Tranche 2 advice	Low	Low	High	Moderate	Updated following Protocol E based on more recent data.
Honeycomb worm reef ( <i>Sabellaria alveolata</i> )	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
Peacock's tail ( <i>Padina pavonica</i> )	Tranche 2 advice	Low	Low	No confidence	No confidence	Updated following Protocol E based on more recent data.
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	Moderate	Moderate	Moderate	Low	Updated following Protocol E based on more recent data.
A1.3 Low energy intertidal rock	T2 new features	N/A	N/A	High	High	Updated following Protocol E based on more recent data.
A3.2 Moderate energy infralittoral rock	T2 new features	N/A	N/A	High	Moderate	Updated following Protocol E based on more recent data.
A4.1 High energy circalittoral rock	T2 new features	N/A	N/A	High	Moderate	Updated following Protocol E based on more recent data.
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	N/A	High	Moderate	Updated following Protocol E based on more recent data.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Hartland Point to Tintagel rMCZ FS 40

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A1.1 High energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A2.1 Intertidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Maintain	Maintain	No change
A2.3 Intertidal mud	Tranche 2 advice	Maintain	Maintain	No change
A2.4 Intertidal mixed sediment	Tranche 2 advice	Maintain	Maintain	No change
A2.5 Coastal salt marshes and saline reedbeds	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for no confidence features.
A3.1 High energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Recover	Updated exposure assessments indicate that there is exposure (low) to benthic trawling and exposure (low) to dredging within the site.
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Recover	Updated exposure assessments indicate that there is exposure (moderate) to benthic trawling and exposure (low) to dredging within the site.
Fragile sponge and anthozoan communities on subtidal rocky habitats	Tranche 2 advice	Maintain	Recover	Updated exposure assessments indicate that there is exposure (moderate) to benthic trawling and exposure (low) to dredging within the site.
Honeycomb worm reef ( <i>Sabellaria alveolata</i> )	Tranche 2 advice	Maintain	Maintain	No change

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
Peacock's tail ( <i>Padina pavonica</i> )	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for no confidence features.
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	Maintain	Recover	Updated fisheries exposure assessments indicate that there is exposure (low) to benthic trawling and dredging over the feature.
A1.3 Low energy intertidal rock	T2 new features	N/A	Maintain	New feature
A3.2 Moderate energy infralittoral rock	T2 new features	N/A	Maintain	New feature
A4.1 High energy circalittoral rock	T2 new features	N/A	Recover	New feature
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	Recover	New feature

#### A9.14.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.1 High energy intertidal rock	Tranche 2 advice	Low		Moderate	
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Low		Moderate	
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low		Moderate	
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Low		Moderate	
A2.3 Intertidal mud	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more fishing pressures; however, local knowledge indicates that such activities do not happen over the feature. Such fishing activities do not

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
					occur in the intertidal zone where this feature exists. Therefore a high future risk of unfavourable condition is not thought to be justified.
A2.4 Intertidal mixed sediment	Tranche 2 advice	Low		Moderate	
A3.1 High energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A5.1 Subtidal coarse sediment	Tranche 2 advice	High	Current risk from the sensitivity of this feature to pressures associated with dredging.	Moderate	
A5.2 Subtidal sand	Tranche 2 advice	High	Current risk from the sensitivity of this feature to pressures associated with benthic trawling and dredging.	High	
Fragile sponge and anthozoan communities on subtidal rocky habitats	Tranche 2 advice	High	Current risk from the sensitivity of this feature to pressures associated with dredging.	High	
Honeycomb worm reef ( <i>Sabellaria alveolata</i> )	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more fishing pressures; however, such activities do not happen over the feature. Such fishing activities do not occur in the intertidal zone where this feature exists. Therefore a high future risk of unfavourable condition is not thought to be justified.
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	High	Current risk from the sensitivity of this feature to pressures associated with dredging.	High	



Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.3 Low energy intertidal rock	T2 new features	Low		Moderate	
A3.2 Moderate energy infralittoral rock	T2 new features	Low		Moderate	
A4.1 High energy circalittoral rock	T2 new features	High	Current risk from the sensitivity of this feature to pressures associated with benthic trawling and dredging.	Moderate	
A4.2 Moderate energy circalittoral rock	T2 new features	High	Current risk from the sensitivity of this feature to pressures associated with benthic trawling and dredging.	High	

## A9.14.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
A1.1 High energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.2 Moderate energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.1 Intertidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.3 Intertidal mud	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	Yes	Further consideration		
A2.4 Intertidal mixed sediment	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation		
A3.1 High energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A5.2 Subtidal sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Fragile sponge and anthozoan communities on subtidal rocky habitats	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Honeycomb worm reef ( <i>Sabellaria alveolata</i> )	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	SOCI	Yes	No	No	Move to Q2	No	No	Yes	Further consideration		
A1.3 Low energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A3.2 Moderate energy infralittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.1 High energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence	Comments regarding 'new data coming'
A4.2 Moderate energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

<b>Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?</b>	<b>Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)</b>	<b>Comment on Q2 assessment</b>	<b>Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>
No	98%		Yes. Available data support at least one JNCC Big Gaps identified feature for designation.

**Table 8** Site level commentary

<b>Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>	<b>Number of features with at least moderate confidence in both presence and extent (T2 new sites only)</b>	<b>Site area (ha)</b>	<b>Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)</b>
Yes. Available data support at least one JNCC Big Gaps identified feature for designation.	13	30,397.2	The combination of its size, big gap filling ability, and number of features with reasonable confidence make this site one of the strong candidates among the inshore sites that could contribute to the network.

## A9.14.7 Additional advice

### A9.14.7.1 Advice on specific features

There is limited information on the extent of pink sea fan (*Eunicella verrucosa*) in Hartland Point to Tintagel rMCZ FS 40; however, local group feedback has recently highlighted extensive presence of *Eunicella verrucosa* as well as several sightings of the rare spiny lobster (*Palinurus elephas*) within the site.

### A9.14.7.2 Advice on boundaries

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### A9.14.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00075	CCO aerial photography 2001–2013	FS 20, FS 21, FS 23, FS 25, FS 26, FS 33, FS 34, FS 37, FS 39, FS 40, FS 42, FS 43	Aerial photographs	Uninterpreted remote sensing data.
D_00076	CCO Lidar survey 2011–2014	NG 13, FS 20, FS 21, FS 23, FS 25, FS 26, FS 33, FS 34, FS 37, FS 39, FS 40, FS 42, FS 43	Lidar	Uninterpreted remote sensing data.
D_00080	Intertidal discovery project ERCCIS 2013–2014	FS 37, FS 39, FS 40	Phase 1 biotope mapping	Not available before data cut-off.
D_00513	Hartland Point to Land's End	FS 36, FS 37, FS 38, FS 40	Multibeam	Uninterpreted remote sensing data.

## A9.15 Bideford to Foreland Point rMCZ FS 43

### A9.15.1 Site description

Bideford to Foreland Point rMCZ is an inshore site located on the north Devon coast. The boundary extends from Mermaid's pool at Westward Ho! to Foreland Point on the Exmoor coast. An area of approximately 101 km<sup>2</sup> is protected. This rMCZ covers a range of habitats from the intertidal beaches to the subtidal sediments found up to depths of 36 m. The site follows the coastline from Westward Ho! to Foreland Point and is characterised by cliffs and rocky shores, with small sandy bays and inlets. The exception is Bideford Bay, an expanse of sandy shoreline backed by extensive sand dunes at the mouth of the Taw Torridge estuary system. The site covers a wide range of features that includes 14 BSHs, 5 HOCl and 2 SOCl. The beaches at Woolacombe are known to include rocky shore communities adjacent to sand characterised by solitary and small colonies of the honeycomb worm (*Sabellaria alveolata*). The rare pink sea fan (*Eunicella verrucosa*), a soft coral with intricate branches made up of colonies of tiny anemone-like polyps, can be found within the subtidal zone. Pink sea fans are slow growing and vulnerable to damage. Spiny lobster (*Palinurus elephas*) a large, brightly coloured crustacean that can grow up to 60 cm long, can be found within the site. Spiny lobsters were once an important commercial species that now require protection due to a declining population around the south-west.



**Plate 1** High energy intertidal rock, Woolacombe Beach 2014 © Ruth Porter and Lucia Mascorda, Natural England



**Plate 2** Low energy intertidal rock, Lynmouth 2014 © Ruth Porter and Lucia Mascorda, Natural England

## A9.15.2 Site feature maps

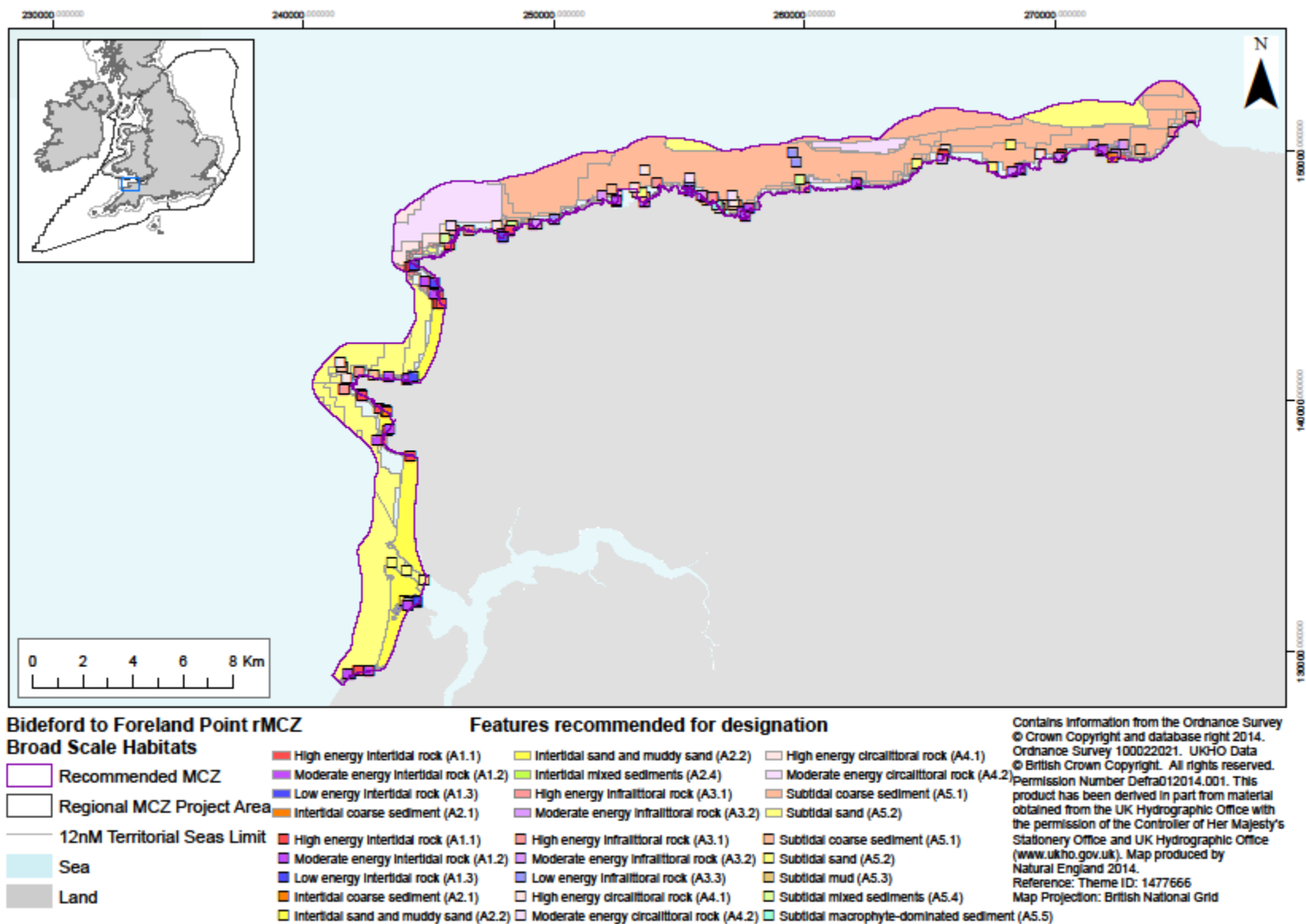
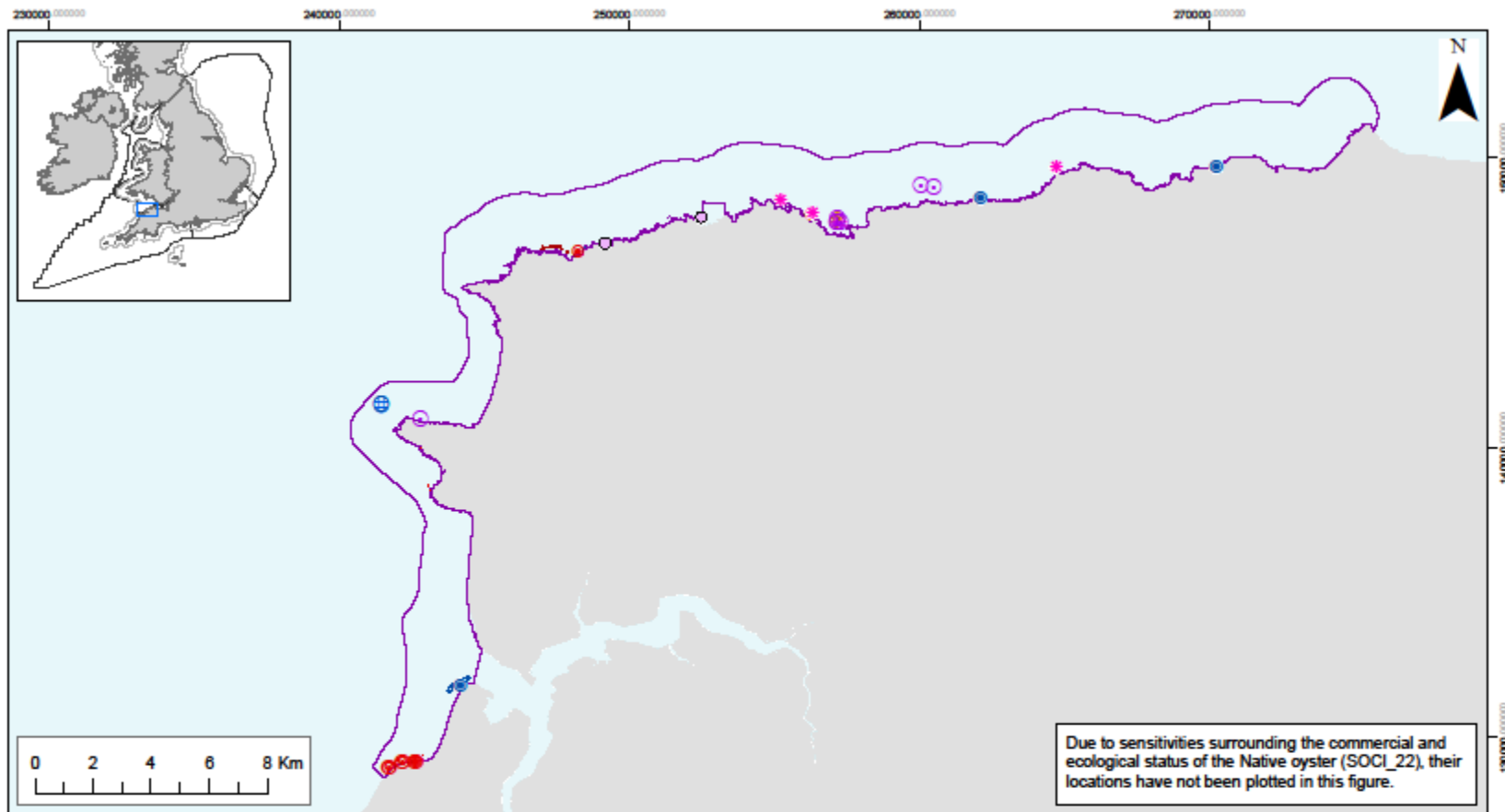


Figure 1 Location of mapped BSHs in Bideford to Foreland Point rMCZ FS 43





**Bidford to Foreland Point rMCZ**  
**Features of Conservation Importance**

- Recommended MCZ
- Regional MCZ Project Area
- 12nM Territorial Seas Limit
- Sea
- Land

- ⊕ Blue Mussel Beds
- ⊙ Estuarine rocky habitats
- ⊙ Honeycomb worm (*Sabellaria alveolata*) reefs
- ⊙ Intertidal under boulder communities
- ⊙ Littoral chalk communities
- ⊙ Fragile sponge & anthozoan communities on subtidal rocky habitats

**Features recommended for designation**

- \* Pink sea-fan (*Eunicella verrucosa*)
- + Spiny lobster (*Palinurus elephas*)
- ⊙ Estuarine rocky habitats
- ⊙ Littoral chalk communities
- ⊙ Honeycomb worm (*Sabellaria alveolata*) reefs

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 Stationery Office and UK Hydrographic Office  
 (www.ukho.gov.uk). Map produced by  
 Natural England 2014.  
 Reference: Theme ID: 1477666  
 Map Projection: British National Grid

**Figure 2** Location of mapped FOCl in Bidford to Foreland Point rMCZ FS 43

### A9.15.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Bideford to Foreland Point rMCZ FS 43

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.1 High energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A1.2 Moderate energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A1.3 Low energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A2.1 Intertidal coarse sediment	BSH	Tranche 2 advice	High	High	Maintain
A2.2 Intertidal sand and muddy sand	BSH	Tranche 2 advice	High	High	Maintain
A2.3 Intertidal mud	BSH	Tranche 2 advice	No confidence	No confidence	N/A
A2.4 Intertidal mixed sediments	BSH	Tranche 2 advice	High	High	Maintain
A3.1 High energy infralittoral rock	BSH	Tranche 2 advice	High	Moderate	Maintain
A3.2 Moderate energy infralittoral rock	BSH	Tranche 2 advice	High	Moderate	Maintain
A4.1 High energy circalittoral rock	BSH	Tranche 2 advice	High	Moderate	Maintain
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A5.2 Subtidal sand	BSH	Tranche 2 advice	High	Moderate	Recover
Honeycomb worm reefs ( <i>Sabellaria alveolata</i> )	HOCI	Tranche 2 advice	High	High	Maintain
Pink sea fan ( <i>Eunicella verrucosa</i> )	SOCI	Tranche 2 advice	Moderate	Moderate	Maintain
A3.3 Low energy infralittoral rock	BSH	T2 new features	Moderate	Moderate	Maintain
A4.2 Moderate energy circalittoral rock	BSH	T2 new features	High	Moderate	Maintain
A5.4 Subtidal mixed sediments	BSH	T2 new features	Moderate	Moderate	Maintain

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
Intertidal underboulder communities	HOCl	T2 new features	Moderate	Moderate	Maintain
Littoral chalk communities	HOCl	T2 new features	High	High	Maintain
Estuarine rocky habitats	HOCl	T2 new features	High	High	Maintain
Fragile sponge and anthozoan communities on subtidal rocky habitats	HOCl	T2 new features	Moderate	Moderate	Maintain
Spiny lobster ( <i>Palinurus elephas</i> )	SOCI	T2 new features	Moderate	Moderate	Recover

**Table 2** Supporting documentation, reference materials and relevant survey details for Bideford to Foreland Point rMCZ FS 43

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00001	2011 Atlantic Array benthic ecology characterisation report (D_00001) - JER4290_AA_Benthic_CombinedBiotopes_RPS_110721_A	2011 Atlantic array benthic ecology characterisation report (D_00001)	Channel Energy Limited, RWE npower renewables, Auckland House, Lydiard Fields, Great Western Way, Swindon, Wiltshire, SN5 8ZT atlanticarray@npower-renewables.com
D_00038	NE MCZ verification photos	NE regional staff MCZ verification photos	NE National GI
D_00041	2013 NE MCZ verification survey Bideford to Foreland Point		NE National GI
D_00107	Marine Recorder new data 2014_02_14	2013 Seasearch Devon survey of North Devon	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00126	Marine Recorder snapshot 2013_06_24	2012 Seasearch Devon survey of Bideford to Foreland Point rMCZ	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00149	Marine Recorder snapshot 2013_06_24	2010 Seasearch Devon survey of North Devon coast	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00208	Marine Recorder snapshot 2013_06_24	2003 Seasearch surveys in Devon	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00214	Marine Recorder snapshot 2013_06_24	2002 Seasearch surveys in Devon	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00265	Marine Recorder snapshot 2013_06_24	1992–1995 DWT Morte Bay littoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00267	Marine Recorder snapshot 2013_06_24	1992–1994 DWT Ilfracombe littoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00282	Marine Recorder snapshot 2013_06_24	1991–1993 DWT Saunton littoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00308	Marine Recorder snapshot 2013_06_24	1988–1991 MNCR Morte Point and Ilfracombe littoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00309	Marine Recorder snapshot 2013_06_24	1988 OPRU HRE Tav and Torridge Estuary survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00327	Marine Recorder snapshot 2013_06_24	1984–1985 Harris lower Torridge estuary littoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00335	Marine Recorder snapshot 2013_06_24	1978–1979 SWBSS North Devon survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00357	MESH Combined EUNIS 20140203	MNCR area summaries – inlets in the Bristol Channel and approaches	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00369	MESH Combined EUNIS 20140203	The distribution of sublittoral macrofauna communities in the Bristol Channel in relation to substrate	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00387	EA Eel and Smelt data_20140305 - freshwater	2011 Torridge, Main River Torridge, U/S Gidcott Mill (Sp) (WFDS) survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00394	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from MB102 layers by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
M_00095	MB0166 - JER4290_AA_Benthic_DraftE pifaunaBiotopes_RPS_110721_A_MCZ	RWE npower renewables Limited	Channel Energy Limited, RWE npower renewables, Auckland House, Lydiard Fields, Great Western Way, Swindon, Wiltshire, SN5 8ZT atlanticarray@npower-renewables.com
M_00124	MB0116 - Habmap_points_181109_MCZ	HABMAP 2009, K Mortimer and H Wilson	National Museum Wales
M_00225	MB0116 - EID_15_16_MCZ	Delle Chiaje (1828). The status, distribution and ecology of Paludinella littorina (Gastropoda: Assimineidae) in the British Isles	<a href="http://www.marbef.org/data/eurobiss_earch.php">http://www.marbef.org/data/eurobiss_earch.php</a>

#### A9.15.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Bideford to Foreland Point rMCZ FS 43

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.1 High energy intertidal rock	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
A1.2 Moderate energy intertidal rock	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
A1.3 Low energy intertidal rock	Tranche 2 advice	Moderate	Low	High	High	Updated following Protocol E based on more recent data.
A2.1 Intertidal coarse sediment	Tranche 2 advice	Moderate	Low	High	High	Updated following Protocol E based on more recent data.
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Moderate	Low	High	High	Updated following Protocol E based on more recent data.
A2.4 Intertidal mixed sediments	Tranche 2 advice	Moderate	Low	High	High	Updated following Protocol E based on more recent data.
A2.3 Intertidal mud	Tranche 2 advice	Moderate	Low	No confidence	No confidence	Removed polygonal data so no data for assessment.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A3.1 High energy infralittoral rock	Tranche 2 advice	Low	Low	High	Moderate	Updated following Protocol E based on more recent data.
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low	Low	High	Moderate	Updated following Protocol E based on more recent data.
A4.1 High energy circalittoral rock	Tranche 2 advice	Low	Low	High	Moderate	Updated following Protocol E based on more recent data.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low	Low	Moderate	Moderate	Updated following Protocol E based on more recent data.
A5.2 Subtidal sand	Tranche 2 advice	Low	Low	High	Moderate	Updated following Protocol E based on more recent data.
Honeycomb worm reefs ( <i>Sabellaria alveolata</i> )	Tranche 2 advice	Low	Low	High	High	Updated following Protocol E based on more recent data.
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	Moderate	Moderate	Moderate	Moderate	Updated following Protocol E based on more recent data.
A3.3 Low energy infralittoral rock	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	N/A	High	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
A5.4 Subtidal mixed sediments	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Intertidal underboulder communities	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Littoral chalk communities	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Estuarine rocky habitats	T2 new features	N/A	N/A	High	High	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
Fragile sponge and anthozoan communities on subtidal rocky habitats	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.
Spiny lobster ( <i>Palinurus elephas</i> )	T2 new features	N/A	N/A	Moderate	Moderate	New feature proposed as it has potential to fill a gap in the ecological network of MPAs.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Bideford to Foreland Point rMCZ FS 43

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A1.1 High energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A1.3 Low energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A2.1 Intertidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Maintain	Maintain	No change
A2.3 Intertidal mud	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for no confidence feature.
A2.4 Intertidal mixed sediments	Tranche 2 advice	Maintain	Maintain	No change
A3.1 High energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A4.1 High energy circalittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Recover	Local site knowledge concludes exposure (low) from benthic trawling.

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
Honeycomb worm reefs ( <i>Sabellaria alveolata</i> )	Tranche 2 advice	Maintain	Maintain	No change
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	Maintain	Maintain	No change
A3.3 Low energy infralittoral rock	T2 new features	N/A	Maintain	New feature
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	Maintain	New feature
A5.4 Subtidal mixed sediments	T2 new features	N/A	Maintain	New feature
Intertidal underboulder communities	T2 new features	N/A	Maintain	New feature
communities	T2 new features	N/A	Maintain	New feature
Estuarine rocky habitats	T2 new features	N/A	Maintain	New feature
Fragile sponge and anthozoan communities on subtidal rocky habitats	T2 new features	N/A	Maintain	New feature
Spiny lobster ( <i>Palinurus elephas</i> )	T2 new features	N/A	Recover	New feature

### A9.15.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.1 High energy intertidal rock	Tranche 2 advice	Low		Moderate	
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Low		Moderate	
A1.3 Low energy intertidal rock	Tranche 2 advice	Low		Moderate	
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low		Moderate	
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Low		Moderate	
A2.4 Intertidal mixed sediments	Tranche 2 advice	Low		Moderate	



Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A3.1 High energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A4.1 High energy circalittoral rock	Tranche 2 advice	Low		Moderate	
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low		Moderate	
A5.2 Subtidal sand	Tranche 2 advice	High	Current risk from the sensitivity of this feature to pressures associated with benthic trawling.	High	
Honeycomb worm reefs ( <i>Sabellaria alveolata</i> )	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge exposure to activities creating these pressures would not occur or would be minimal. Therefore a high future risk of unfavourable condition is not thought to be justified.
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge exposure to activities creating these pressures would not occur or would be minimal. Therefore a high future risk of unfavourable condition is not thought to be justified.
A3.3 Low energy infralittoral rock	T2 new features	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge exposure to activities creating these pressures would not occur or would be minimal. Therefore a high future risk of unfavourable condition is not thought to be justified.

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A4.2 Moderate energy circalittoral rock	T2 new features	Low		High	
A5.4 Subtidal mixed sediments	T2 new features	Low		Moderate	
Intertidal underboulder communities	T2 new features	Low		Moderate	
Littoral chalk communities	T2 new features	Low		Moderate	
Estuarine rocky habitats	T2 new features	Low		Moderate	
Fragile sponge and anthozoan communities on subtidal rocky habitats	T2 new features	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge exposure to activities creating these pressures would not occur or would be minimal. Therefore a high future risk of unfavourable condition is not thought to be justified.
Spiny lobster ( <i>Palinurus elephas</i> )	T2 new features	High	<i>Palinurus elephas</i> has a high vulnerability due to the sensitivity of this feature to potting. There is currently a high level of potting in the site, so there is a current high risk to this species.	High	Disagree with high future risk for this feature. <i>Palinurus elephas</i> has a high vulnerability due to the sensitivity of this feature to potting. In the future the risk will be managed through the Devon and Severn IFCA potting permit byelaw that will prohibit anyone taking or landing <i>Palinurus elephas</i> within their district.

## A9.15.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation / ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A1.1 High energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.2 Moderate energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.3 Low energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.1 Intertidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.4 Intertidal mixed sediments	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation / ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A3.1 High energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.1 High energy circalittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.2 Subtidal sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Honeycomb worm reefs ( <i>Sabellaria alveolata</i> )	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Pink sea fan ( <i>Eunicella verrucosa</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation / ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A3.3 Low energy infralittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.2 Moderate energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.4 Subtidal mixed sediments	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Intertidal underboulder communities	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Littoral chalk communities	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Estuarine rocky habitats	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Fragile sponge and anthozoan communities on subtidal rocky habitats	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation / ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Spiny lobster ( <i>Palinurus elephas</i> )	T2 new features	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

<b>Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?</b>	<b>Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)</b>	<b>Comment on Q2 assessment</b>	<b>Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>
No	91%		No, did not fill gap originally.

**Table 8** Site level commentary

<b>Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>	<b>Number of features with at least moderate confidence in both presence and extent (T2 new sites only)</b>	<b>Site area (ha)</b>	<b>Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)</b>
No, did not fill big gap originally.	21	10,143.4	

## **A9.15.7 Additional advice**

### **A9.15.7.1 Advice on specific features**

No additional advice given to Defra on specific features for this site.

### **A9.15.7.2 Advice on boundaries**

Defra requested advice on straightening the curved boundary for the site.

Natural England advised that this would be appropriate as long as there was no net loss to feature extent.

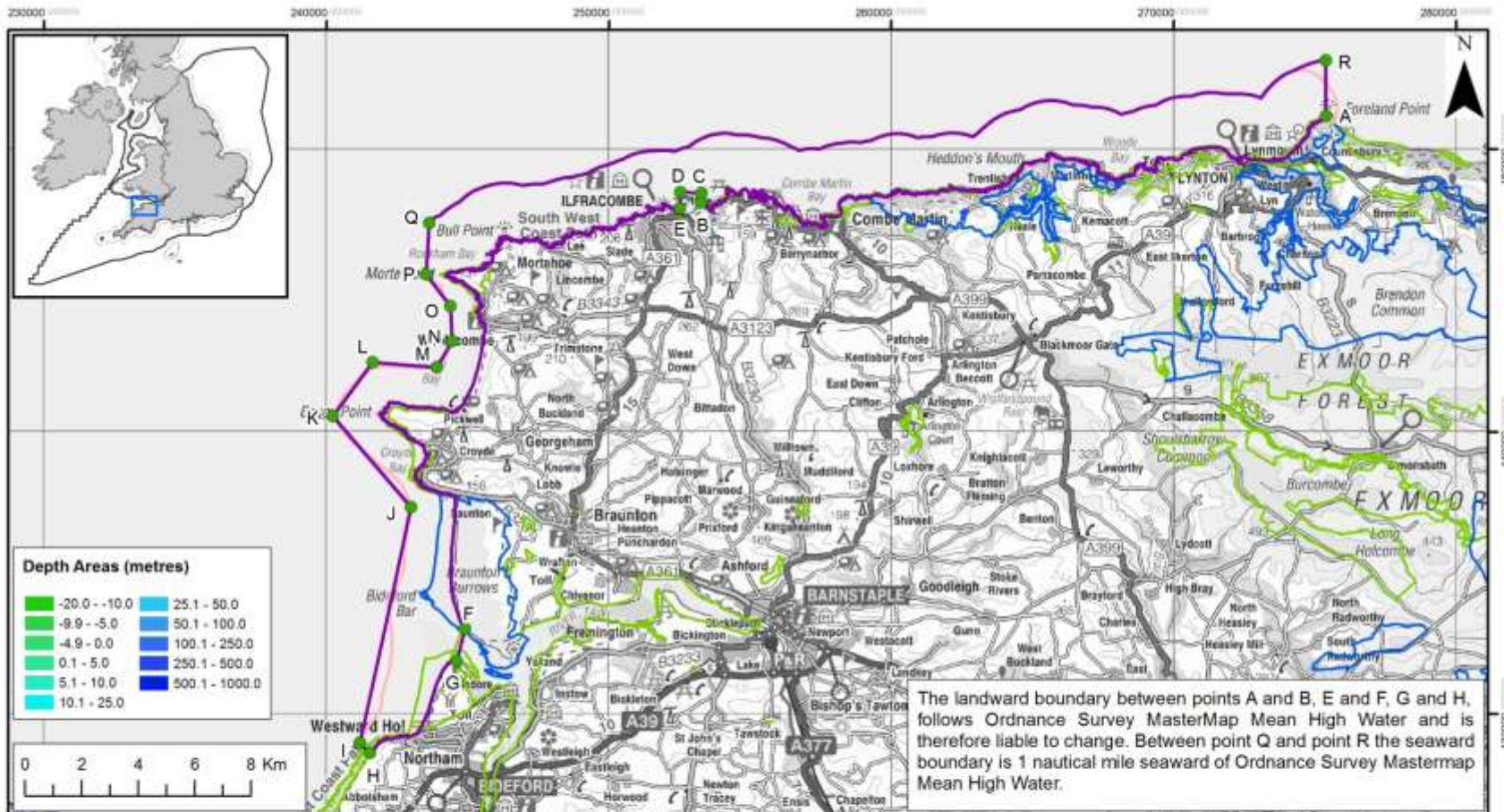
Defra also requested information on why the outer boundary extended to 1 nm in some areas and the 10 m depth contour in others.

Natural England advised that the boundary was selected by Finding Sanctuary to include the maximum extent of features without impinging on fishing activity in the area.

Natural England will continue to provide advice prior to the public consultation.

Table 9 is not applicable for this site.





The landward boundary between points A and B, E and F, G and H, follows Ordnance Survey MasterMap Mean High Water and is therefore liable to change. Between point Q and point R the seaward boundary is 1 nautical mile seaward of Ordnance Survey Mastermap Mean High Water.

**Bideford to Foreland Point rMCZ Boundary**

- Revised Recommended MCZ
- Recommended MCZ (Finding Sanctuary)
- Regional MCZ project area
- MCZ boundary co-ordinates
- SACs
- 12nM Territorial Seas Limit
- SSSIs

Point	Lat	Long	Point	Lat	Long
A	51°14' 45.850" N	3°47' 12.166" W	J	51°6' 48.963" N	4°14' 39.954" W
B	51°12' 47.504" N	4°8' 7.894" W	K	51°8' 30.292" N	4°17' 8.020" W
C	51°12' 58.795" N	4°6' 7.505" W	L	51°9' 33.796" N	4°15' 57.921" W
D	51°12' 58.967" N	4°6' 46.601" W	M	51°9' 29.975" N	4°14' 0.781" W
E	51°12' 41.004" N	4°6' 46.608" W	N	51°10' 0.660" N	4°13' 34.129" W
F	51°4' 31.519" N	4°12' 55.392" W	O	51°10' 40.595" N	4°13' 39.184" W
G	51°3' 54.101" N	4°13' 9.019" W	P	51°11' 16.423" N	4°14' 25.471" W
H	51°2' 5.910" N	4°15' 41.019" W	Q	51°12' 15.021" N	4°14' 23.018" W
I	51°2' 16.871" N	4°15' 59.940" W	R	51°15' 49.481" N	3°47' 14.597" W

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Figure 3 Boundary change proposed by Defra for Bideford to Foreland Point rMCZ FS 43

### A9.15.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00005	Cefas MCZ verification survey Bideford to Foreland Point	FS 43	Multibeam	Not available before data cut-off.
D_00075	CCO aerial photography 2001–2013	FS 43	Aerial photographs	Uninterpreted remote sensing data.
D_00077	North Devon Bioblitz Woolacombe 2013	FS 43		Not available before data cut-off.
D_00078	Biotope map for Braunton Burrows SSSI ISA 2013	FS 43	Phase 1 biotope mapping	Not available before data cut-off.
D_00514	Barnstaple Bay	FS 43	Multibeam	Not available before data cut-off.

## A9.16 North of Lundy rMCZ FS 45

### A9.16.1 Site description

North of Lundy rMCZ is located approximately 14 km north-west of the nearest land at Morte Point in North Devon. This large site is located within an area of high tidal energy at the mouth of the Bristol Channel. The seabed primarily consists of subtidal sand and subtidal coarse sediment at a depth of 35 to 55 m below chart datum.

The site includes large areas of sand including part of the South Outer Bristol Channel Sands. The sand can be highly mobile and at the very north of the site in places large sand waves are formed. The subtidal sand creates a challenging environment in which to survive. Species such as the white catworm (*Nephtys cirrosa*), a thin, smooth, segmented worm, and opportunistic populations of amphipods, small crustaceans (*Bathyporeia* species) can be found living within the sand. Large areas of subtidal coarse sediment are also found throughout the site. These gravelly sediments have a diverse community of polychaete worms, bivalves and amphipods living within the sediment as well as an interesting epifaunal community of tubeworms, barnacles, echinoderms, bryozoans and hydroids living on the surface. Sand eels (*Ammodytes* species) may occasionally be observed in association with these habitats. The sand and sediment are punctuated by areas of boulders and bedrock protrusions.

To the east the site includes part of Morte Platform, an area of reef with regionally high levels of biodiversity. Here, Ross worm (*Sabellaria spinulosa*) can be found building their tubes to live in from sand or shell fragments, along with barnacle species *Verruca stroemia* and *Balanus crenatus*. The epifauna growing on the rock reflects the high levels of sand scour and tidal energy found in this area.

## A9.16.2 Site feature map

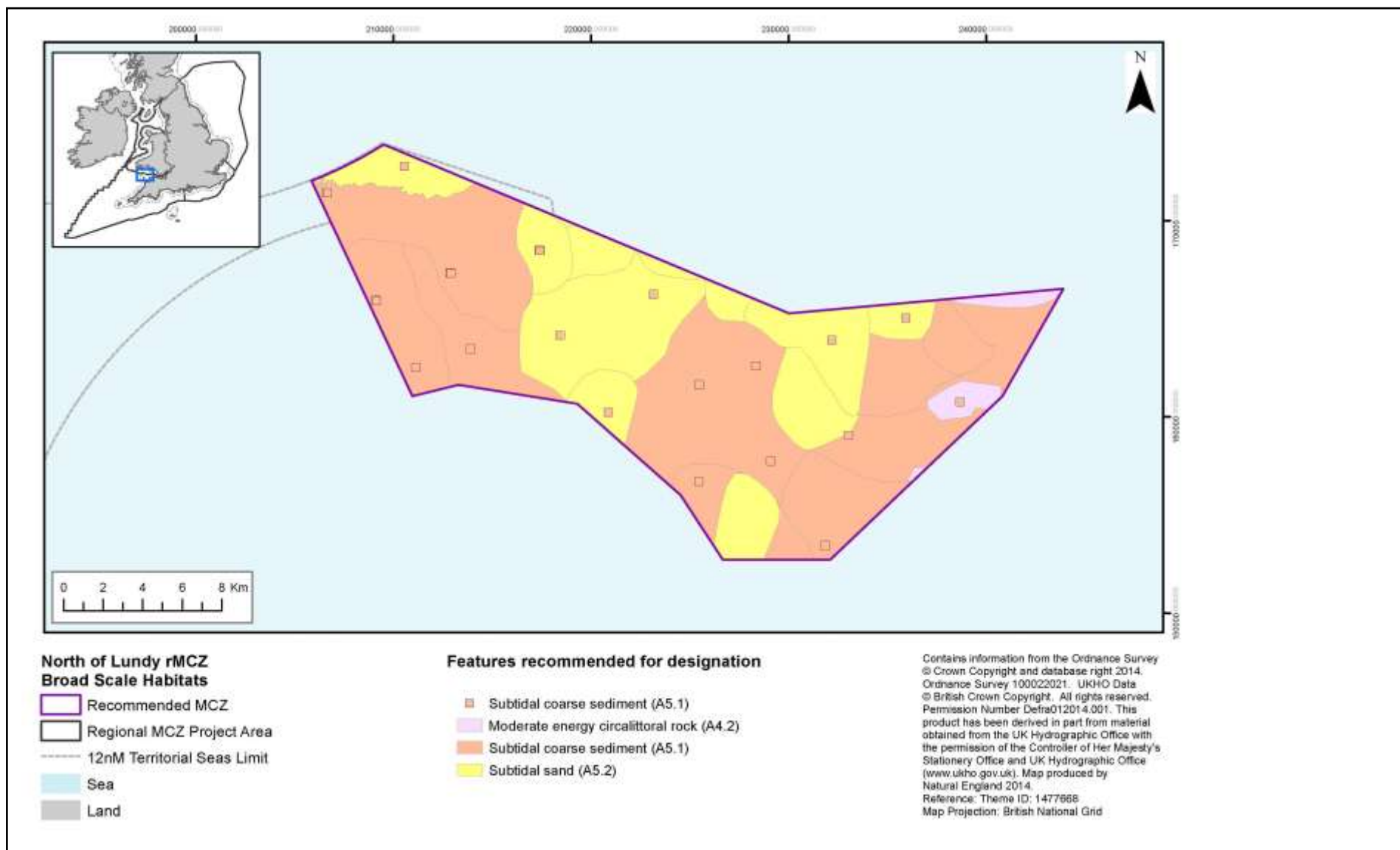


Figure 1 Location of mapped BSHs in North of Lundy rMCZ FS 45

### A9.16.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for North of Lundy rMCZ FS 45

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A4.2 Moderate energy circalittoral rock	BSH	Tranche 2 advice	High	High	Recover
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	High	High	Recover
A5.2 Subtidal sand	BSH	Tranche 2 advice	High	High	Maintain
A5.4 Subtidal mixed sediments	BSH	Tranche 2 advice	No confidence	No confidence	N/A

**Table 2** Supporting documentation, reference materials and relevant survey details for North of Lundy rMCZ FS 45

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00001	2011 Atlantic array benthic ecology characterisation report - (D_00001) - JER4290_AA_Benthic_CombinedBiotopes_RPS_110721_A	2011 Atlantic array benthic ecology characterisation report (D_00001)	Channel Energy Limited, RWE npower renewables, Auckland House, Lydiard Fields, Great Western Way, Swindon, Wiltshire, SN5 8ZT atlanticarray@npower-renewables.com
D_00222	Marine Recorder snapshot 2013_06_24	1999 Bristol Channel and Irish Sea Cefas 4 m beam trawl survey (Corey 9-99)	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
M_00124	MB0116 - Habmap_points_181109_MCZ	HABMAP 2009, K Mortimer and H Wilson	National Museum Wales

#### A9.16.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for North of Lundy rMCZ FS 45

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Low	Low	High	High	Manually upgraded to high/high due to expert judgement as ground truthing points not included in database but shown in report held by NE.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low	Low	High	High	Updated following Protocol E based on more recent data.
A5.2 Subtidal sand	Tranche 2 advice	Low	Low	High	High	Manually upgraded to high/high due to expert judgement as ground truthing points not included in database but shown in report held by NE.
A5.4 Subtidal mixed sediments	Tranche 2 advice	Low	Low	No confidence	No confidence	Updated following Protocol E based on more recent data.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for North of Lundy rMCZ FS 45

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Maintain	Recover	Fisheries exposure assessments indicate there are low levels of benthic trawling and dredging in the vicinity of this feature. New ecological data identify the presence of communities that are highly sensitive to some pressures associated with these activities.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Recover	Fisheries exposure assessments indicate there are moderate levels of benthic trawling and

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
				low levels of dredging over this feature. New ecological data identify the presence of communities that are highly sensitive to some pressures associated with these activities.
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Maintain	No change
A5.4 Subtidal mixed sediments	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for no confidence features.

### A9.16.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	High	Current risk from the sensitivity of this feature to pressures associated with benthic trawling and dredging.	High	
A5.1 Subtidal coarse sediment	Tranche 2 advice	High	Current risk from the sensitivity of this feature to pressures associated with benthic trawling and dredging.	Moderate	
A5.2 Subtidal sand	Tranche 2 advice	Low		High	The feature has moderate exposure to benthic trawling and low exposure to dredging. Based on site-specific information the sensitivity of the feature to the pressures associated with these activities is considered to be low and is unlikely to change in the future. Therefore a high future risk of unfavourable condition is not thought to be justified.

## A9.16.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A5.2 Subtidal sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		



**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No	100%		Maybe. Available data support at least one JNCC Big Gaps identified feature for designation.

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Maybe. Available data support at least one JNCC Big Gaps identified feature for designation.	3	35,783.4	This site is the largest of the predominately inshore sites being considered for Tranche 2. It has the potential to contribute significantly to the proportion of subtidal sand protected within the region.

## **A9.16.7 Additional advice**

### **A9.16.7.1 Advice on specific features**

No additional advice given to Defra on specific features for this site.

### **A9.16.7.2 Advice on boundaries**

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### **A9.16.7.3 Evidence not used**

All evidence received was used in our advice. Therefore Table 10 is not applicable to this site.

## A9.17 West of Walney rMCZ including proposed Co-Location Zone ISCZ 02

### A9.17.1 Site description

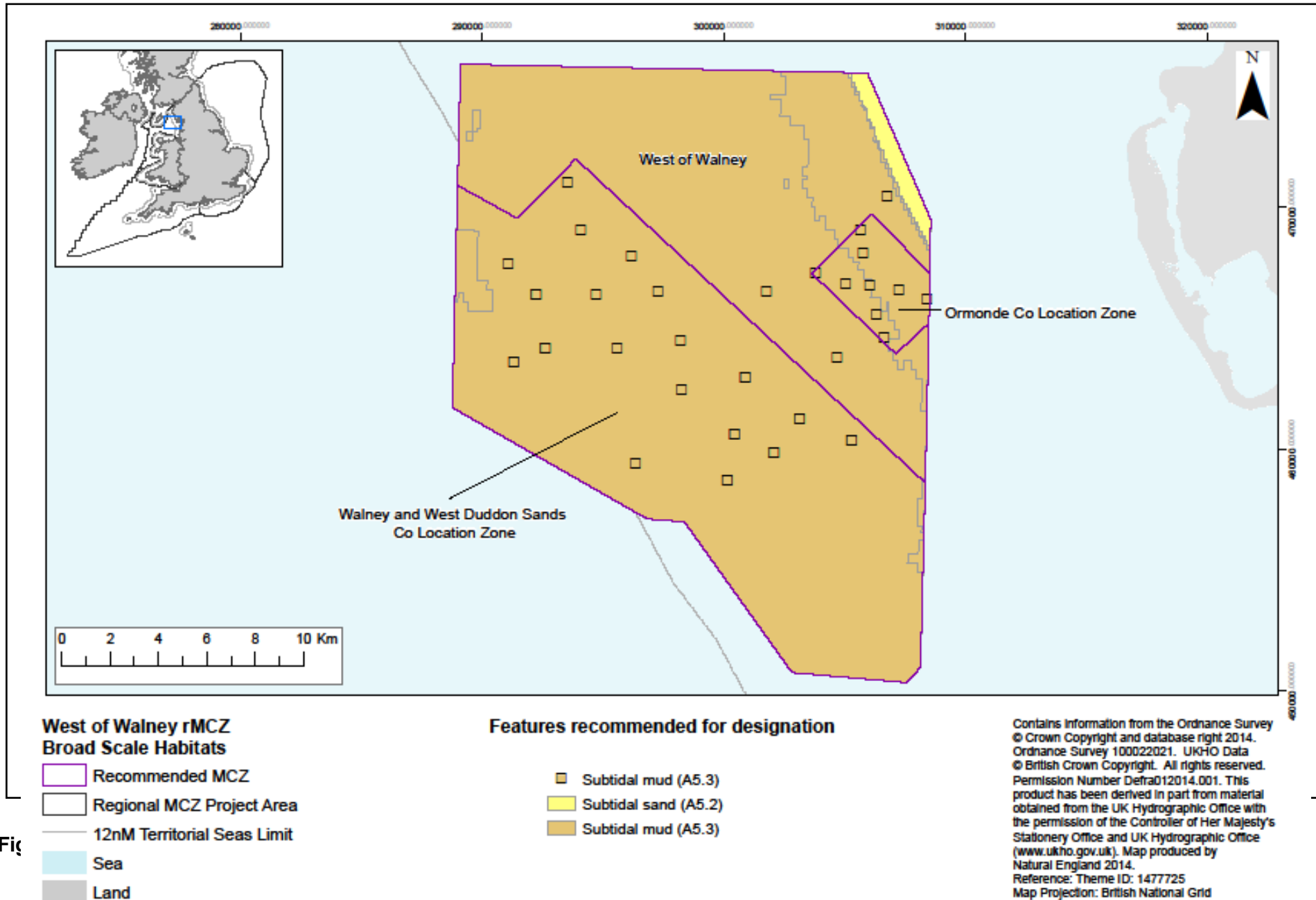
West of Walney rMCZ including the proposed Co-Location Zone can be found about 8 km west of Walney Island. This area of sea bed has been recommended as a MCZ because of its subtidal mud and sand habitats and the communities they support. Under the waves the site is home to Dublin Bay prawn (also known as Norway lobster, but best known for its culinary uses as langoustine or scampi) and a host of other animals, including burrowing sea urchins that hide beneath the surface of the sediment. Luminescent sea pens look plant-like with their branching structure but are animals and can move either to streamline themselves out or retract into their burrows when disturbed. Strange-looking spoon worms, also known as mud volcano worms, create volcano-like mounds of mud through the top of which they protrude a long tongue-shaped green proboscis to feed. West of Walney is partially co-located with a collection of 4 wind farms: Walney 1 and 2, Ormonde and Walney Extension. Collectively, these constitute one of the world's largest offshore wind farm areas.



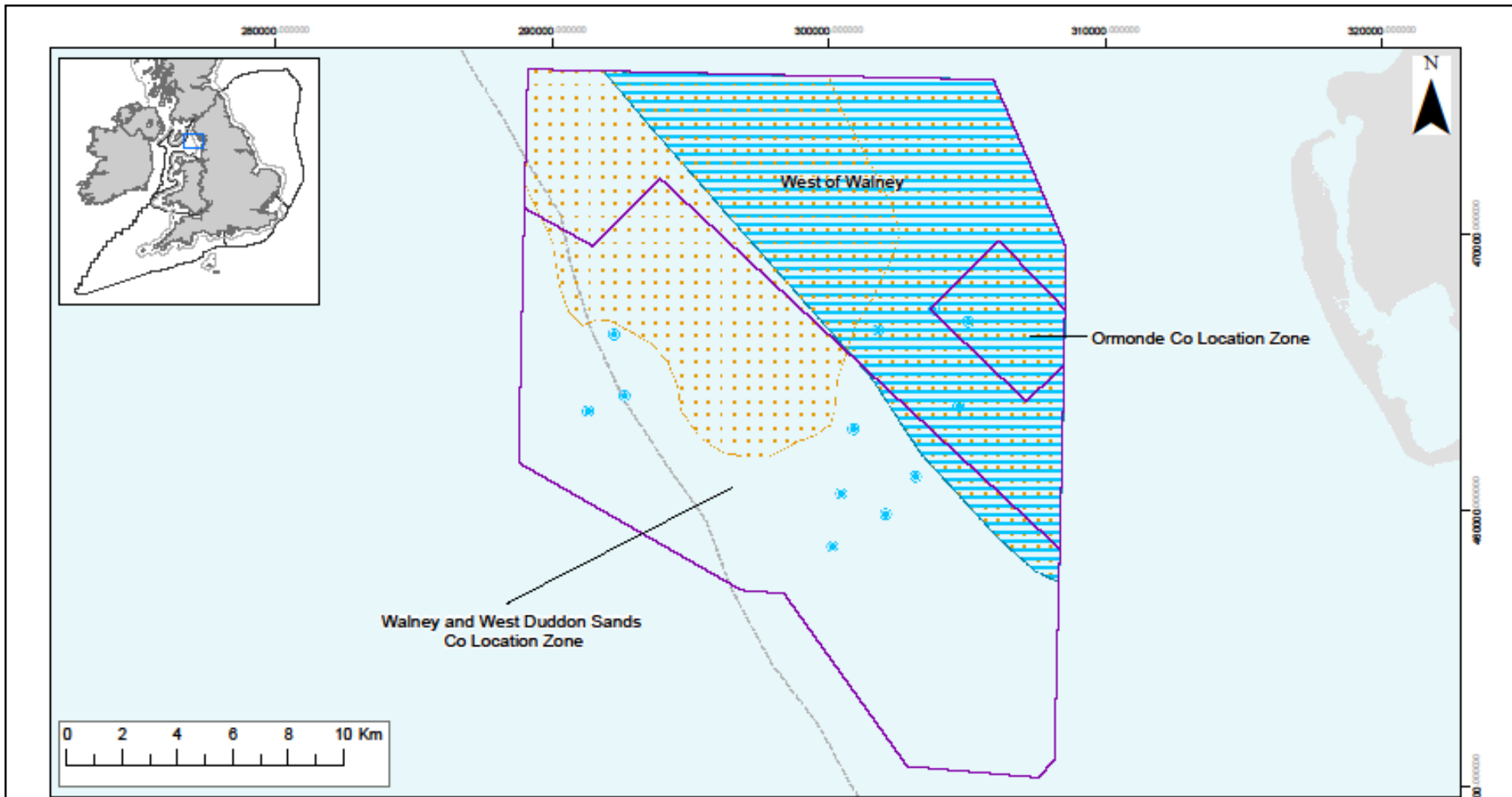
**Plate 1** Sea pen © F Dipper, Natural England

Please note this photograph is an example photograph of the above feature only and does not necessarily represent the feature found at the site.

## A9.17.2 Site feature maps



Fig



**West of Walney rMCZ**  
**Features of Conservation Importance**

- Recommended MCZ
- Regional MCZ Project Area
- 12nM Territorial Seas Limit
- Sea
- Land

**Features recommended for designation**

- Mud habitats in deep water
- Mud habitats in deep water
- Sea pens and burrowing megafauna

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 Natural England 2014.  
 Reference: Theme ID: 1477725  
 Map Projection: British National Grid

Fi

### A9.17.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for West of Walney rMCZ including proposed Co-Location Zone ISCZ 02

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A5.2 Subtidal sand	BSH	Tranche 2 advice	Low	Low	Recover
A5.3 Subtidal mud	BSH	Tranche 2 advice	High	Mod	Recover
Mud habitats in deep water	HOCl	Tranche 2 advice	High	Mod	Recover
Sea pens and burrowing megafauna	HOCl	Tranche 2 advice	Low	Low	Recover

**Table 2** Supporting documentation, reference materials and relevant survey details for West of Walney rMCZ including proposed Co-Location Zone ISCZ 02

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00395	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Map of offshore benthic communities of the Irish Sea	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
M_00048	ABPmer 2012 data collection - original data - dataset: IS	Lumb, C (2011). Evidence on the distribution and quality of mud-related features in the eastern Irish Sea. A paper presented to the ISCZ project team and regional stakeholder group. This paper assessed all available published and unpublished data relating to mud features within the eastern Irish Sea	Unpublished material, available from NE

Survey ID code	MCZ source dataset	MCZ original survey	Location
M_00052	ABPmer 2012 data collection - original data - dataset: IS_	Dong Energy Irish Sea survey (2011 DONG Energy, Irish Sea, Offshore Windfarm benthic survey reports)	DONG Energy info@dongenergy.co.uk
M_00267	MB0116 - Walney_Ormonde_2009_EIA_MCZ	Walney and Ormonde Offshore Windfarm: Benthic survey report, November 2009, CMACS Project No: J3114. Doc Ref: J3114/11-09v3	DONG Energy info@dongenergy.co.uk

#### A9.17.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for West of Walney rMCZ including proposed Co-Location Zone ISCZ 02

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A5.2 Subtidal sand	Tranche 2 advice	High	High	Low	Low	Manually downgraded as confidence based on parent feature alone.
A5.3 Subtidal mud	Tranche 2 advice	High	High	High	Mod	Duplicate dataset removed.
Mud habitats in deep water	Tranche 2 advice	High	High	High	Mod	Duplicate dataset removed.
Sea pens and burrowing megafauna	Tranche 2 advice	High	High	Low	Low	New data likely to be available in future to improve confidence.

**Table 9** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for West of Walney rMCZ including proposed Co-Location Zone ISCZ 02

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.2 Subtidal sand	Tranche 2 advice	Recover	Recover	No change
A5.3 Subtidal mud	Tranche 2 advice	Recover	Recover	No change

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
Mud habitats in deep water	Tranche 2 advice	Recover	Recover	No change
Sea pens and burrowing megafauna	Tranche 2 advice	Recover	Recover	No change

### A9.17.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A5.2 Subtidal sand	Tranche 2 advice	High	Current risk from the exposure to pressures related to fishing activities. These activities occur across the site, so despite low confidence levels, it can be reasonably assumed that these features are at risk.	High	
A5.3 Subtidal mud	Tranche 2 advice	High	Current risk from exposure to pressures related to fishing activities.	Moderate	
Mud habitats in deep water	Tranche 2 advice	High	Current risk from exposure to pressures related to fishing activities.	High	
Sea pens and burrowing megafauna	Tranche 2 advice	High	Current risk from exposure to pressures related to fishing activities. These activities occur across the site, so despite low confidence levels, it can be reasonably assumed that these features are at risk.	High	



## A9.17.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A5.2 Subtidal sand	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	Yes	Further consideration	Yes	Post-construction monitoring survey reports and point data from benthic sampling (grab and video) survey to be available for analysis post consultation.
A5.3 Subtidal mud	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Post-construction monitoring survey reports and point data from benthic sampling (grab and video) survey to be available for analysis post consultation.
Mud habitats in deep water	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Post-construction monitoring survey reports and point data from benthic

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
												sampling (grab and video) survey to be available for analysis post consultation.
Sea pens and burrowing megafauna	Tranche 2 advice	HOCI	No	No	No	Move to Q2	No	No	Yes	Further consideration	Yes	Post-construction monitoring survey reports and point data from benthic sampling (grab and video) survey to be available for analysis post consultation. Data from Cefas/AFBI eastern Irish Sea <i>Nephrops</i> surveys also to be made available by JNCC, not available prior to data cut-off.

**Table 7** Site data sufficiency assessment

<b>Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?</b>	<b>Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)</b>	<b>Comment on Q2 assessment</b>	<b>Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>
No	100%		Yes

**Table 8** Site level commentary

<b>Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>	<b>Number of features with at least moderate confidence in both presence and extent (T2 new sites only)</b>	<b>Site area (ha)</b>	<b>Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)</b>
Yes	2	38,803.7	The combination of big gap filling ability, and size make this site one of the strong candidates among the inshore sites that could contribute to the network.

## A9.17.7 Additional advice

### A9.17.7.1 Advice on specific features

Defra requested further clarification on the potential management requirements for activities associated with wind farms in MCZs.

Natural England provided advice based on the habitats present in this site and on precedent from cabling work in SACs. Natural England is involved in ongoing work with the MMO, offshore wind farm developers and Defra to develop further advice on this area.

### A9.17.7.2 Advice on boundaries

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### A9.17.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00082	Ormonde Wind Farm 2013 post-construction monitoring surveys	ISCZ 02 (+pCLZ), ISCZ 02	Day grab samples, drop camera, side-scan sonar, multibeam	Not available before data cut-off.
D_00083	Ormonde Offshore Wind Farm adult and juvenile fish and epi-benthic post-construction survey 2012	ISCZ 02 (+pCLZ), ISCZ 02	Otter and beam trawls	Not available before data cut-off.
D_00084	Ormonde Wind Farm 2012 post-construction monitoring surveys	ISCZ 02 (+pCLZ), ISCZ 02	Day grab samples, drop camera, side-scan sonar, multibeam	Not available before data cut-off.
D_00085	CMACS (2012). Walney Offshore Wind Farm Year 1 post-construction benthic monitoring technical survey report (2012 survey). Report to Walney Offshore Wind Farms (UK) Ltd/DONG Energy. July 2012. J3192	ISCZ 02 (+pCLZ), ISCZ 02	Day grab samples, drop camera, beam trawls	Not available before data cut-off.
D_00086	1st year post-construction monitoring report Walney Offshore Windfarm (2013)	ISCZ 02 (+pCLZ), ISCZ 02	Day grab samples, drop camera, beam trawls	Not available before data cut-off.
D_00087	West of Duddon Sands Offshore Windfarm pre-construction monitoring report Version C (August 2013)	ISCZ 02 (+pCLZ)	Day grab samples, drop camera, side-scan sonar, multibeam	Not available before data cut-off.

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00088	Walney Extension Offshore Wind Farm volume 1 environmental statement	ISCZ 02 (+pCLZ), ISCZ 02	Grab samples, drop camera, beam trawls	Not available before data cut-off.

## A9.18 Allonby Bay rMCZ ISCZ 10

### A9.18.1 Site description

Allonby Bay is an inshore site that stretches for approximately 9 km along the coast on the English side of the Solway Firth. It extends from Dubmill Point in the north to just north of Maryport in the south. The total area of the site is approximately 39 km<sup>2</sup>. This stretch of coast has been recommended as a MCZ because of the diverse range of marine habitats and species it supports. In particular, this includes large areas of nationally important living reefs formed by the honeycomb worm (*Sabellaria alveolata*) and blue mussel (*Mytilus edulis*) beds.

The honeycomb worm reefs are formed from the closely packed sand tubes constructed by these colonial worms. The reef structures resemble honeycomb and can be tens of metres wide and up to 1 metre tall. In an otherwise ever-changing environment, these reefs are able to support a wide range of other shore-dwelling species, including anemones, snails, shore crabs and seaweeds.

Honeycomb worm reefs need rock to build on as well as a steady supply of sand for tube building. This makes north-west England an ideal place for this species and Allonby Bay supports some of the best examples of these reefs in the UK. Moreover, the peat exposures provide a habitat into which piddocks, a type of burrowing clam, and other species can tunnel.

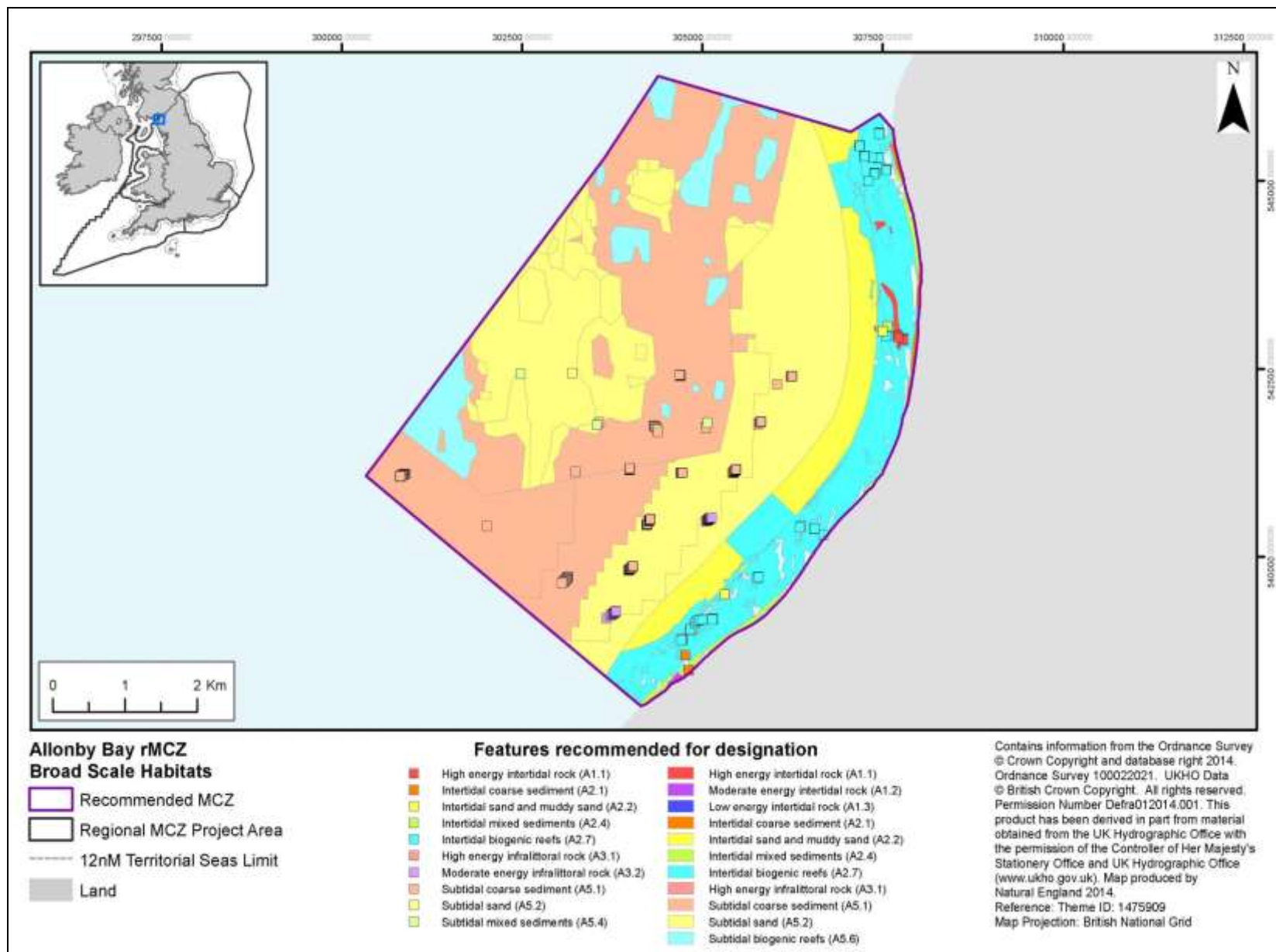


**Plate 1** Honeycomb worm reef, Dubmill Point 2013 © Laurence Browning, Natural England

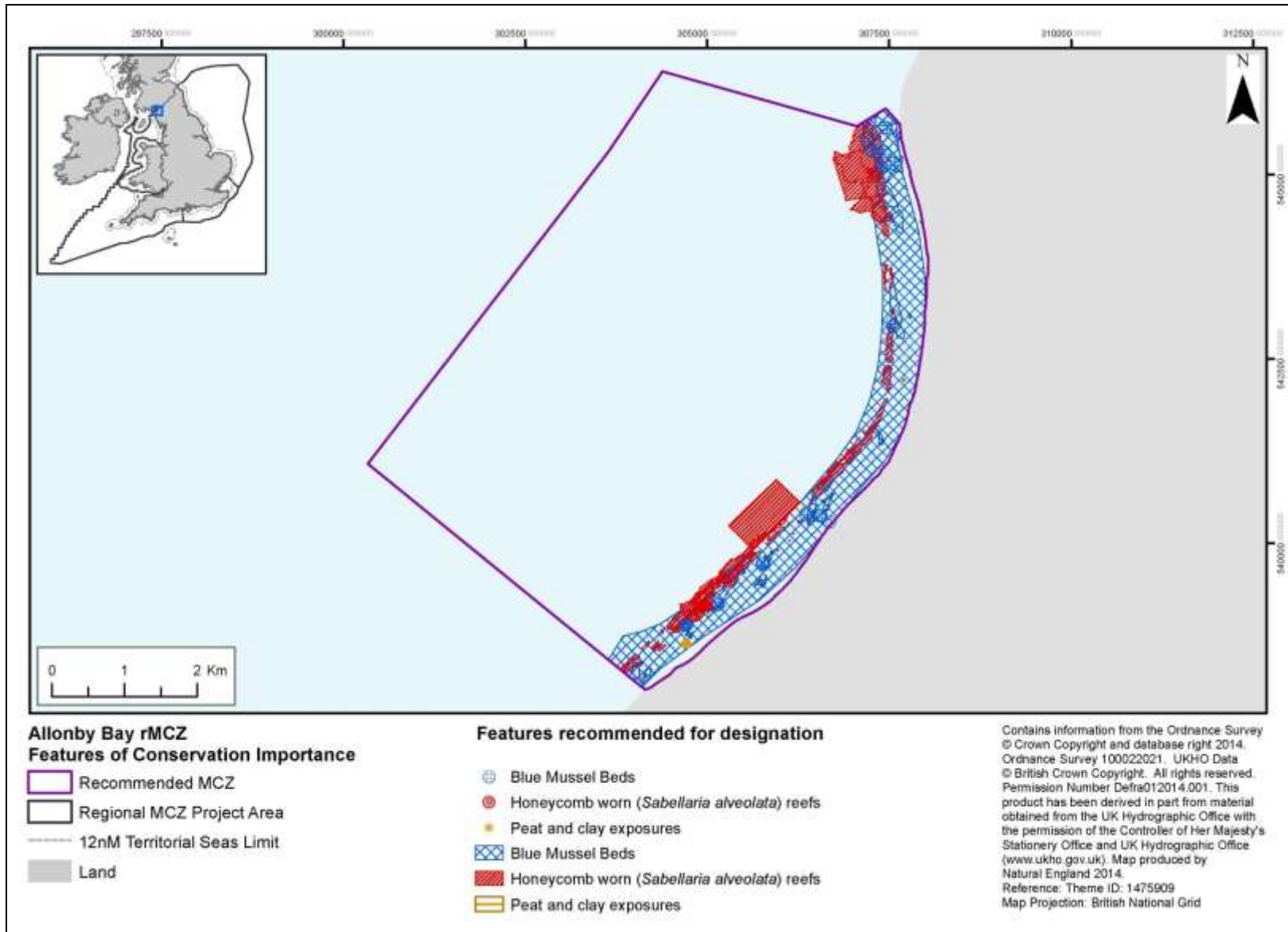


**Plate 2** Close-up of honeycomb worm reef, Dubmill Point 2013 © Laurence Browning, Natural England

## A9.18.2 Site feature maps



**Figure 1** Location of mapped BSHs in Allonby Bay rMCZ ISCZ 10



**Figure 2** Location of mapped FOCI in Allonby Bay rMCZ ISCZ 10



### A9.18.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Allonby Bay rMCZ ISCZ 10

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.1 High energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A2.7 Intertidal biogenic reefs	BSH	Tranche 2 advice	High	High	Maintain
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	Low	Low	Maintain
A5.2 Subtidal sand	BSH	Tranche 2 advice	Low	Low	Maintain
Blue mussel ( <i>Mytilus edulis</i> ) beds	HOCI	Tranche 2 advice	High	High	Maintain
Peat and clay exposures	HOCI	Tranche 2 advice	High	High	Maintain
Honeycomb worm ( <i>Sabellaria alveolata</i> ) reefs	HOCI	Tranche 2 advice	High	High	Maintain
A1.2 Moderate energy intertidal rock	BSH	T2 new features	High	High	Maintain
A1.3 Low energy intertidal rock	BSH	T2 new features	High	High	Maintain
A2.1 Intertidal coarse sediment	BSH	T2 new features	High	High	Maintain
A2.2 Intertidal sand and muddy sand	BSH	T2 new features	High	Moderate	Maintain
A3.2 Moderate energy infralittoral rock	BSH	T2 new features	High	Moderate	Maintain
A5.4 Subtidal mixed sediments	BSH	T2 new features	Moderate	Moderate	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Allonby Bay rMCZ ISCZ 10

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00017	2012 EA MCZ verification survey - Allonby Bay		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT, lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00038	NE MCZ verification photos	NE regional staff MCZ verification photos	NE National GI
D_00039	2013 NE MCZ verification survey - Allonby Bay (D_00039)		NE National GI
D_00292	Marine Recorder snapshot 2013_06_24	1991 MNCR inner Solway Firth littoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00358	MESH Combined EUNIS 20140203	MNCR area summaries - Liverpool Bay and the Solway Firth; Wigtown and Kirkcudbright Bays	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00382	MESH Combined EUNIS 20140203	Eastern Solway Firth benthic substrate map	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00389	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	2002 Mapping, condition and conservation assessment of honeycomb worm ( <i>Sabellaria alveolata</i> ) reefs on the eastern Irish Sea coast	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>

#### A9.18.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Allonby Bay rMCZ ISCZ 10

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.1 High energy Intertidal rock	Tranche 2 advice	Low	Low	High	High	
A2.7 Intertidal biogenic reefs	Tranche 2 advice	High	Moderate	High	High	
A5.1 Subtidal coarse sediment	Tranche 2 advice	High	Low	Low	Low	Manually downgraded to low/low as confidence based on parent feature alone after 107 stills records have been removed.
A5.2 Subtidal sand	Tranche 2 advice	Low	Low	Low	Low	
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	High	Low	High	High	
Peat and clay exposures	Tranche 2 advice	High	High	High	High	
Honeycomb worm ( <i>Sabellaria alveolata</i> ) reefs	Tranche 2 advice	High	Moderate	High	High	Polygons incorrectly tagged as HOCl_18 now changed to HOCl_8.
A1.2 Moderate energy intertidal rock	T2 new features			High	High	New feature
A1.3 Low energy intertidal rock	T2 new features			High	High	New feature
A2.1 Intertidal coarse sediment	T2 new features			High	High	New feature
A2.2 Intertidal sand and muddy sand	T2 new features			High	Moderate	New feature
A3.2 Moderate energy infralittoral rock	T2 new features			High	Moderate	New feature
A5.4 Subtidal mixed sediments	T2 new features			Moderate	Moderate	New feature

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Allonby Bay rMCZ IS CZ 10

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A1.1 High energy Intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A2.7 Intertidal biogenic reefs	Tranche 2 advice	Maintain	Maintain	No change
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Maintain	No change
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	Maintain	Maintain	No change
Peat and clay exposures	Tranche 2 advice	Maintain	Maintain	No change
Honeycomb worm ( <i>Sabellaria alveolata</i> ) reefs	Tranche 2 advice	Maintain	Maintain	No change
A1.2 Moderate energy intertidal rock	T2 new features		Maintain	New feature
A1.3 Low energy intertidal rock	T2 new features		Maintain	New feature
A2.1 Intertidal coarse sediment	T2 new features		Maintain	New feature
A2.2 Intertidal sand and muddy sand	T2 new features		Maintain	New feature
A3.2 Moderate energy infralittoral rock	T2 new features		Maintain	New feature
A5.4 Subtidal mixed sediments	T2 new features		Maintain	New feature

#### A9.18.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.1 High energy Intertidal rock	Tranche 2 advice	Low		Moderate	
A2.7 Intertidal biogenic reefs	Tranche 2 advice	Low		High	Intertidal features unlikely to be exposed to future increases in fishing activity that may

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
					create pressures at the benchmark to which the feature is sensitive. Remote location of site means that recreation occurs at a fairly consistent low level. <i>Sabellaria alveolata</i> reefs are partially protected from bottom-towed gear by NW IFCA Byelaw 6. Any intertidal fishery, eg for mussels, that were to become viable would be managed by the NW IFCA. North Western IFCA management for mussel fisheries in the district prioritises <i>Sabellaria alveolata</i> reef conservation.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low		Moderate	
A5.2 Subtidal sand	Tranche 2 advice	Low		High	Unlikely to be exposed to future increases in fishing activity that may create pressures at the benchmark to which the feature is sensitive. Consistently low level of fishing in the site. A dredge fishery for eg seed mussel that could potentially occur in the site and overlap the feature would be regulated by the NW IFCA.
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	Low		Moderate	
Peat and clay exposures	Tranche 2 advice	Low		High	Intertidal features unlikely to be exposed to future increases in fishing activity that may create pressures at the benchmark to which the feature is sensitive. Remote location of site means that recreation occurs at a fairly consistent low level.
Honeycomb worm ( <i>Sabellaria alveolata</i> ) reefs	Tranche 2 advice	Low		High	Intertidal features unlikely to be exposed to future increases in fishing activity that may

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
					create pressures at the benchmark to which the feature is sensitive. Remote location of site means that recreation occurs at a fairly consistent low level. <i>Sabellaria alveolata</i> reefs are partially protected from bottom-towed gear by NW IFCA Byelaw 6. Any intertidal fishery, eg for mussels, that were to become viable would be managed by the NW IFCA. North Western IFCA management for mussel fisheries in the district prioritises <i>Sabellaria alveolata</i> reef conservation.
A1.2 Moderate energy intertidal rock	T2 new features	Low		Moderate	
A1.3 Low energy intertidal rock	T2 new features	Low		Moderate	
A2.1 Intertidal coarse sediment	T2 new features	Low		Moderate	
A2.2 Intertidal sand and muddy sand	T2 new features	Low		Moderate	
A3.2 Moderate energy infralittoral rock	T2 new features	Low		Moderate	
A5.4 Subtidal mixed sediments	T2 new features	Low		Moderate	

## A9.18.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A1.1 High energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.7 Intertidal biogenic reefs	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation	Yes	Survey planned for August 2014. Reporting expected January 2015.
A5.2 Subtidal sand	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	Yes	Further consideration	Yes	Survey planned for August 2014. Reporting expected January 2015.
Blue mussel ( <i>Mytilus edulis</i> ) beds	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Peat and clay exposures	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Honeycomb worm ( <i>Sabellaria alveolata</i> ) reefs	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.2 Moderate energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.3 Low energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.1 Intertidal coarse sediment	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.2 Intertidal sand and muddy sand	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.4 Intertidal mixed sediments	T2 new features	BSH	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		



Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A3.1 High energy infralittoral rock	T2 new features	BSH	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
A3.2 Moderate energy infralittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.4 Subtidal mixed sediments	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.6 Subtidal biogenic reefs	T2 new features	BSH	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		Assessment based predominantly on point data – Q2 has not been calculated.	No, did not fill gap originally.

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
No, did not fill big gap originally.	11	3,908.3	

## A9.18.7 Additional advice

### A9.18.7.1 Advice on specific features

No additional advice given to Defra on specific features for this site.

### A9.18.7.2 Advice on boundaries

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### A9.18.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00069	NW IFCA Dubmill Point <i>Sabellaria</i> survey 2013	ISCZ 10	GPS mapping	Not available before data cut-off.
D_00081	Cumbria Wildlife Trust <i>Sabellaria</i> survey 2013	ISCZ 10		Not available before data cut-off.
D_00505	Mapped multibeam imagery of the outer Solway Firth	ISCZ 10	Multibeam bathymetry and backscatter	Not available before data cut-off.
D_00506	English Nature Solway Firth Subtidal Scar Ground survey	ISCZ 10	Drop-down camera survey of subtidal rocky habitats	Not available before data cut-off.
D_00515	NW IFCA Cumbrian shore survey 2011	ISCZ 10	Walkover surveys	Not available before data cut-off.

## **A9.19 Cromer Shoal Chalk Beds rMCZ NG 02**

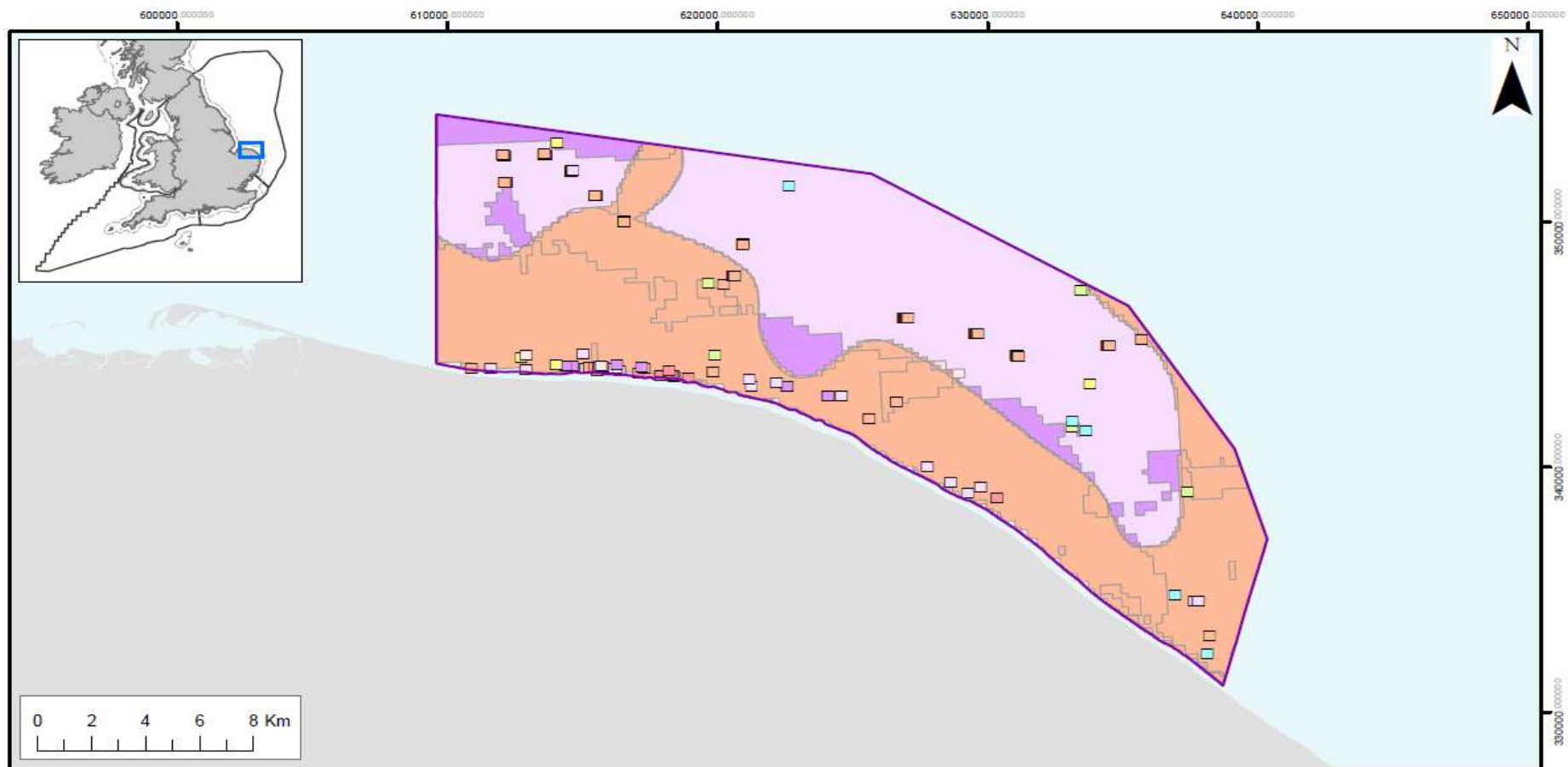
### **A9.19.1 Site description**

Cromer Shoal Chalk Beds rMCZ is located just 200 m from the shore of the beautiful north Norfolk coast. It begins just west of Weybourne and ends at Happisborough, extending around 10 km out to sea and covering an area of 316 km<sup>2</sup>. It has a maximum depth of about 20 m and its unique features are visible in the shallows with a mask and snorkel in favourable conditions. These features consist of soft chalk, rock and clay communities among sand and mixed sediments, displayed as a colourful garden of seaweeds. Within a wider area that is predominantly sandy, the chalk beds provide stable surfaces for seaweeds and static animals to settle on and grow. The beds support nursery areas for juveniles of species and are also important in the food chain for higher animals such as tompot blennies and even the small-spotted catshark, which is sometimes seen. The chalk beds are inhabited by soft-bodied and tentacled animals, with small fish, lobsters and crabs inhabiting the crevices and holes. The area supports the small-scale crab and lobster fishery vital to the character and economy of the area. Other common species include sponges, starfish, sea squirts, hermit crabs and pipefish (related to the seahorse).



**Plate 1** Chalk archway within Cromer Shoal Chalk Beds © 2011 Rob Spray

## A9.19.2 Site feature maps



### Cromer Shoal Chalk Beds rMCZ Broad Scale Habitats

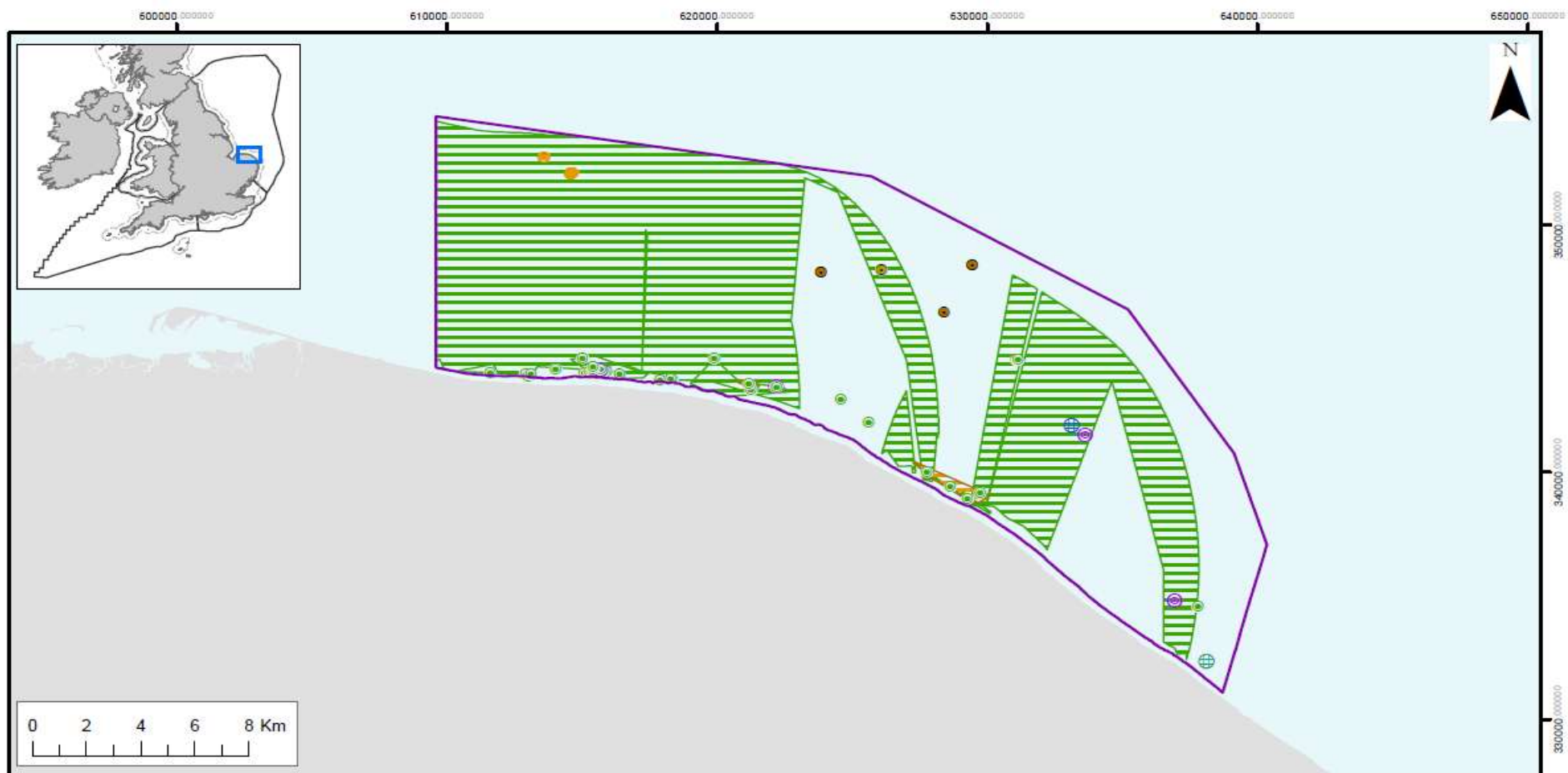
- Recommended MCZ
- Regional MCZ Project Area
- 12nM Territorial Seas Limit
- Sea
- Land

### Features recommended for designation

- |  |  |
|--|--|
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #c0504d; border: 1px solid black; margin-right: 5px;"></span> High energy infralittoral rock (A3.1)     | <span style="display: inline-block; width: 10px; height: 10px; background-color: #c0504d; border: 1px solid black; margin-right: 5px;"></span> High energy infralittoral rock (A3.1)     |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> Moderate energy infralittoral rock (A3.2) | <span style="display: inline-block; width: 10px; height: 10px; background-color: #800080; border: 1px solid black; margin-right: 5px;"></span> Moderate energy infralittoral rock (A3.2) |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #d3d3d3; border: 1px solid black; margin-right: 5px;"></span> High energy circalittoral rock (A4.1)     | <span style="display: inline-block; width: 10px; height: 10px; background-color: #d3d3d3; border: 1px solid black; margin-right: 5px;"></span> High energy circalittoral rock (A4.1)     |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #d3d3d3; border: 1px solid black; margin-right: 5px;"></span> Moderate energy circalittoral rock (A4.2) | <span style="display: inline-block; width: 10px; height: 10px; background-color: #d3d3d3; border: 1px solid black; margin-right: 5px;"></span> Moderate energy circalittoral rock (A4.2) |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #ff8c00; border: 1px solid black; margin-right: 5px;"></span> Subtidal coarse sediment (A5.1)           | <span style="display: inline-block; width: 10px; height: 10px; background-color: #ff8c00; border: 1px solid black; margin-right: 5px;"></span> Subtidal coarse sediment (A5.1)           |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #90ee90; border: 1px solid black; margin-right: 5px;"></span> Subtidal sand (A5.2)                      |  |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #90ee90; border: 1px solid black; margin-right: 5px;"></span> Subtidal mixed sediments (A5.4)           |  |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: #40e0d0; border: 1px solid black; margin-right: 5px;"></span> Subtidal biogenic reefs (A5.6)            |  |

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**Figure 1** Location of mapped BSHs in Cromer Shoal Chalk Beds rMCZ NG 02



**Cromer Shoal Chalk Beds rMCZ  
Features of Conservation Importance**

- Recommended MCZ
- Regional MCZ Project Area
- 12nM Territorial Seas Limit
- Sea
- Land

**Features recommended for designation**

- |   |   |
|---|---|
| Blue Mussel Beds                                | Peat and clay exposures   |
| Peat and clay exposures                         | Subtidal chalk  |
| Subtidal chalk                                  | Smelt ( <i>Osmerus eperlanus</i> )                                |
| Horse mussel ( <i>Modiolus modiolus</i> )       | Undulate ray ( <i>Raja undulata</i> )                             |
| Ross worm ( <i>Sabellaria spinulosa</i> ) reefs | Fragile sponge & anthozoan communities on subtidal rocky habitats |

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**Figure 2** Location of mapped FOCI in Cromer Shoal Chalk Beds rMCZ NG 02

### A9.19.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Cromer Shoal Chalk Beds rMCZ NG 02

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A3.1 High energy infralittoral rock	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A3.2 Moderate energy infralittoral rock	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A4.2 Moderate energy circalittoral rock	BSH	Tranche 2 advice	High	Moderate	Maintain
Subtidal chalk	HOCl	Tranche 2 advice	High	Moderate	Maintain
North Norfolk coast (Subtidal)	Geological	Tranche 2 advice	High	Low	Maintain
A4.1 High energy circalittoral rock	BSH	T2 new features	Moderate	Moderate	Maintain
A5.1 Subtidal coarse sediment	BSH	T2 new features	Moderate	Moderate	Maintain
A5.2 Subtidal sand	BSH	T2 new features	Moderate	Moderate	Maintain
A5.4 Subtidal mixed sediments	BSH	T2 new features	Moderate	Moderate	Maintain
Peat and clay exposures	HOCl	T2 new features	High	Moderate	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Cromer Shoal Chalk Beds rMCZ NG 02

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00021	2013 EA MCZ verification survey - Cromer Shoal		Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>
D_00103	Marine Recorder new data 2014_02_14	2013 Seasearch survey of the Norfolk coast	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00117	Marine Recorder snapshot 2013_06_24	2012 Seasearch survey of the Norfolk coast	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00134	Marine Recorder snapshot 2013_06_24	2011 Survey of Norfolk coast	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00145	Marine Recorder snapshot 2013_06_24	2010 Seasearch survey of Norfolk Coast	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00166	Marine Recorder snapshot 2013_06_24	2008 Seasearch Survey of Norfolk	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00175	Marine Recorder snapshot 2013_06_24	2007 Seasearch Survey of Norfolk	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00179	Marine Recorder snapshot 2013_06_24	2007 Natural England Outer Wash Annex I habitat survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00184	Marine Recorder snapshot 2013_06_24	2006 Seasearch North Norfolk	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00193	Marine Recorder snapshot 2013_06_24	2005 Seasearch North Norfolk	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00203	Marine Recorder snapshot 2013_06_24	2004 Seasearch North Norfolk	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00210	Marine Recorder snapshot 2013_06_24	2003 Seasearch North Norfolk	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00233	Marine Recorder snapshot 2013_06_24	1997 Envision - Wash Jul 97	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>



Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00393	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	Derived from BGS and OS data by MarLIN	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00452	MB0116 - EID14_EUROBIS_MCZ (was M_00122)	Fish trawl survey: North Sea international bottom trawl survey. ICES database of trawl surveys (DATRAS). The International Council for the Exploration of the Sea, Copenhagen. 2010	<a href="http://www.eurobis.org/eurobissearch.php">http://www.eurobis.org/eurobissearch.php</a> Online source: <a href="http://ecosystemdata.ices.dk">http://ecosystemdata.ices.dk</a> .
M_00072	ABPmer 2012 data collection - original data - dataset: NG	NE (SeaSearch) PHA1_projected	NE National GI
M_00128	MB0116 - IBTS_CPUE_Data_MCZ		Department of Biosciences, Wallace Building, Swansea University, Singleton Park, Swansea SA2 8PP

#### A9.19.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Cromer Shoal Chalk Beds rMCZ NG 02

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A3.1 High energy infralittoral rock	Tranche 2 advice	Low	Low	Moderate	Moderate	New data from data source unavailable in 2012.
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low	Low	Moderate	Moderate	New data from data source unavailable in 2012.
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Low	Low	High	Moderate	New data from data source unavailable in 2012.
Subtidal chalk	Tranche 2 advice	High	Low	High	Moderate	New data from data source unavailable in 2012.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
North Norfolk coast (Subtidal)	Tranche 2 advice	High	Low	High	Low	No change
A4.1 High energy circalittoral rock	T2 new features	N/A	N/A	Moderate	Moderate	Feature added due to improved evidence.
A5.1 Subtidal coarse sediment	T2 new features	N/A	N/A	Moderate	Moderate	Feature added due to improved evidence.
A5.2 Subtidal sand	T2 new features	N/A	N/A	Moderate	Moderate	Feature added due to improved evidence.
A5.4 Subtidal mixed sediments	T2 new features	N/A	N/A	Moderate	Moderate	Feature added due to improved evidence.
Peat and clay exposures	T2 new features	N/A	N/A	High	Moderate	Feature added due to improved evidence.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Cromer Shoal Chalk Beds rMCZ NG 02

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A3.1 High energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Maintain	Maintain	No change
Subtidal chalk	Tranche 2 advice	Maintain	Maintain	No change
North Norfolk coast (Subtidal)	Tranche 2 advice	Maintain	Maintain	No change
A4.1 High energy circalittoral rock	T2 new features	N/A	Maintain	New feature
A5.1 Subtidal coarse sediment	T2 new features	N/A	Maintain	New feature
A5.2 Subtidal sand	T2 new features	N/A	Maintain	New feature
A5.4 Subtidal mixed sediments	T2 new features	N/A	Maintain	New feature
Peat and clay exposures	T2 new features	N/A	Maintain	New feature

## A9.19.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
High energy infralittoral rock	Tranche 2 advice	Low		Moderate	Future risks to the site exist from plans to develop offshore wind farms with cabling route, running through the offshore boundary to the shore, along the west of the site. The cables will cut through the substrate of the site and require future maintenance.
Moderate energy infralittoral rock	Tranche 2 advice	Low		Moderate	Future risks to the site exist from plans to develop offshore wind farms with cabling routes, running through the offshore boundary to the shore, along the west of the site. The cables will cut through the substrate of the site and require future maintenance.
Moderate energy circalittoral rock	Tranche 2 advice	Low		High	Future risks to the site exist from plans to develop offshore wind farms with cabling routes, running through the offshore boundary to the shore, along the west of the site. The cables will cut through the substrate of the site and require future maintenance.
Subtidal chalk	Tranche 2 advice	Low		High	Future risks to the site exist from plans to develop offshore wind farms with cabling routes, running through the offshore boundary to the shore, along the west of the site. The cables will cut through the substrate of the site and require future maintenance.
North Norfolk coast (Subtidal)	Tranche 2 advice	Low		Unknown	Future risk narrative not provided for geological

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
					features as sensitivity to pressures determined by expert judgement only and not currently included in sensitivity matrix.
High energy circalittoral rock	T2 new features	Low		Moderate	Future risks to the site exist from plans to develop offshore wind farms with cabling routes, running through the offshore boundary to the shore, along the west of the site. The cables will cut through the substrate of the site and require future maintenance.
Subtidal coarse sediment	T2 new features	Low		Moderate	Future risks to the site exist from plans to develop offshore wind farms with cabling routes, running through the offshore boundary to the shore, along the west of the site. The cables will cut through the substrate of the site and require future maintenance.
Subtidal sand	T2 new features	Low		High	Future risks to the site exist from plans to develop offshore wind farms with cabling routes, running through the offshore boundary to the shore, along the west of the site. The cables will cut through the substrate of the site and require future maintenance.
Subtidal mixed sediments	T2 new features	Low		Moderate	Future risks to the site exist from plans to develop offshore wind farms with cabling routes, running through the offshore boundary to the shore, along the west of the site. The cables will cut through the substrate of the site and require future maintenance.

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Peat and clay exposures	T2 new features	Low		High	Future risks to the site exist from plans to develop offshore wind farms with cabling routes, running through the offshore boundary to the shore, along the west of the site. The cables will cut through the substrate of the site and require future maintenance.

## A9.19.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?
A3.1 High energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A	
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A	
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A	
Subtidal chalk	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A	
North Norfolk coast (Subtidal)	Tranche 2 advice	Geological	Not assessed	Not assessed	Not assessed	Not assessed	Not assessed	Not assessed	Not assessed	N/A	

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?
A4.1 High energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	
A5.1 Subtidal coarse sediment	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	
A5.2 Subtidal sand	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A	
A5.4 Subtidal mixed sediments	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	Not assessed	
A5.6 Subtidal biogenic reefs	T2 new features	BSH	No	No	No	Move to Q2	Yes	No	No	Not assessed	
Peat and clay exposures	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	Not assessed	

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No	99%		Yes. Available data support 4 JNCC Big Gaps identified features for designation.

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Yes. Available data support 4 JNCC Big Gaps identified features for designation.	9	32,032.3	The combination of its size, big gap filling ability, and number of features with reasonable confidence make this site one of the strong candidates among the inshore sites that could contribute to the network.



## **A9.19.7 Additional advice**

### **A9.19.7.1 Advice on specific features**

No additional advice given to Defra on specific features for this site.

### **A9.19.7.2 Advice on boundaries**

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### **A9.19.7.3 Evidence not used**

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

<b>Survey ID code</b>	<b>Survey (identifying name or code)</b>	<b>T2 rMCZs (rMCZ to which the survey relates)</b>	<b>Data collection methods</b>	<b>Reason for non-inclusion</b>
D_00007	Cefas MCZ verification survey - Cromer Shoal NG 02	NG 02 Cromer Shoal Chalk Beds	Multibeam	Not available before data cut-off.

## A9.20 Holderness Inshore rMCZ NG 08

### A9.20.1 Site description

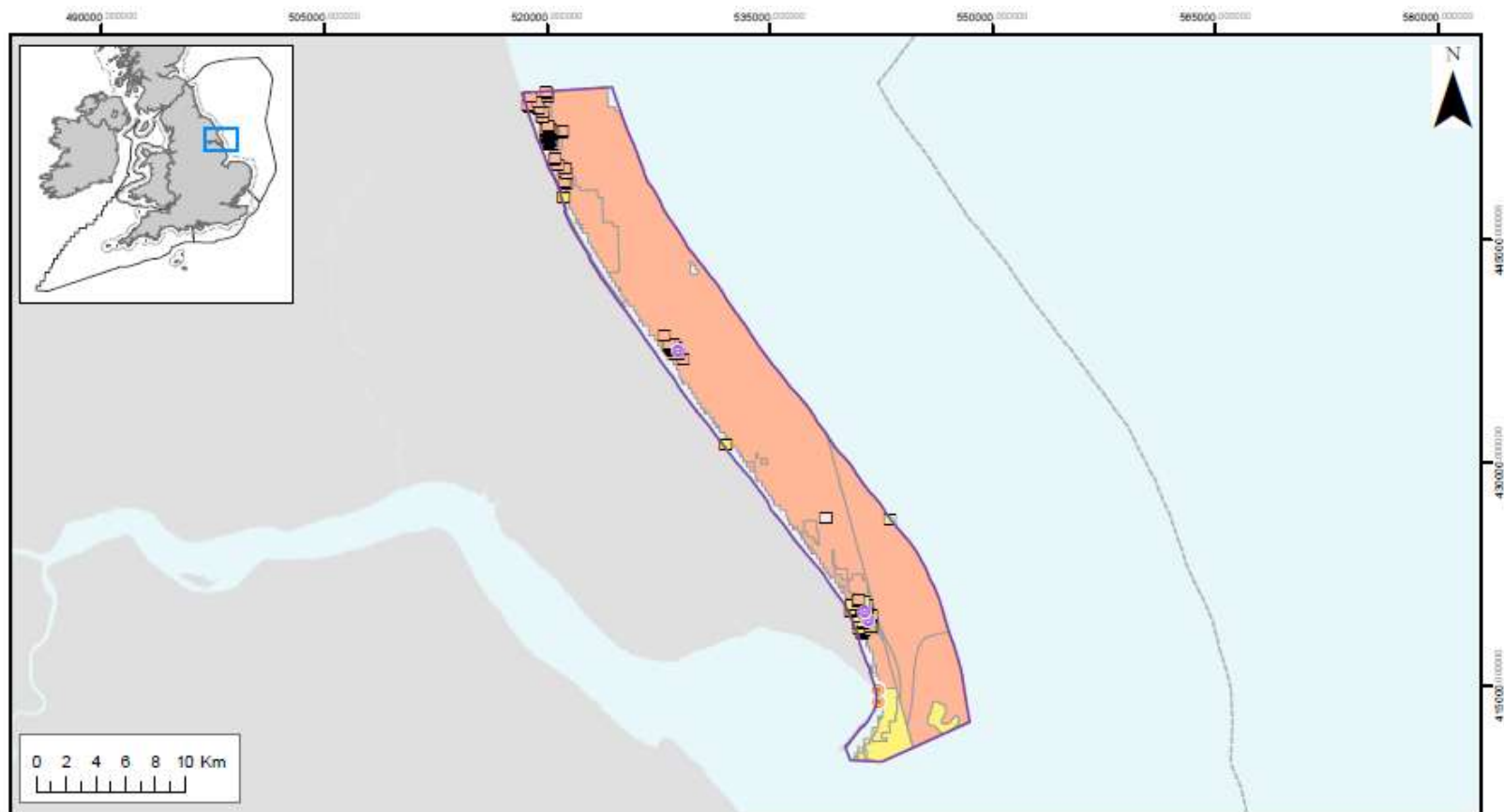
Holderness Inshore rMCZ is located on the Holderness coast, north of the mouth of the Humber Estuary in the East Riding of Yorkshire. The site runs along the coast from Skipsea in the north to Spurn Head in the south and extends offshore to the 3 nm limit. This area was recommended as an MCZ due to the presence of BSHs, HOCl and a geological feature of interest. Intertidal mixed sediments, subtidal sand, subtidal coarse and subtidal mixed sediments are present, and these BSHs support 2 HOCl: peat and clay exposures and Ross worm (*Sabellaria spinulosa*) reefs.

The mosaic of habitats within the site supports a diverse range of organisms including red algae, sponges and other encrusting fauna; fish species such as European eel, dab and wrasse, as well as commercially significant crustaceans such as edible and velvet swimming crabs and lobster. The geological feature of Spurn Head, located to the south of the site, is a unique example of a dynamic spit system, extending across the mouth of the macrotidal Humber Estuary. 'The Binks', an area of subtidal terminal moraine adjacent to the spit, traps sediment and reduces erosion to the Spurn Head feature. Few similar features are able to maintain comparable size and length in a setting with such a large tidal range.



**Plate 1** Intertidal mixed sediments, Holderness coast © Natural England

## A9.20.2 Site feature map



### Holderness Inshore rMCZ

- Recommended MCZ
- Regional MCZ Project Area
- 12nM Territorial Seas Limit
- Sea
- Land

### Features recommended for designation

- |  |  |
|--|--|
| <span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> Intertidal sand and muddy sand (A2.2)          | <span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; margin-right: 5px;"></span> Intertidal sand and muddy sand (A2.2)   |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: orange; border: 1px solid black; margin-right: 5px;"></span> High energy circalittoral rock (A4.1)          | <span style="display: inline-block; width: 15px; height: 10px; background-color: orange; margin-right: 5px;"></span> Subtidal coarse sediment (A5.1)   |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: lightorange; border: 1px solid black; margin-right: 5px;"></span> Moderate energy circalittoral rock (A4.2) | <span style="display: inline-block; width: 15px; height: 10px; background-color: lightorange; margin-right: 5px;"></span> Subtidal sand (A5.2)   |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: lightyellow; border: 1px solid black; margin-right: 5px;"></span> Subtidal coarse sediment (A5.1)           | <span style="display: inline-block; width: 15px; height: 10px; background-color: lightyellow; margin-right: 5px;"></span> Subtidal mud (A5.3)  |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: lightyellow; border: 1px solid black; margin-right: 5px;"></span> Subtidal sand (A5.2)                      | <span style="display: inline-block; width: 15px; height: 10px; background-color: lightyellow; border: 1px solid black; margin-right: 5px;"></span> Peat and clay exposures                         |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: lightyellow; border: 1px solid black; margin-right: 5px;"></span> Subtidal mud (A5.3)                       | <span style="display: inline-block; width: 15px; height: 10px; background-color: lightyellow; border: 1px solid black; margin-right: 5px;"></span> Ross worm ( <i>Sabellaria spinulosa</i> ) reefs |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: lightyellow; border: 1px solid black; margin-right: 5px;"></span> Subtidal mixed sediments (A5.4)           |  |

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 the permission of the Controller of Her Majesty's  
 Stationery Office and UK Hydrographic Office  
 (www.ukho.gov.uk). Map produced by  
 Natural England 2014.  
 Reference: Theme ID: 1477592  
 Map Projection: British National Grid

**Figure 1** Location of mapped BSHs and HOCl in Holderness Inshore rMCZ NG 08

### A9.20.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Holderness Inshore rMCZ NG 08

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A2.4 Intertidal mixed sediments	BSH	Tranche 2 advice	Low	Low	Maintain
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	High	Moderate	Maintain
A5.2 Subtidal sand	BSH	Tranche 2 advice	High	Moderate	Maintain
Peat and clay exposures	HOCI	Tranche 2 advice	Low	Low	Maintain
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	HOCI	Tranche 2 advice	Low	Low	Maintain
Subtidal chalk	HOCI	Tranche 2 advice	No confidence	No confidence	No GMA advised in 2014 for no confidence features.
Spurn Head (Subtidal)	Geological	Tranche 2 advice	High	Low	Maintain
A2.2 Intertidal sand and muddy sand	BSH	T2 new features	High	Moderate	Maintain
A4.1 High energy circalittoral rock	BSH	T2 new features	Moderate	Moderate	Maintain
A4.2 Moderate energy circalittoral rock	BSH	T2 new features	Moderate	Moderate	Maintain
A5.3 Subtidal mud	BSH	T2 new features	High	Moderate	Maintain
A5.4 Subtidal mixed sediments	BSH	T2 new features	Moderate	Moderate	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Holderness Inshore rMCZ NG 08

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00157	Marine Recorder snapshot 2013_06_24	2009 Seasearch Yorkshire Easington Dimlington survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00226	Marine Recorder snapshot 2013_06_24	1998 IECS Holderness Coast- Easington sublittoral sediment survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00227	Marine Recorder snapshot 2013_06_24	1998 IECS Holderness Coast- Aldbrough sublittoral sediment survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00285	Marine Recorder snapshot 2013_06_24	1991 NRA North Yorkshire and Humberside EC designated bathing beaches survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00293	Marine Recorder snapshot 2013_06_24	1991 IECS Holderness Coast- Easington sublittoral sediment survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00294	Marine Recorder snapshot 2013_06_24	1991 IECS Holderness Coast- Atwick sublittoral sediment survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00374	MESH Combined EUNIS 20140203	Humber Estuary intertidal habitat status report	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00442	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00058)	English Heritage peat records	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
M_00090	ABPmer 2012 data collection - original data - dataset: REC	Humber REC	MALSF <a href="http://www.marinealsf.org.uk/do">www.marinealsf.org.uk/do</a>
M_00091	ABPmer 2012 data collection - original data - dataset: REC	Humber REC	MALSF <a href="http://www.marinealsf.org.uk/do">www.marinealsf.org.uk/do</a>

#### A9.20.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Holderness Inshore rMCZ NG 08

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A2.4 Intertidal mixed sediments	Tranche 2 advice	High	Moderate	Low	Low	Updated following Protocol E based on more recent data.
A5.1 Subtidal coarse sediment	Tranche 2 advice	High	Moderate	High	Moderate	
A5.2 Subtidal sand	Tranche 2 advice	Low	Low	High	Moderate	Updated following Protocol E based on more recent data.
Peat and clay exposures	Tranche 2 advice	Low	Low	Low	Low	
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	Low	Low	Low	Low	
Subtidal chalk	Tranche 2 advice	Low	Low	No confidence	No confidence	Downgraded. Removed HOCl tags from Seasearch records and BGS Chalk polygon. Not found/present as suggested.
Spurn Head (Subtidal)	Tranche 2 advice	High	Low	High	Low	
A2.2 Intertidal sand and muddy sand	T2 new features			High	Moderate	
A4.1 High energy circalittoral rock	T2 new features			Moderate	Moderate	Evidence for circalittoral rock in the site is limited to point data from 2 parts of the site (one of which is modified by anthropogenic activity). The geology is dominated by glacial deposits, notably boulder clay, as well as patches of soft clay: there is no evidence for exposed bedrock. There may be a mosaic of subtidal habitats that grade from soft and mixed

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
						sediments to areas where higher frequency of clay exposures, cobbles and boulders form reefs.
A4.2 Moderate energy circalittoral rock	T2 new features			Moderate	Moderate	Evidence for circalittoral rock in the site is limited to point data from 2 parts of the site (one of which is modified by anthropogenic activity). The geology is dominated by glacial deposits, notably boulder clay, as well as patches of soft clay: there is no evidence for exposed bedrock. There may be a mosaic of subtidal habitats that grade from soft and mixed sediments to areas where higher frequency of clay exposures, cobbles and boulders form reefs.
A5.3 Subtidal mud	T2 new features			High	Moderate	Tiny EU SeaMap polygon; however, decision to maintain confidence based solely on point data.
A5.4 Subtidal mixed sediments	T2 new features			Moderate	Moderate	

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Holderness Inshore rMCZ NG 08

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A2.4 Intertidal mixed sediments	Tranche 2 advice	Maintain	Maintain	No change
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Maintain	No change

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
Peat and clay exposures	Tranche 2 advice	Maintain	Maintain	No change
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	Maintain	Maintain	No change
Subtidal chalk	Tranche 2 advice	Maintain	N/A	No GMA advised in 2014 for no confidence features.
Spurn Head (Subtidal)	Tranche 2 advice	Maintain	Maintain	No change
A2.2 Intertidal sand and muddy sand	T2 new features	N/A	Maintain	New feature
A4.1 High energy circalittoral rock	T2 new features	N/A	Maintain	New feature
A4.2 Moderate energy circalittoral rock	T2 new features	N/A	Maintain	New feature
A5.3 Subtidal mud	T2 new features	N/A	Maintain	New feature
A5.4 Subtidal mixed sediments	T2 new features	N/A	Maintain	New feature

## A9.20.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A2.4 Intertidal mixed sediments	Tranche 2 advice	Low		Moderate	
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low		Moderate	
A5.2 Subtidal sand	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk.



Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
					Therefore a high future risk of unfavourable condition is not thought to be justified.
Peat and clay exposures	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk. Therefore a high future risk of unfavourable condition is not thought to be justified.
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk. Therefore a high future risk of unfavourable condition is not thought to be justified.
Spurn Head (Subtidal)	Tranche 2 advice	Low		Unknown	Future risk narrative not provided for geological features as sensitivity to pressures determined by expert judgement only and not currently included in sensitivity matrix.
A2.2 Intertidal sand and muddy sand	T2 new features	Low		Moderate	
A4.1 High energy circalittoral rock	T2 new features	Low		Moderate	
A4.2 Moderate energy circalittoral rock	T2 new features	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
					site that would put this feature at high risk. Therefore a high future risk of unfavourable condition is not thought to be justified.
A5.3 Subtidal mud	T2 new features	Low		Moderate	
A5.4 Subtidal mixed sediments	T2 new features	Low		Moderate	

## A9.20.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A2.4 Intertidal mixed sediments	Tranche 2 advice	BSH	No	No	No	Move to Q2	No	No	No	No designation		
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.2 Subtidal sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Peat and clay exposures	Tranche 2 advice	HOCI	No	No	No	Move to Q2	No	No	Yes	Further consideration		
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	Tranche 2 advice	HOCI	No	No	No	Move to Q2	No	No	Yes	Further consideration		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Spurn Head (Subtidal)	Tranche 2 advice	Geological										
A2.2 Intertidal sand and muddy sand	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.1 High energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.2 Moderate energy circalittoral rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.3 Subtidal mud	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

<b>Feature name</b>	<b>Feature status</b>	<b>Feature type</b>	<b>Q1a. Confidence score of at least moderate for feature presence?</b>	<b>Q1b. Is 1a based only on parent habitat being present?</b>	<b>Q1c. Confidence score of at least moderate for extent/distribution?</b>	<b>Outcome from question 1 assessment: Are there enough data to support feature designation?</b>	<b>Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?</b>	<b>Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?</b>	<b>Q2b: Is the feature at high risk of damage?</b>	<b>Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?</b>	<b>Are new data coming that are likely to improve feature confidence?</b>	<b>Comments regarding 'new data coming'</b>
A5.4 Subtidal mixed sediments	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

<b>Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?</b>	<b>Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)</b>	<b>Comment on Q2 assessment</b>	<b>Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>
No	91%		No, did not fill gap originally.

**Table 8** Site level commentary

<b>Does this site still fill a 'big gap' in the network based on revised confidence assessment in feature presence and extent?</b>	<b>Number of features with at least moderate confidence in both presence and extent (T2 new sites only)</b>	<b>Site area (ha)</b>	<b>Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)</b>
No, did not fill big gap originally.	7	30,896.5	

## A9.20.7 Additional advice

### A9.20.7.1 Advice on specific features

No additional advice given to Defra on specific features for this site.

### A9.20.7.2 Advice on boundaries

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### A9.20.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00025	EA MCZ verification survey - Holderness Inshore	NG 08	Grab samples, camera drops	Not available before data cut-off.
D_00503	East Riding of Yorkshire Council	NG 08	Grab samples, multibeam	Not available before data cut-off.
D_00504	NESFC prohibited trawl area study	NG 08, NG 11	Roxann GDA and grab	Not available before data cut-off.

## A9.21 Runswick Bay rMCZ NG 11

### A9.21.1 Site description

Runswick Bay rMCZ is a coastal site that lies north-west of Whitby on the North Yorkshire coast and has an area of 67.92 km<sup>2</sup>. The depth range of the site is from mean high water to 30 m deep. The seabed across the site is composed of a number of rock and sediment features, which form a highly diverse and productive mosaic of habitats. The site was recommended for infralittoral and circalittoral rock habitats, as well as subtidal coarse and mixed sediments and subtidal sand. The complex habitat supports diverse communities such as dense carpets of hydroids, bryozoans and sponges interspersed with harder patches of Ross worm reef. The site is also being designated for the ocean quahog (*Arctica islandica*), which is a SOCI. The intertidal area within the site comprises rocky reefs, boulders and pools as well as caves and sandy beaches.

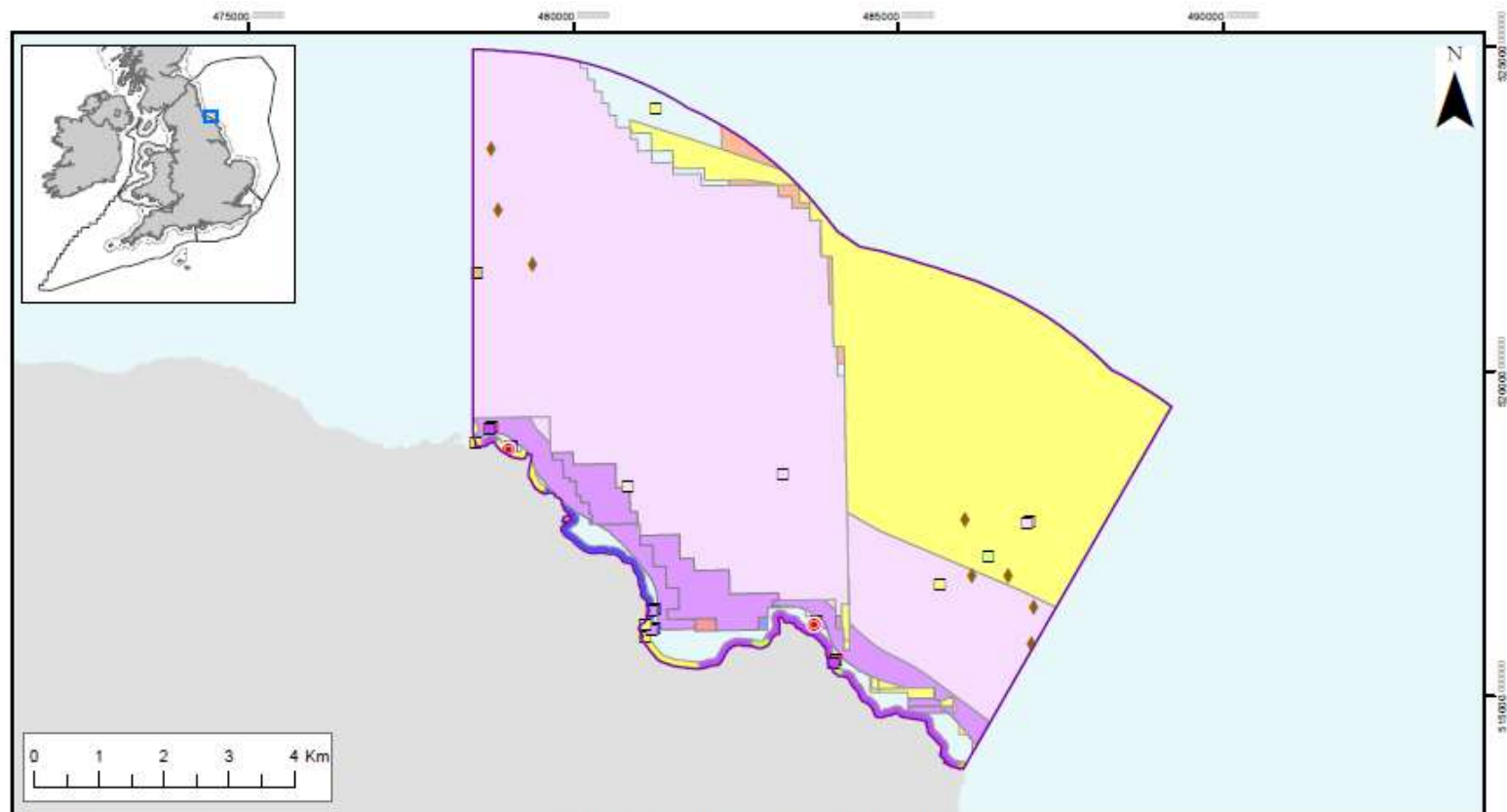
The rich benthic habitats also support a number of crustacean species, including 8 species of crab and the common lobster, providing rich fishing grounds for lobster and brown crab fisheries. As well as supporting a diverse benthic community, the site provides spawning grounds for a number of fish species including herring (*Clupea harengus*), sprat (*Sprattus sprattus*), cod (*Gadus morhua*), whiting (*Merlangus merlangus*) and plaice (*Pleuronectes platessa*).



**Plate 1** Intertidal rocks at Runswick Bay © Natural England



## A9.21.2 Site feature map



### Runswick Bay rMCZ

- Recommended MCZ
- Regional MCZ Project Area
- 12nM Territorial Seas Limit
- Sea
- Land

### Features recommended for designation

- |   |   |   |   |
|---|---|---|---|
| <span style="display: inline-block; width: 10px; height: 10px; background-color: red; border: 1px solid black; margin-right: 5px;"></span> High energy intertidal rock (A1.1)           | <span style="display: inline-block; width: 10px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Moderate energy intertidal rock (A1.2)    | <span style="display: inline-block; width: 10px; height: 10px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Low energy intertidal rock (A1.3)           | <span style="display: inline-block; width: 10px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> Intertidal sand and muddy sand (A2.2)     |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Moderate energy infralittoral rock (A3.2) | <span style="display: inline-block; width: 10px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> Intertidal mud (A2.3)                     | <span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Intertidal mixed sediments (A2.4)          | <span style="display: inline-block; width: 10px; height: 10px; background-color: red; border: 1px solid black; margin-right: 5px;"></span> High energy infralittoral rock (A3.1)        |
| <span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> High energy circalittoral rock (A4.1)                               | <span style="display: inline-block; width: 10px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Moderate energy circalittoral rock (A4.2) | <span style="display: inline-block; width: 10px; height: 10px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Low energy infralittoral rock (A3.3)        | <span style="display: inline-block; width: 10px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Moderate energy circalittoral rock (A4.2) |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> Subtidal coarse sediment (A5.1)           | <span style="display: inline-block; width: 10px; height: 10px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Moderate energy circalittoral rock (A4.2)   | <span style="display: inline-block; width: 10px; height: 10px; background-color: red; border: 1px solid black; margin-right: 5px;"></span> Subtidal coarse sediment (A5.1)              | <span style="display: inline-block; width: 10px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> Subtidal sand (A5.2)                      |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: purple; border: 1px solid black; margin-right: 5px;"></span> Subtidal sand (A5.2)                      | <span style="display: inline-block; width: 10px; height: 10px; background-color: blue; border: 1px solid black; margin-right: 5px;"></span> Subtidal mud (A5.3)                         | <span style="display: inline-block; width: 10px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> Subtidal mixed sediments (A5.4)           | <span style="display: inline-block; width: 10px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> Subtidal sand (A5.2)                      |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black; margin-right: 5px;"></span> Subtidal mixed sediments (A5.4)            | <span style="display: inline-block; width: 10px; height: 10px; background-color: red; border: 1px solid black; margin-right: 5px;"></span> Littoral chalk communities                   | <span style="display: inline-block; width: 10px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> Ocean quahog ( <i>Arctica islandica</i> ) |   |

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 (www.ukho.gov.uk). Map produced by  
 Natural England 2014.  
 Reference: Theme ID: 1477555  
 Map Projection: British National Grid

**Figure 1** Location of mapped BSHs and FOCI in Runswick Bay rMCZ NG 11

### A9.21.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Runswick Bay rMCZ NG 11

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A3.1 High energy infralittoral rock	BSH	Tranche 2 advice	Low	Low	Maintain
A3.2 Moderate energy infralittoral rock	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A4.1 High energy circalittoral rock	BSH	Tranche 2 advice	Low	Low	Maintain
A4.2 Moderate energy circalittoral rock	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	Low	Low	Maintain
A5.2 Subtidal sand	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A5.4 Subtidal mixed sediments	BSH	Tranche 2 advice	Low	Low	Maintain
Ocean quahog ( <i>Arctica islandica</i> )	SOCI	Tranche 2 advice	Moderate	Moderate	Maintain
A1.1 High energy intertidal rock	BSH	T2 new features	High	Moderate	Maintain
A1.2 Moderate energy intertidal rock	BSH	T2 new features	High	Moderate	Maintain

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.3 Low energy intertidal rock	BSH	T2 new features	High	Moderate	Maintain
A2.2 Intertidal sand and muddy sand	BSH	T2 new features	Moderate	Moderate	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Runswick Bay rMCZ NG 11

Survey ID code	MCZ source dataset	MCZ original survey	Location
N/A	Net Gain. (2011). Final recommendations: Submission to Natural England and JNCC	Final report from NG detailing the final rMCZs for the NG region	<a href="http://publications.naturalengland.org.uk/publication/1466980">http://publications.naturalengland.org.uk/publication/1466980</a>
N/A	JNCC and Natural England. (2012a)	JNCC and NE's advice to Defra on the final MCZ recommendations from the 4 MCZ regional projects	<a href="http://publications.naturalengland.org.uk/file/4923082">http://publications.naturalengland.org.uk/file/4923082</a>
N/A	JNCC and Natural England. (2012b)	JNCC and NE's amendments to their July published advice (JNCC and Natural England 2012a)	<a href="http://publications.naturalengland.org.uk/file/4255584">http://publications.naturalengland.org.uk/file/4255584</a>
N/A	Natural England (2013d)	NE's advice to Defra on proposed MCZs for designation in 2013	<a href="http://publications.naturalengland.org.uk/publication/5717839965061120?category=1499649">http://publications.naturalengland.org.uk/publication/5717839965061120?category=1499649</a>
D_00123	Marine Recorder snapshot 2013_06_24	2012 Seasearch North East England survey of Runswick Bay dMCZ	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00234	Marine Recorder snapshot 2013_06_24	1997 Envision - Boulby August 1997	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00255	Marine Recorder snapshot 2013_06_24	1993 MNCR/AES Blyth to Flamborough Head sublittoral sediment survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00258	Marine Recorder snapshot 2013_06_24	1993 MNCR Saltburn to Flamborough Head	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
		sublittoral survey	
D_00259	Marine Recorder snapshot 2013_06_24	1993 MNCR Saltburn to Flamborough Head littoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00284	Marine Recorder snapshot 2013_06_24	1991 NRA North Yorkshire and Humberside littoral rock survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00285	Marine Recorder snapshot 2013_06_24	1991 NRA North Yorkshire and Humberside EC designated bathing beaches survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00354	MESH Combined EUNIS 20140203	MNCR area summaries - South- east Scotland and north-east England	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
D_00378	MESH Combined EUNIS 20140203	Intertidal mudflat layer for England	MESH Project, JNCC <a href="http://jncc.defra.gov.uk/UKSeaMap">http://jncc.defra.gov.uk/UKSeaMap</a>
M_00084	ABPmer 2012 data collection - original data - dataset: NG	NESFC_IECS	NE National GI

#### A9.21.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Runswick Bay rMCZ NG 11

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A3.1 High energy infralittoral rock	Tranche 2 advice	Moderate	Low	Low	Low	Revised confidence assessment criteria.
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Moderate	Low	Moderate	Moderate	Revised confidence assessment criteria.
A4.1 High energy circalittoral rock	Tranche 2 advice	Moderate	Low	Low	Low	Revised confidence assessment criteria.
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Moderate	Low	Moderate	Moderate	Revised confidence assessment criteria.
A5.1 Subtidal coarse sediment	Tranche 2 advice	High	Low	Low	Low	Revised confidence assessment criteria.
A5.2 Subtidal sand	Tranche 2 advice	High	Low	Moderate	Moderate	Revised confidence assessment criteria.
A5.4 Subtidal mixed sediments	Tranche 2 advice	High	Low	Low	Low	Revised confidence assessment criteria.
Ocean quahog ( <i>Arctica islandica</i> )	Tranche 2 advice	High	High	Moderate	Moderate	Revised confidence assessment criteria.
A1.1 High energy intertidal rock	T2 new features			High	Moderate	Intertidal features were not recommended for protection by the NG regional project; although in their final recommendations NG indicated that stakeholders considered that these features could be considered for designation in subsequent stages of the MCZ consultation process.
A1.2 Moderate energy intertidal rock	T2 new features			High	Moderate	Intertidal features were not recommended for protection by the NG regional project; although

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
						in their final recommendations NG indicated that stakeholders considered that these features could be considered for designation in subsequent stages of the MCZ consultation process.
A1.3 Low energy intertidal rock	T2 new features			High	Moderate	Intertidal features were not recommended for protection by the NG regional project; although in their final recommendations NG indicated that stakeholders considered that these features could be considered for designation in subsequent stages of the MCZ consultation process.
A2.2 Intertidal sand and muddy sand	T2 new features			Moderate	Moderate	Intertidal features were not recommended for protection by the NG regional project; although in their final recommendations NG indicated that stakeholders considered that these features could be considered for designation in subsequent stages of the MCZ consultation process.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Runswick Bay rMCZ NG 11

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A3.1 High energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A4.1 High energy circalittoral rock	Tranche 2 advice	Maintain	Maintain	No change

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Maintain	No change
A5.4 Subtidal mixed sediments	Tranche 2 advice	Maintain	Maintain	No change
Ocean quahog ( <i>Arctica islandica</i> )	Tranche 2 advice	Maintain	Maintain	No change
A1.1 High energy intertidal rock	T2 new features		Maintain	Potential new feature
A1.2 Moderate energy intertidal rock	T2 new features		Maintain	Potential new feature
A1.3 Low energy intertidal rock	T2 new features		Maintain	Potential new feature
A2.2 Intertidal sand and muddy sand	T2 new features		Maintain	Potential new feature

#### A9.21.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A3.1 High energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A4.1 High energy circalittoral rock	Tranche 2 advice	Low		Moderate	
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
					condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low		Moderate	
A5.2 Subtidal sand	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
A5.4 Subtidal mixed sediments	Tranche 2 advice	Low		Moderate	
Ocean quahog ( <i>Arctica islandica</i> )	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
A1.1 High energy intertidal rock	T2 new features	Low		Moderate	
A1.2 Moderate energy intertidal rock	T2 new features	Low		Moderate	
A1.3 Low energy intertidal rock	T2 new features	Low		Moderate	
A2.2 Intertidal sand and muddy sand	T2 new features	Low		Moderate	



## A9.21.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A3.1 High energy infralittoral rock	Tranche 2 advice	BSH	No	No	No	Move to Q2	Yes	No	No	No designation	Yes	EA/Cefas verification reporting due 14/11/2014 providing high MESH polygonal and point data in support of subtidal features.
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A	Yes	EA/Cefas verification reporting due 14/11/2014 providing high MESH polygonal and point data in support of subtidal features.
A4.1 High energy circalittoral rock	Tranche 2 advice	BSH	No	No	No	Move to Q2	Yes	No	No	No designation	Yes	EA/Cefas verification reporting due 14/11/2014 providing high MESH polygonal and point data in support of subtidal features.
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A	Yes	EA/Cefas verification reporting due 14/11/2014 providing high MESH polygonal and point data in support of subtidal features.

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	No	No	No	Move to Q2	Yes	No	No	No designation	Yes	EA/Cefas verification reporting due 14/11/2014 providing high MESH polygonal and point data in support of subtidal features.
A5.2 Subtidal sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A	Yes	EA/Cefas verification reporting due 14/11/2014 providing high MESH polygonal and point data in support of subtidal features.
A5.4 Subtidal mixed sediments	Tranche 2 advice	BSH	No	No	No	Move to Q2	Yes	No	No	No designation	Yes	EA/Cefas verification reporting due 14/11/2014 providing high MESH polygonal and point data in support of subtidal features.
Ocean quahog ( <i>Arctica islandica</i> )	Tranche 2 advice	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.1 High energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A1.2 Moderate energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.3 Low energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.2 Intertidal sand and muddy sand	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

<b>Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?</b>	<b>Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)</b>	<b>Comment on Q2 assessment</b>	<b>Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>
No	94%		No, but new data coming.

**Table 8** Site level commentary

<b>Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?</b>	<b>Number of features with at least moderate confidence in both presence and extent (T2 new sites only)</b>	<b>Site area (ha)</b>	<b>Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)</b>
No, but new data coming.	8	6,767.1	

## **A9.21.7 Additional advice**

### **A9.21.7.1 Advice on specific features**

No additional advice given to Defra on specific features for this site.

### **A9.21.7.2 Advice on boundaries**

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### **A9.21.7.3 Evidence not used**

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

<b>Survey ID code</b>	<b>Survey (identifying name or code)</b>	<b>T2 rMCZs (rMCZ to which the survey relates)</b>	<b>Data collection methods</b>	<b>Reason for non-inclusion</b>
D_00033	EA MCZ verification survey - Runswick Bay	NG 11	Grab samples, camera drops	Not available before data cut-off.
D_00504	NESFC prohibited trawl area study	NG 8, NG 11	Roxann GDA and grab	Not available before data cut-off.

## A9.22 Coquet to St Mary's rMCZ NG 13

### A9.22.1 Site description

Coquet to St Mary's rMCZ is a coastal site located off the coast of Northumberland in the north-east of England and has an area of 198.75 km<sup>2</sup>. The rMCZ runs from Alnmouth in the north to Whitley Bay in the south. The seaward boundary nominally runs parallel to the shore adjacent to the 1 nm line, with the northern and southern parts of the site extending to the 3 nm limit. The seabed across the site is composed of a mosaic of intertidal and subtidal rock and sediment features. The rMCZ was recommended by the Net Gain regional MCZ project for 13 of the 16 BSHs that are present within the recommended boundary and for the intertidal underboulder communities, which is a FOCl.

The diversity of subtidal habitats supports varied benthic communities and includes sessile species such as anemones, soft corals, sea squirts, hydroids and bryozoans. In addition, these complex habitats and communities support starfish, sea urchins, crabs and lobsters, and also includes the first ever record of the Arctic cushion star for the English coast. The site also supports diverse intertidal habitats, including intertidal underboulder communities. These communities are formed when suitable habitat such as underboulders, fissures and crevices form a series of microhabitats that provide shelter for smaller species such as calcareous tube worms, crustaceans, brittle stars and bryozoans.



**Plate 1** Intertidal rock, St Mary's Island, November 2012 © Dr Catherine Scott, Natural England

## A9.22.2 Site feature maps

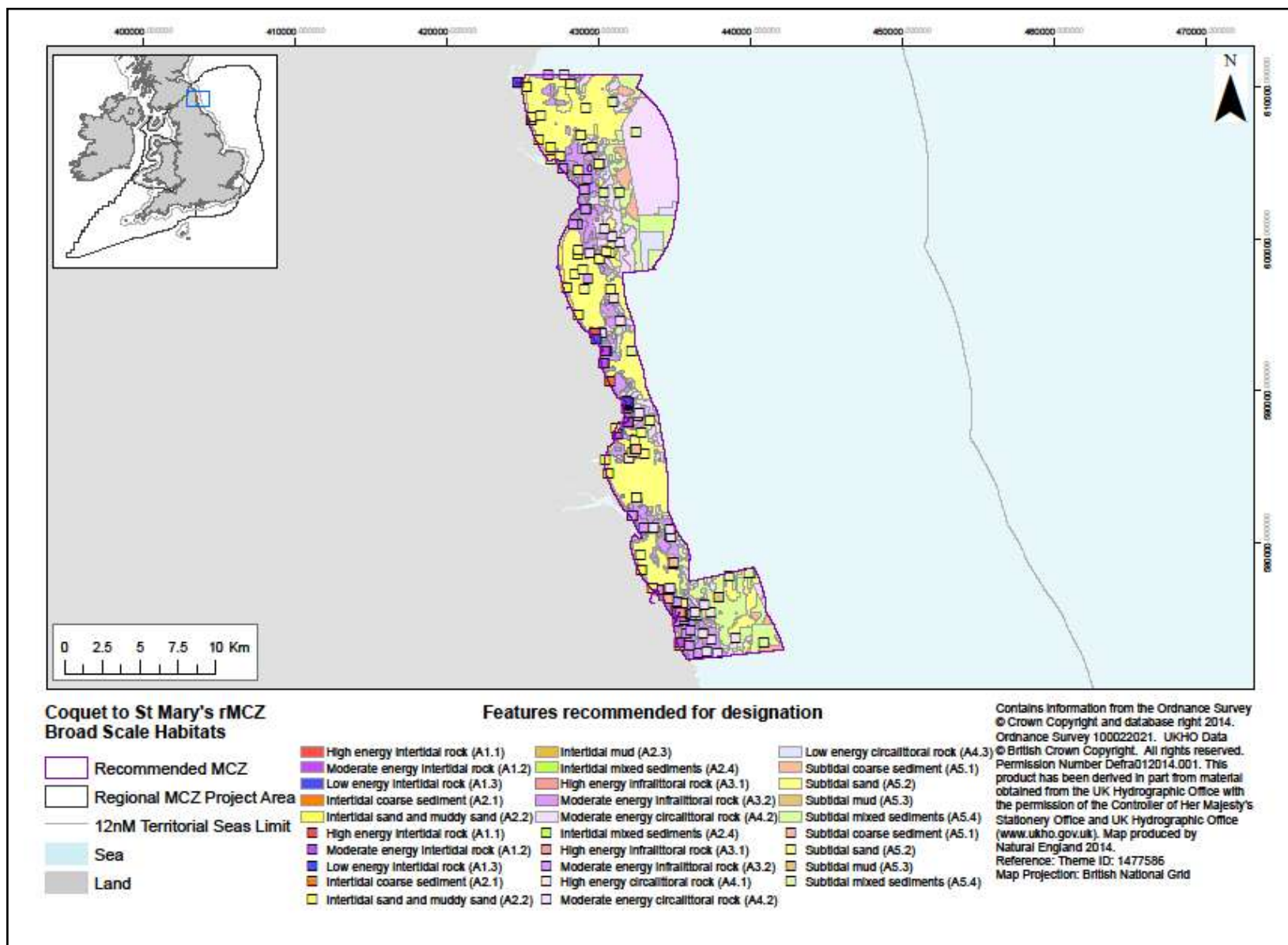


Figure 1 Location of mapped BSHs in Coquet to St Mary's rMCZ NG 13

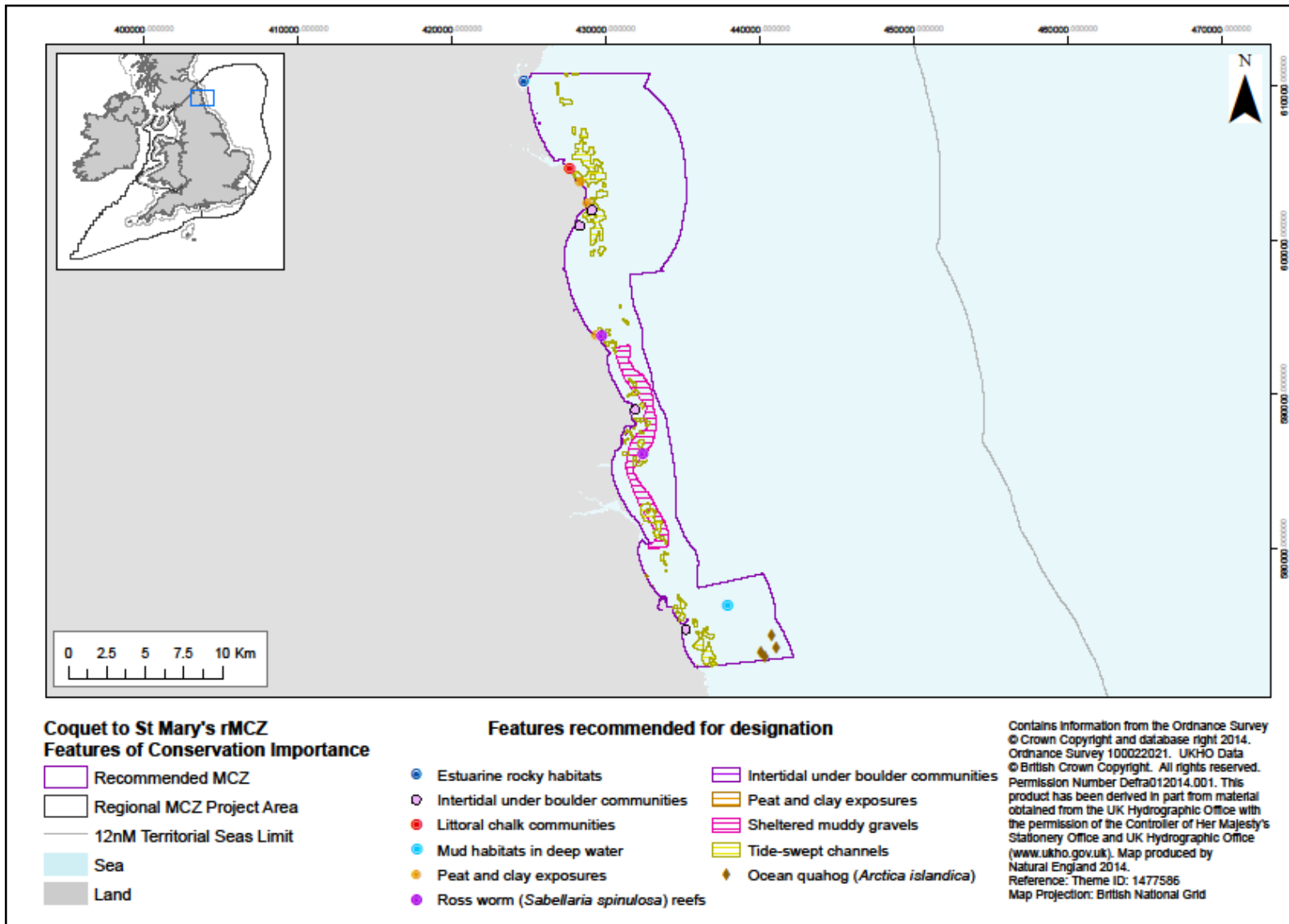


Figure 2 Location of mapped FOCI in Coquet to St Mary's rMCZ NG 13



### A9.22.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Coquet to St Mary's rMCZ NG 13

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A1.2 Moderate energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A1.3 Low energy intertidal rock	BSH	Tranche 2 advice	High	High	Maintain
A2.1 Intertidal coarse sediment	BSH	Tranche 2 advice	High	High	Maintain
A2.2 Intertidal sand and muddy sand	BSH	Tranche 2 advice	High	High	Maintain
A2.3 Intertidal mud	BSH	Tranche 2 advice	High	High	Maintain
A2.4 Intertidal mixed sediments	BSH	Tranche 2 advice	High	High	Maintain
A3.1 High energy infralittoral rock	BSH	Tranche 2 advice	Moderate	Moderate	Maintain
A3.2 Moderate energy infralittoral rock	BSH	Tranche 2 advice	High	High	Maintain
A4.2 Moderate energy circalittoral rock	BSH	Tranche 2 advice	High	Moderate	Maintain
A5.1 Subtidal coarse sediment	BSH	Tranche 2 advice	Moderate	Moderate	Maintain

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A5.2 Subtidal sand	BSH	Tranche 2 advice	High	Moderate	Maintain
A5.3 Subtidal mud	BSH	Tranche 2 advice	Low	Low	Maintain
A5.4 Subtidal mixed sediments	BSH	Tranche 2 advice	High	Moderate	Maintain
Intertidal underboulder communities	HOCI	Tranche 2 advice	High	High	Maintain
A1.1 High energy intertidal rock	BSH	T2 new features	High	High	Maintain
Peat and clay exposures	HOCI	T2 new features	High	High	Maintain
Ocean quahog ( <i>Arctica islandica</i> )	SOCI	T2 new features	Moderate	Moderate	Recover

**Table 2** Supporting documentation, reference materials and relevant survey details for Coquet to St Mary's rMCZ NG 13

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00038	NE MCZ verification photos	NE regional staff MCZ verification photos	NE National GI
D_00043	2013 NE MCZ verification survey - Coquet to St Mary's (D_00043)		NE National GI
D_00105	Marine Recorder new data 2014_02_14	2013 Seasearch North East England survey of the Farne Islands and Northumberland Coast	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00122	Marine Recorder snapshot 2013_06_24	2012 Seasearch North East England survey of St Mary's to Coquet Island rMCZ	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00137	Marine Recorder snapshot 2013_06_24	2011 Seasearch North East England survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00159	Marine Recorder snapshot 2013_06_24	2009 Seasearch North East survey of the coast around Tynemouth	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00228	Marine Recorder snapshot 2013_06_24	1998 Envision - Northumberland Jul98	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00241	Marine Recorder snapshot 2013_06_24	1996 Envision - Amble Aug96	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00251	Marine Recorder snapshot 2013_06_24	1994 Envision – St Mary's Aug94	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00255	Marine Recorder snapshot 2013_06_24	1993 MNCR/AES Blyth to Flamborough Head sublittoral sediment survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00260	Marine Recorder snapshot 2013_06_24	1993 MNCR Newbiggin to Saltburn sublittoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00261	Marine Recorder snapshot 2013_06_24	1993 MNCR Newbiggin to Saltburn littoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00262	Marine Recorder snapshot 2013_06_24	1993 Dove Marine Laboratory Alnmouth and Druridge Bays sediment survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00272	Marine Recorder snapshot 2013_06_24	1992 MNCR north-east England estuaries littoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00276	Marine Recorder snapshot 2013_06_24	1992 MNCR Berwick-on-Tweed to Newbiggin sublittoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00277	Marine Recorder snapshot 2013_06_24	1992 MNCR Berwick-on-Tweed to Newbiggin littoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00279	Marine Recorder snapshot 2013_06_24	1992 AES NE England sublittoral survey	NBN <a href="http://www.nbn.org.uk">www.nbn.org.uk</a>
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00347	MESH Combined EUNIS 20140203	Mapping survey of the intertidal biotopes of the Berwickshire coast	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00354	MESH Combined EUNIS 20140203	MNCR area summaries - south-east Scotland and north-east England	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00370	MESH Combined EUNIS 20140203	TY070 facies interpretation from 2004 side-scan	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00375	MESH Combined EUNIS 20140203	ENSIS (Marine SSSI data)	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00376	MESH Combined EUNIS 20140203	Futurecoast	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00378	MESH Combined EUNIS 20140203	Intertidal mudflat layer for England	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00380	MESH Combined EUNIS 20140203	Broadscale mapping of the reefs of Berwickshire and Northumberland. Lifeforms	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
D_00392	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00059)	BGS	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00440	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00058)	CEND 12/06_BA004_Blyth Disposal Site 2006_G7A	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00441	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00058)	CEND 12/07_BA004_Blyth Disposal Site 2006_G7A	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00442	ABPmer 2012 data collection - original data - dataset: MB102 (was M_00058)	English Heritage peat records	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00443	MB0116 - Species_FOCI_MCZ (was M_00099)	Cefas - A1033 CIR3a/02 TY070 disposal site survey	<a href="https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme">https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/publication-scheme</a>
D_00449	MB0116 - Species_FOCI_MCZ (was M_00099)	Cefas - TY070 AE1033 2004	Knowledge and Information, Cefas, Pakefield Road, Lowestoft, Suffolk, NR33 0HT lowlibrary@cefas.co.uk <a href="http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx">http://www.cefas.defra.gov.uk/publications-and-data/access-to-information.aspx</a>

#### A9.22.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Coquet to St Mary's rMCZ NG 13

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A1.2 Moderate energy intertidal rock	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
A1.3 Low energy intertidal rock	Tranche 2 advice	High	Low	High	High	Updated following Protocol E based on more recent data.
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low	Low	High	High	Updated following Protocol E based on more recent data.
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	No confidence	No confidence	High	High	Updated following Protocol E based on more recent data.
A2.3 Intertidal mud	Tranche 2 advice	High	Moderate	High	High	Updated following Protocol E based on more recent data.
A2.4 Intertidal mixed sediments	Tranche 2 advice	High	Moderate	High	High	Updated following Protocol E based on more recent data.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A3.1 High energy infralittoral rock	Tranche 2 advice	Moderate	Low	Moderate	Moderate	Updated following Protocol E based on more recent data.
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low	Low	High	High	Updated following Protocol E based on more recent data.
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Low	Low	High	Moderate	Updated following Protocol E based on more recent data.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Moderate	Moderate	Moderate	Moderate	Updated following Protocol E based on more recent data.
A5.2 Subtidal sand	Tranche 2 advice	Low	Low	High	Moderate	Updated following Protocol E based on more recent data.
A5.3 Subtidal mud	Tranche 2 advice	Low	Low	Low	Low	Supported by modelled data and parent feature – mainly EU Seemap and single point – queried and downgraded. Moderate/moderate confidence based on parent feature so manually downgraded.
A5.4 Subtidal mixed sediments	Tranche 2 advice	Moderate	Moderate	High	Moderate	Updated following Protocol E based on more recent data.
Intertidal underboulder communities	Tranche 2 advice	High	Moderate	High	High	Increased confidence to high/high from high/moderate as intertidal polygons have MESH>58.
A1.1 High energy intertidal rock	T2 new features	N/A	N/A	High	High	Potential new feature not previously considered in 2012 confidence assessment.
A4.1 High energy circalittoral rock	T2 new features	N/A	N/A	Moderate	Low	Potential new feature not previously considered in 2012 confidence assessment. Extent manually downgraded to low following spatial check and expert judgement.

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
Peat and clay exposures	T2 new features	N/A	N/A	High	High	Potential new feature not previously considered in 2012 confidence assessment. Verification survey – data shown in report but not GI or MR. Manually increased confidence to high/high based on verification survey report.
Ocean quahog ( <i>Arctica islandica</i> )	T2 new features	N/A	N/A	Moderate	Moderate	Potential new feature not previously considered in 2012 confidence assessment.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for St Mary's Coquet to St Mary's rMCZ NG 13

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A1.3 Low energy intertidal rock	Tranche 2 advice	Maintain	Maintain	No change
A2.1 Intertidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Maintain	Maintain	No change
A2.3 Intertidal mud	Tranche 2 advice	Maintain	Maintain	No change
A2.4 Intertidal mixed sediments	Tranche 2 advice	Maintain	Maintain	No change
A3.1 High energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Maintain	Maintain	No change
A5.1 Subtidal coarse sediment	Tranche 2 advice	Maintain	Maintain	No change

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.2 Subtidal sand	Tranche 2 advice	Maintain	Maintain	No change
A5.3 Subtidal mud	Tranche 2 advice	Maintain	Maintain	No change
A5.4 Subtidal mixed sediments	Tranche 2 advice	Maintain	Maintain	No change
Intertidal underboulder communities	Tranche 2 advice	Maintain	Maintain	No change
A1.1 High energy intertidal rock	T2 new features	N/A	Maintain	N/A
Peat and clay exposures	T2 new features	N/A	Maintain	N/A
Ocean quahog ( <i>Arctica islandica</i> )	T2 new features	N/A	Recover	N/A

## A9.22.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A1.2 Moderate energy intertidal rock	Tranche 2 advice	Low		Moderate	
A1.3 Low energy intertidal rock	Tranche 2 advice	Low		Moderate	
A2.1 Intertidal coarse sediment	Tranche 2 advice	Low		Moderate	
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	Low		Moderate	
A2.3 Intertidal mud	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk



Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
					of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
A2.4 Intertidal mixed sediments	Tranche 2 advice	Low		Moderate	
A3.1 High energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	Low		Moderate	
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
A5.1 Subtidal coarse sediment	Tranche 2 advice	Low		Moderate	
A5.2 Subtidal sand	Tranche 2 advice	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
A5.3 Subtidal mud	Tranche 2 advice	Low		Moderate	
A5.4 Subtidal mixed sediments	Tranche 2 advice	Low		Moderate	

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Intertidal underboulder communities	Tranche 2 advice	Low		Moderate	
A1.1 High energy intertidal rock	T2 new features	Low		Moderate	
Peat and clay exposures	T2 new features	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.
Ocean quahog ( <i>Arctica islandica</i> )	T2 new features	High	Although trawling pressure is low in the site, the feature is highly sensitive to the removal of non-target features and sub-surface penetration. There are 4 records of this species, currently concentrated in the south-east of the site. Verification surveys may find further records in similar habitats across the wider site.	High	

## A9.22.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A1.2 Moderate energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.3 Low energy intertidal rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.1 Intertidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.2 Intertidal sand and muddy sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A2.3 Intertidal mud	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A2.4 Intertidal mixed sediments	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A3.1 High energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A3.2 Moderate energy infralittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A4.2 Moderate energy circalittoral rock	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A5.1 Subtidal coarse sediment	Tranche 2 advice	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A5.2 Subtidal sand	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A5.3 Subtidal mud	Tranche 2 advice	BSH	No	No	No	Move to Q2	Yes	No	No	No designation		
A5.4 Subtidal mixed sediments	Tranche 2 advice	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
Intertidal underboulder communities	Tranche 2 advice	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A1.1 High energy intertidal rock	T2 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
A4.1 High energy circalittoral rock	T2 new features	BSH	Yes	No	No	Move to Q2	Yes	Yes	Not assessed	Not assessed		
A4.3 Low energy circalittoral rock	T2 new features	BSH	No	No	No	Move to Q2	Yes	No	Not assessed	No designation		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Littoral chalk communities	T2 new features	HOCI	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
Mud habitats in deep water	T2 new features	HOCI	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
Peat and clay exposures	T2 new features	HOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs	T2 new features	HOCI	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
Sheltered muddy gravels	T2 new features	HOCI	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
Tide-swept channels	T2 new features	HOCI	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Estuarine rocky habitats	T2 new features	HOCI	No	No	No	Move to Q2	No	No	Not assessed	Not assessed		
Ocean quahog ( <i>Arctica islandica</i> )	T2 new features	SOCI	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No	97%		Yes. Available data support at least one JNCC Big Gaps identified feature for designation.

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Yes. Available data support at least one JNCC Big Gaps identified feature for designation.	16	19,798.2	The combination of big gap filling ability, high number of features with reasonable confidence, and size make this site one of the strong candidates among the inshore sites that could contribute to the network.



## **A9.22.7 Additional advice**

### **A9.22.7.1 Advice on specific features**

No additional advice given to Defra on specific features for this site.

### **A9.22.7.2 Advice on boundaries**

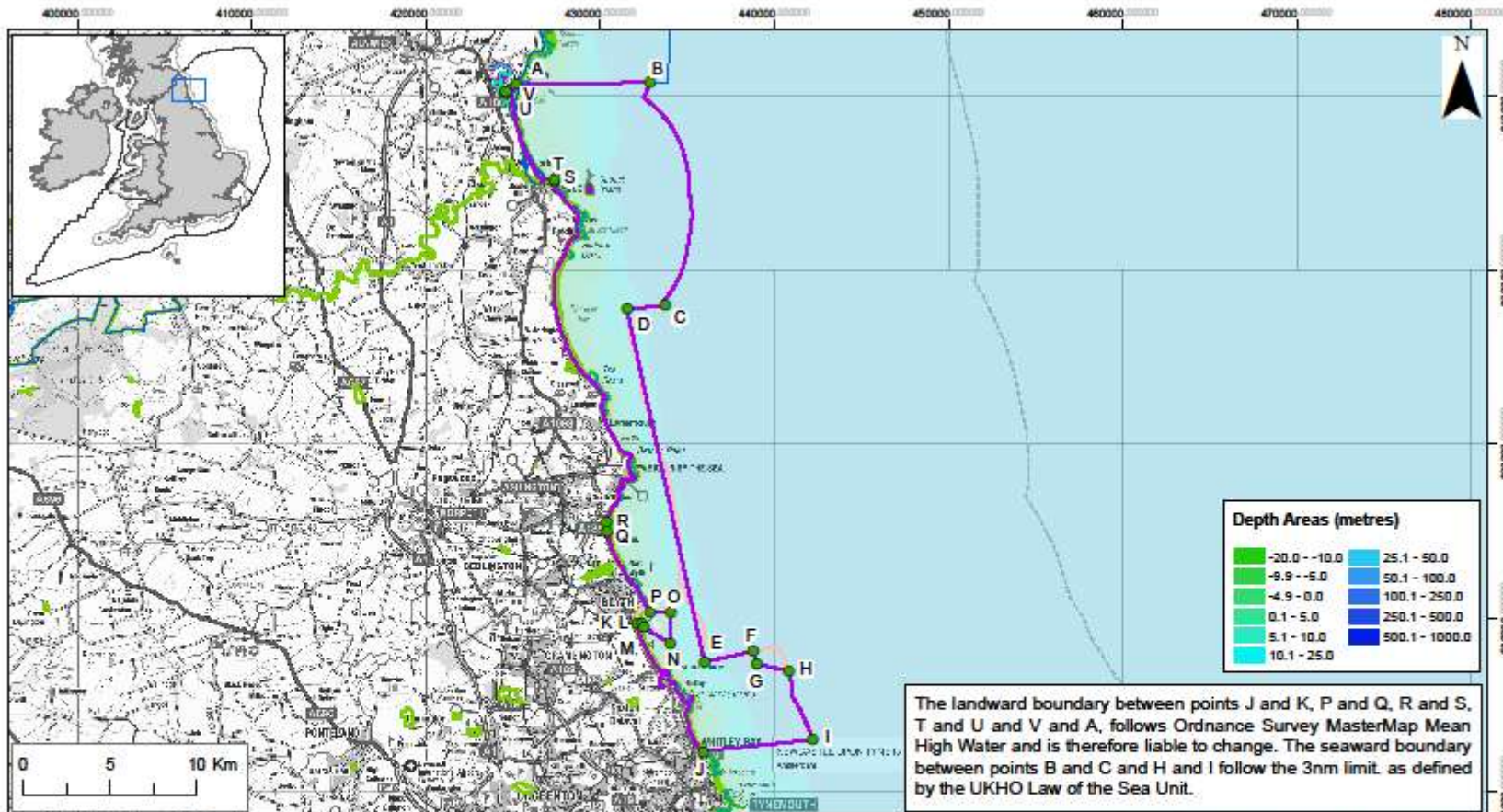
Defra requested advice on the possible removal of the part of the rMCZ falling within the southern end of the statutory limits of the Port of Blyth (sections K and P in Figure 3).

Natural England has no evidence to suggest that the habitats in the southern part of the port's jurisdiction, which are likely to be dominated by soft sediments and shingle, are in any way sub-optimal or not potentially worthy of inclusion in the rMCZ. However, the rMCZ was primarily identified for its rock habitats, which are present in the intertidal zone in the northern half of the port's jurisdiction and likely to be present in the subtidal zone there too. This northern area, which Defra also sought Natural England's advice on regarding potential removal, also includes 2 areas of intertidal rock that are not currently protected by SSSI or other designations. Rocky habitats have a limited distribution in the English North Sea, and this site allowed Net Gain to meet a number of ENG criteria such as representativity and connectivity for subtidal rock. Therefore, removing the southern half of the port's jurisdiction while continuing to retain the northern portion will significantly reduce the impact of changes on the ecological value of the site

Additionally, Natural England's advice was sought regarding the removal of another portion of the rMCZ, relating to the Port of Blyth's dredge disposal area. Defra have proposed removing the dredge disposal area plus a 250m buffer from the rMCZ section F-G-H). Natural England has advised that this will result in the removal of a small area of moderate energy circalittoral rock as well as areas of subtidal mixed sediment and subtidal sand. Again, Natural England has no evidence to suggest that these habitats are not potentially worthy of inclusion in the rMCZ. However, the removal of these areas will not affect the overall viability of these features within the rMCZ.

It should be noted that the majority of the evidence that Natural England uses to provide advice relating to subtidal habitats in this rMCZ is modelled data only. Therefore, some caution needs to be exercised when considering these data.

Lastly, the seaward extent of the boundary has been simplified to aid the granting of a designation order (sections D and E in Figure 3).



**Coquet to St Mary's rMCZ Boundary**

- Revised Recommended MCZ
- Recommended MCZ (NetGain)
- Regional MCZ project area
- Land
- MCZ boundary co-ordinates
- 12nM Territorial Seas Limit
- SPAs
- SACs
- MCZ
- SSSIs

Point	Lat	Long	Point	Lat	Long
A	55° 23' 23.938" N	1° 36' 16.596" W	L	55° 6' 38.485" N	1° 29' 37.867" W
B	55° 23' 22.507" N	1° 28' 58.903" W	M	55° 6' 30.244" N	1° 29' 32.148" W
C	55° 16' 29.020" N	1° 28' 14.397" W	N	55° 6' 0.348" N	1° 28' 6.099" W
D	55° 16' 21.614" N	1° 30' 19.395" W	O	55° 6' 58.794" N	1° 28' 5.290" W
E	55° 5' 25.433" N	1° 26' 16.455" W	P	55° 6' 59.097" N	1° 29' 12.133" W
F	55° 5' 44.243" N	1° 23' 39.473" W	Q	55° 9' 28.997" N	1° 31' 29.000" W
G	55° 5' 21.620" N	1° 23' 27.991" W	R	55° 9' 45.860" N	1° 31' 30.150" W
H	55° 5' 6.617" N	1° 21' 43.958" W	S	55° 20' 20.317" N	1° 34' 14.911" W
I	55° 2' 59.103" N	1° 20' 28.435" W	T	55° 20' 23.317" N	1° 34' 13.728" W
J	55° 2' 39.178" N	1° 26' 22.263" W	U	55° 23' 3.917" N	1° 36' 49.580" W
K	55° 6' 38.552" N	1° 29' 54.248" W	V	55° 23' 9.032" N	1° 36' 51.347" W

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Figure 3 Boundary changes proposed by Defra for Coquet to St Mary's rMCZ NG 13

**Table 9** Implications of boundary changes in Coquet to St Mary's rMCZ for feature viability based on sections I and J (Figure 3) boundary change only

Site	Feature	Approximate loss of known extent from rMCZ with revised boundary	Implications for viability*
Coquet to St Mary's	A2.1 Intertidal coarse sediment	Small proportion of the feature of overall site	Site will still be viable
Coquet to St Mary's	A2.2 Intertidal sand and muddy sand	Small proportion of the feature of overall site	Site will still be viable
Coquet to St Mary's	A3.2 Moderate energy infralittoral rock	Small proportion of the feature of overall site	Site will still be viable
Coquet to St Mary's	A4.2 Moderate energy circalittoral rock	Small proportion of the feature of overall site	Site will still be viable
Coquet to St Mary's	A5.2 Subtidal sand	Small proportion of the feature of overall site	Site will still be viable
Coquet to St Mary's	A5.4 Subtidal mixed sediment	Small proportion of the feature of overall site	Site will still be viable

\* As described in the ENG.

### A9.22.7.3 Evidence not used

Table 10 lists evidence of relevance to Tranche 2 rMCZs that was not available in time to use in the 2014 assessments of confidence as data were in the process of being collated or analysed.

**Table 10** Evidence not used

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
D_00020	EA MCZ verification survey - Coquet to St Mary's	NG 13	Multibeam and backscatter grab samples, camera drops	Not available before data cut-off.
D_00076	CCO Lidar survey 2011–2014	NG 13, FS 20, FS 21, FS 23, FS 25, FS 26, FS 33, FS 34, FS 37, FS 39, FS 40, FS 42, FS 43	Lidar	Uninterpreted remote sensing data.
D_00507	Northumberland County Council/EA Lidar CELL 1 management monitoring	NG 13	Lidar	Uninterpreted remote sensing data.

Survey ID code	Survey (identifying name or code)	T2 rMCZs (rMCZ to which the survey relates)	Data collection methods	Reason for non-inclusion
	programme			
D_00508	BIG SEA survey (University of Newcastle upon Tyne)	NG 13	Rocky shore surveys	Not available before data cut-off.

## **A9.23 Blackwater Crouch, Roach and Colne Estuaries MCZ BS 03**

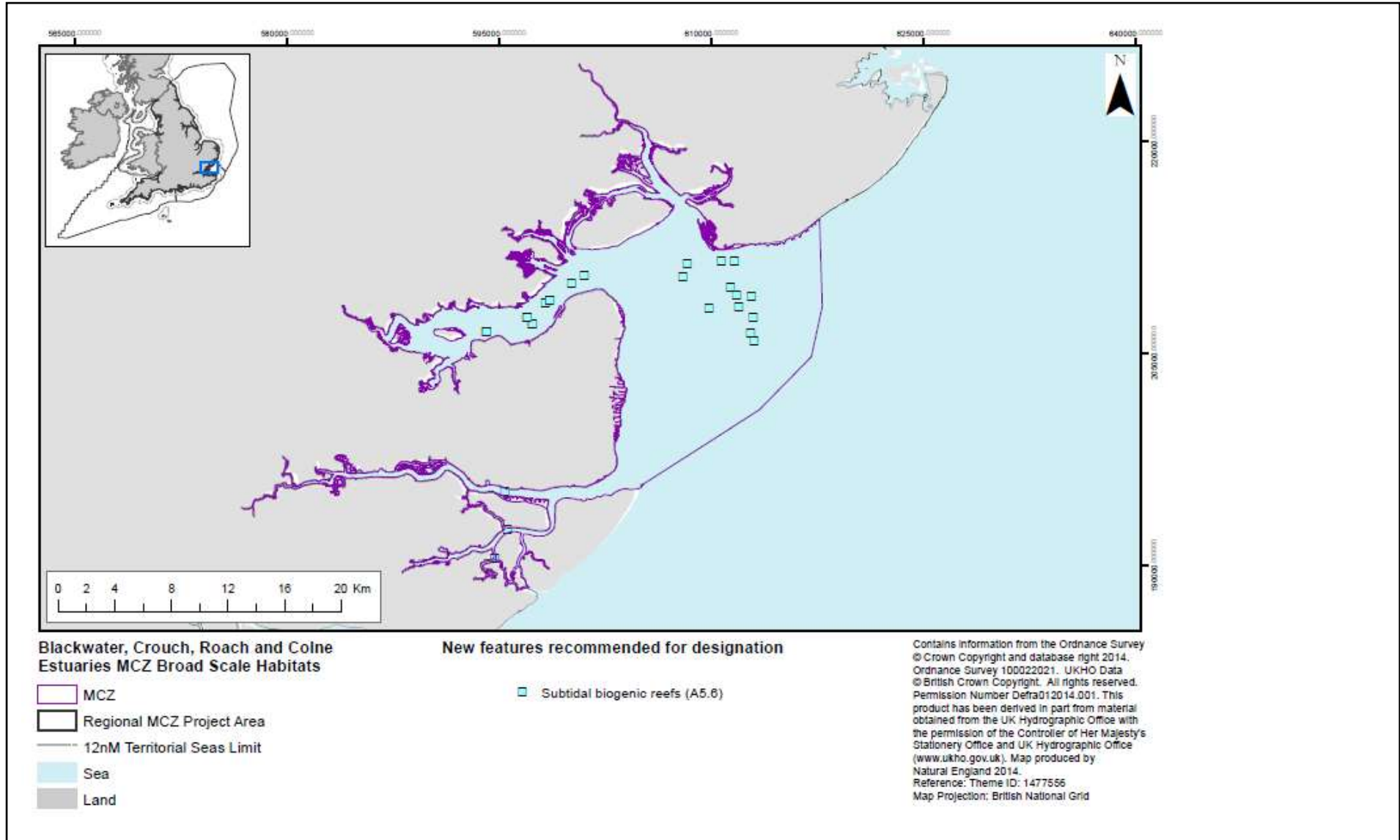
### **A9.23.1 Site description**

Blackwater, Crouch, Roach and Colne Estuaries MCZ is located on the Essex coast. The 284 km<sup>2</sup> site extends from the mean high water mark to where the estuary mouths join the North Sea. The site protects one of the largest estuaries in the East of England and includes the Blackwater, the largest tidal river in Essex. The MCZ currently protects intertidal mixed sediments, native oyster (*Ostrea edulis*) and native oyster beds and the Clacton Cliffs and Foreshore, a geological feature of international interest.

There are a number of other designations within the area, including SSSIs, the Essex Estuaries SAC and Mid Essex coast SPA. These existing sites protect extensive areas of mudflats and salt marsh, which support a wide range of species including internationally and nationally important numbers of waterfowl such as brent goose and curlew.

Subtidal biogenic reef, a BSH, has been identified within the site. This feature is being considered for designation within the MCZ as it fills a big gap in the ecological network of the UK's MPAs.

## A9.23.2 Site feature map



**Figure 1** Location of mapped BSHs and in Blackwater MCZ BS 03

### A9.23.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Blackwater MCZ BS 03

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A5.6 Subtidal biogenic reefs	BSH	T1 new features	High	Moderate	Recover

**Table 2** Supporting documentation, reference materials and relevant survey details for Blackwater MCZ BS 03

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00236	Marine Recorder snapshot 2013_06_24	1997 EN Blackwater Estuary sublittoral sediment survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00407	ABPmer 2012 data collection - original data - dataset: BS (was M_00025)	Blackwater biotope macrobenthic survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00410	ABPmer 2012 data collection - original data - dataset: BS (was M_00025)	Blackwater quinquennial survey 1996	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00412	ABPmer 2012 data collection - original data - dataset: BS (was M_00025)	Crouch quinquennial survey 2000	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00426	ABPmer 2012 data collection - original data - dataset: BS (was M_00025)	Quinquennial survey in the Blackwater in 2004	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00427	ABPmer 2012 data collection - original data - dataset: BS (was M_00025)	Roach quinquennial survey 1995	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00429	ABPmer 2012 data collection - original data - dataset: BS (was M_00025)	Roach quinquennial survey 2005	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>
D_00436	ABPmer 2012 data collection - original data - dataset: BS (was M_00025)	WFD TW intercalibration survey	EA <a href="http://www.geostore.com/environment-agency">http://www.geostore.com/environment-agency</a>



#### A9.23.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Blackwater MCZ BS 03

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A5.6 Subtidal biogenic reefs	T1 new features	N/A	N/A	High	Moderate	This is a new feature proposed because it fills a big gap in the ecological network.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Blackwater MCZ BS 03

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.6 Subtidal biogenic reefs	T1 new features	N/A	Recover	N/A

#### A9.23.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A5.6 Subtidal biogenic reefs	T1 new features	High	Current risk from benthic trawling. Dredging byelaw may be lifted in the near future to allow dredging over the feature where native oysters ( <i>Ostrea edulis</i> ) and native oyster beds (existing MCZ feature) require human intervention to manage. The potential management of this feature could greatly conflict with proposed management for the designated native oyster.	High	



### A9.23.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A5.6 Subtidal biogenic reefs	T1 new features	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		Tranche 1 designated MCZ and estuarine site - Q2 has not been calculated.	Yes. Available data support at least one JNCC Big Gaps identified feature for designation.

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Yes. Available data support at least one JNCC Big Gaps identified feature for designation.		28,439.7	

## **A9.23.7 Additional advice**

### **A9.23.7.1 Advice on specific features**

Discussions involving Defra and the Kent and Essex IFCA were held regarding the incompatibility of the management of this feature and that of existing MCZ features (native oyster (*Ostrea edulis*) and native oyster beds). Work with stakeholders has already begun on management of these designated features; the addition of a subtidal biogenic reef to the MCZ could therefore pose a risk to these relationships.

### **A9.23.7.2 Advice on boundaries**

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### **A9.23.7.3 Evidence not used**

All evidence received was used in our advice. Therefore Table 10 is not applicable to this site.

## **A9.24 Beachy Head West MCZ BS 13.2**

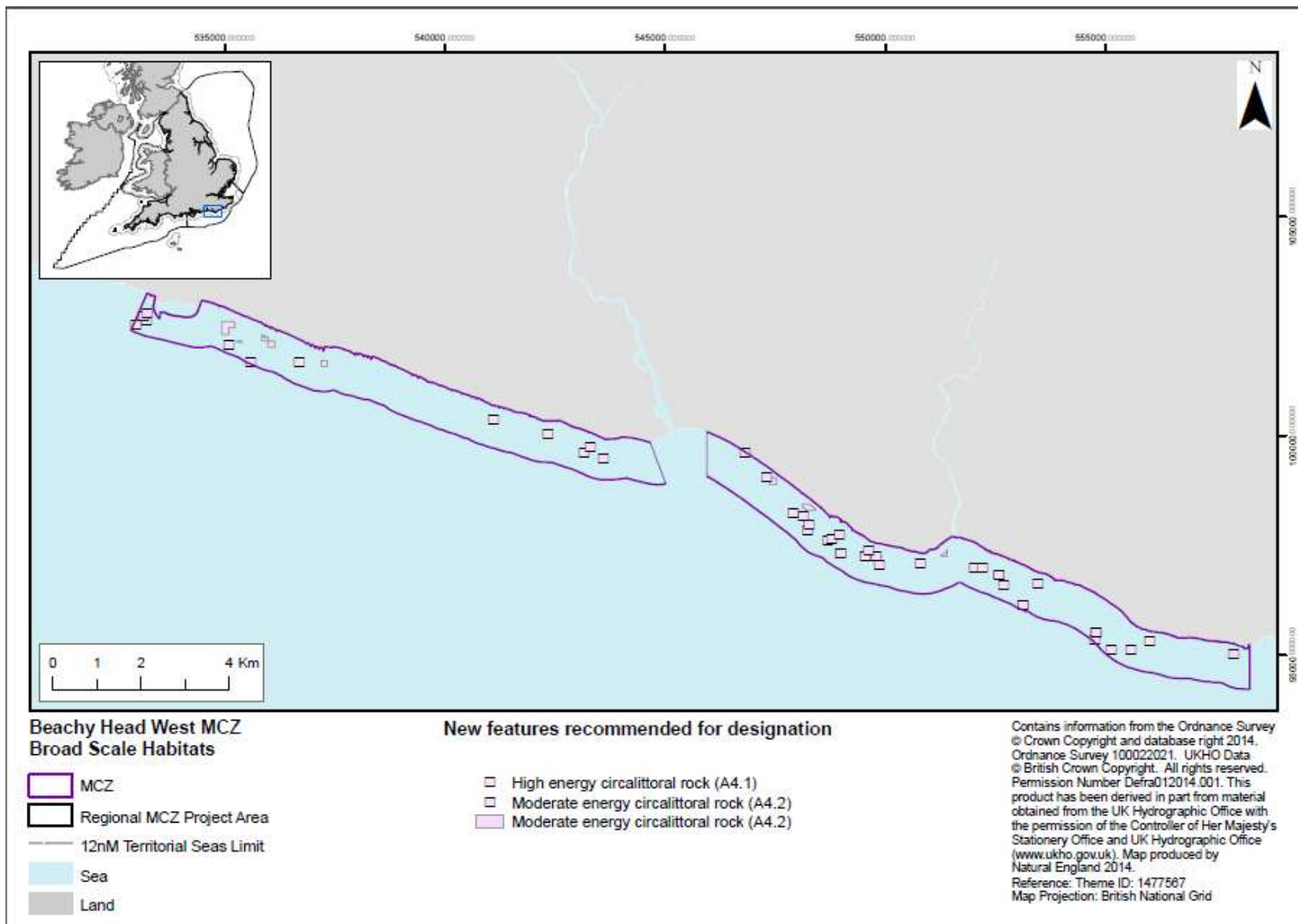
### **A9.24.1 Site description**

Beachy Head West MCZ is made up of 2 spatially separate sites in the south-east of England. They run parallel to the East Sussex coastline extending from Brighton to the Beachy Head Cliffs near Eastbourne and protect a total area of approximately 24 km<sup>2</sup>. The MCZ partially overlaps with the Seven Sisters voluntary marine conservation area. These sites contain some of the best examples of chalk habitat in the south-east region. Here the chalk reefs and gullies support specialised communities of animals and seaweeds. Additionally, the sites are known to support the rare short-snouted seahorse.

These sites protect 10 different types of habitat and their associated species and offer specific protection to 2 SOCI. Within the MCZ there is an extensive intertidal wave-cut chalk platform as well as subtidal chalk ridges, the surface of which is pitted with holes. These holes are created by burrowing molluscs and, when empty, can be inhabited by and provide shelter to animals such as crabs and anemones. Blue mussel (*Mytilus edulis*) beds and native oysters (*Ostrea edulis*) are found densely packed on the chalk ridges, creating a mosaic of habitats.

The rare short-snouted seahorse (*Hippocampus hippocampus*) can be found in shallower waters. These are a type of fish, and are one of only two species found in UK waters. Seahorses have excellent eyesight and hunt for their food by sight. They feed on a variety of small crustaceans such as shrimp, but do not have teeth so instead suck food up through their snouts. Seahorses require protection as they are particularly vulnerable to threats that cause damage to their habitat.

## A9.24.2 Site feature map



**Figure 1** Location of mapped BSHs in Beachy Head West MCZ BS 13.2

### A9.24.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each newly proposed feature of the site for Beachy Head West MCZ BS 13.2

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
A4.1 High energy circalittoral rock	BSH	T1 new features	Moderate	Moderate	Recover
A4.2 Moderate energy circalittoral rock	BSH	T1 new features	High	Moderate	Recover

**Table 2** Supporting documentation, reference materials and relevant survey details for Beachy Head West MCZ BS 13.2

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00132	Marine Recorder snapshot 2013_06_24	2011 Sussex Seasearch Chichester to Newhaven	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00144	Marine Recorder snapshot 2013_06_24	2010 Sussex Seasearch Bracklesham Bay to Newhaven	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00156	Marine Recorder snapshot 2013_06_24	2009 Sussex Seasearch Chichester to Eastbourne	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00223	Marine Recorder snapshot 2013_06_24	1998 Sussex Seasearch Chichester Harbour to Rye Bay sublittoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00231	Marine Recorder snapshot 2013_06_24	1997 Sussex Seasearch Chichester Harbour to Rye Bay sublittoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00238	Marine Recorder snapshot 2013_06_24	1996 Sussex Seasearch Beachy Head to Rye Bay sublittoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00246	Marine Recorder snapshot 2013_06_24	1995 Sussex Seasearch Brighton to Beachy Head sublittoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00247	Marine Recorder snapshot 2013_06_24	1995 Envision - Sussex May95	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00247	MESH Combined EUNIS 20140203 and Marine Recorder snapshot 2013_06_24	Sussex Coast (Worthing to Beachy Head) lifeforms map	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00250	Marine Recorder snapshot 2013_06_24	1994 Sussex Seasearch Chichester Harbour to Pevensy Bay sublittoral survey	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
D_00326	Marine Recorder snapshot 2013_06_24	1984–1986 MCS Seven Sisters sublittoral survey, Sussex	NBN <a href="http://www.nbn.org.uk/">http://www.nbn.org.uk/</a>
M_00161	MB0116 - Sussex IFCA	MALSF_2007_Survey_EUNIS_JNCC_MCZ	MALSF <a href="http://www.marinealsf.org.uk/downloads/MALSF_Data_State_ment.pdf">http://www.marinealsf.org.uk/downloads/MALSF_Data_State_ment.pdf</a>

#### A9.24.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Beachy Head West MCZ BS 13.2

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A4.1 High energy circalittoral rock	T1 new features	Moderate	Moderate	Moderate	Moderate	
A4.2 Moderate energy circalittoral rock	T1 new features	High	High	High	Moderate	Extent manually downgraded to moderate due to lack of matching ground truthing points/failure to be considered in automated process.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Beachy Head West MCZ BS 13.2

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A4.1 High energy circalittoral rock	T1 new features	N/A	Recover	New feature
A4.2 Moderate energy circalittoral rock	T1 new features	N/A	Recover	New feature

## A9.24.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A4.1 High energy circalittoral rock	T1 new features	High	Current risk from benthic trawling. There is currently a seasonal (May to October) byelaw prohibiting benthic trawling within this site; however, it does occur (to unknown levels) throughout the rest of the year. (Note: subtidal chalk was designated in this MCZ last year with a maintain GMA, which may need reviewing in light of this feature's assessment.)	Moderate	
A4.2 Moderate energy circalittoral rock	T1 new features	High	Current risk from benthic trawling. There is currently a seasonal (May to October) byelaw prohibiting benthic trawling within this site; however, it does occur (to unknown levels) throughout the rest of the year. (Note: subtidal chalk was designated in this MCZ last year with a maintain GMA, which may need reviewing in light of this feature's assessment.)	High	



## A9.24.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A4.1 High energy circalittoral rock	T1 new features	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		
A4.2 Moderate energy circalittoral rock	T1 new features	BSH	Yes	No	Yes	Yes	No	N/A	N/A	N/A		

**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		Tranche 1 designated MCZ – Q2 has not been calculated.	Yes

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Yes		2,436.2	

## **A9.24.7 Additional advice**

### **A9.24.7.1 Advice on specific features**

No additional advice given to Defra on specific features for this site, but it is important to note that subtidal chalk was designated in this MCZ last year with a maintain GMA. This may need reviewing in light of these new feature GMAs.

### **A9.24.7.2 Advice on boundaries**

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### **A9.24.7.3 Evidence not used**

All evidence received was used in our advice. Therefore Table 10 is not applicable to this site.

## A9.25 Torbay MCZ FS 22

### A9.25.1 Site description

Torbay MCZ covers an area of coastline in South Devon between Oddicombe Beach and Sharkham Point. The site extends from the shoreline out to a depth of 30 m and includes a range of habitats exposed to different environmental conditions. This variation creates an area capable of supporting a rich array of marine wildlife. The high level of biodiversity in the surrounding area has previously been recognised, with Torbay being described as ‘the jewel in South Devon’s crown’. Nine different habitats are protected within the MCZ. The inshore areas of Torbay’s natural harbour are predominantly soft muddy sands, which are characterised by animals such as heart urchins and brittlestars. Less-muddy sand is found closer to the shore and holds dense populations of species, including razor shells. The site’s rocky areas support sponges, sea squirts and seaweeds. Beds of seagrass are found within the MCZ. Seagrass are plants with dark green, long, narrow, ribbon-shaped leaves and are the only flowering plant able to live in seawater and pollinate while submerged. The seagrass provides a habitat for a wide range of animals such as pipe fish and the nationally rare long-snouted seahorse, which shelter among its leaves. Seagrass also acts as a nursery area for a range of animals such as bass and cuttlefish and molluscs, and worms burrow into the roots and surrounding sediments.



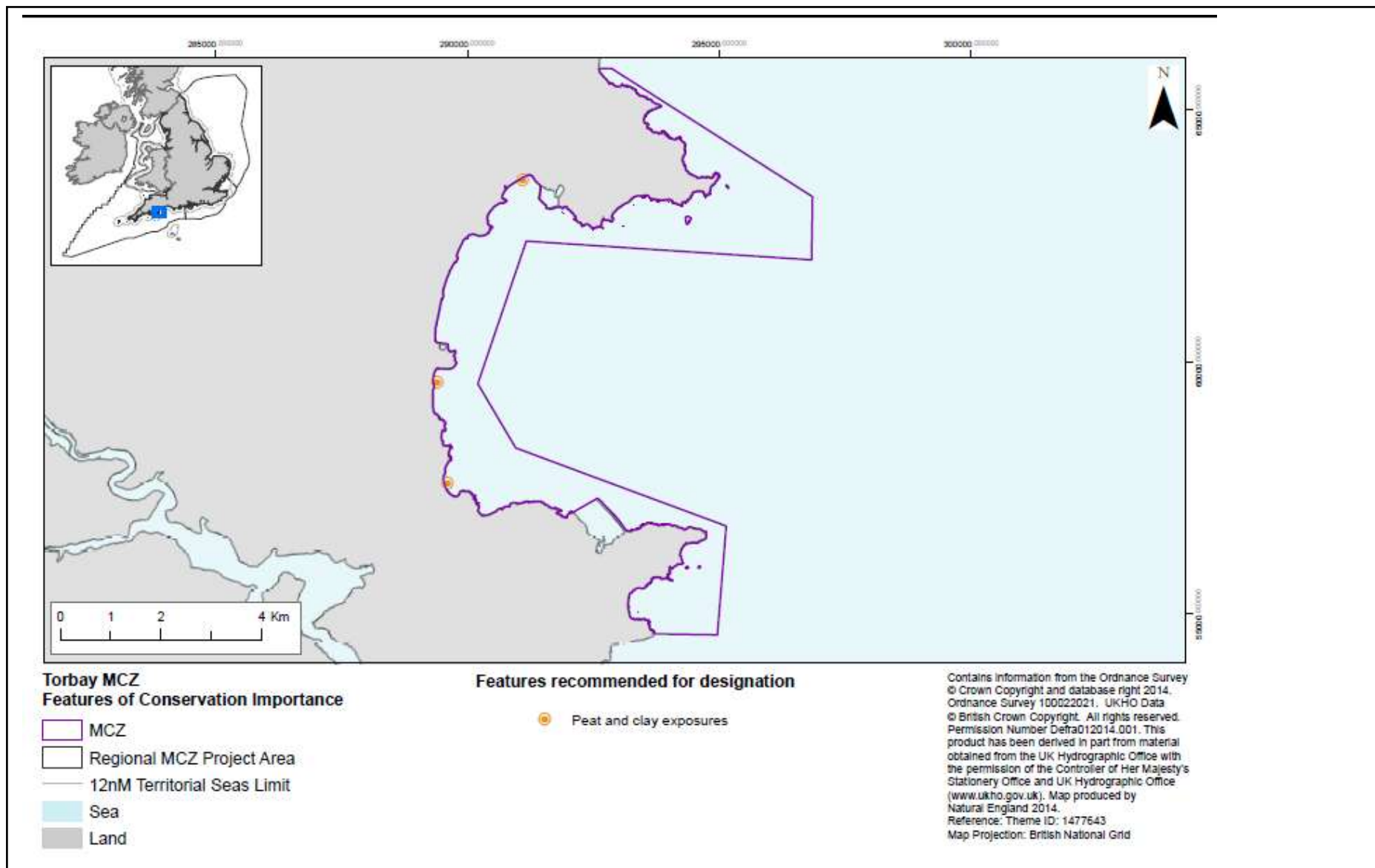
**Plate 1** Long-snouted seahorse © Steve Trehwella

Please note this photograph is an example photograph of the above habitat only and does not necessarily represent the habitat found at the site.



**Plate 2** Berry Head, Torbay © Phil Stocks, Natural England

## A9.25.2 Site feature map



**Figure 1** Location of mapped FOCI in Torbay MCZ FS 22

### A9.25.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Torbay MCZ FS 22

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
Peat and clay exposures	HOCI	T1 new features	Moderate	Moderate	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Torbay MCZ FS 22

Survey ID code	MCZ source dataset	MCZ original survey	Location
M_00007	ABPmer 2012 data collection - original data - dataset: BS	English Heritage	English Heritage/NE National GI Chris Pater, Marine Planner, English Heritage chris.pater@english-heritage.org.uk

### A9.25.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Torbay MCZ FS 22

Feature name	Feature status	2012 advice confidence assessment		2013 Advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
Peat and clay exposures	T1 new features	N/A	N/A	Moderate*	Moderate*	Feature identified during 2013 confidence assessment and fills a big gap in the ecological network.

\* Confidence assessment was carried out in 2013 and not reassessed in 2014.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England's advice published in 2012 for Torbay MCZ FS 22

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
Peat and clay exposures	T1 new features	N/A	Maintain	N/A

## A9.25.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
Peat and clay exposures	T1 new features	Low		High	The feature is highly sensitive to one or more pressures; however, on the basis of current knowledge relevant activities are unlikely to reach levels of exposure within the site that would put this feature at high risk of unfavourable condition. Therefore a high future risk of unfavourable condition is not thought to be justified.

## A9.25.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
Peat and clay exposures	T1 new features	HOCI	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A		



**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		Tranche 1 designated MCZ – Q2 has not been calculated.	Yes

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Yes		1,985.7	

## **A9.25.7 Additional advice**

### **A9.25.7.1 Advice on specific features**

No additional advice given to Defra on specific features for this site.

### **A9.25.7.2 Advice on boundaries**

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### **A9.25.7.3 Evidence not used**

All evidence received was used in our advice. Therefore Table 10 is not applicable to this site.

## A9.26 Fylde MCZ ISCZ 08

### A9.26.1 Site description

Fylde MCZ is in the eastern Irish Sea, lying between 3 and 20 km off the Fylde coast and Ribble estuary. The total area of the site is roughly 260 km<sup>2</sup>. The depth of the seabed ranges from almost being exposed at a low tide (just 35 cm depth) to 22 m at its deepest part. The site was chosen for the extensive areas of subtidal sediment habitats and communities present. These are considered to be good representatives of the seabed habitats and communities found on the eastern side of Liverpool Bay. The sediment communities are known to support rich bivalve mollusc populations. The site includes important nursery and spawning grounds for several commercially important fish species including sole (*Solea solea*), plaice (*Pleuronectes platessa*) and whiting (*Merlangius merlangus*).

The site is located next to Shell Flat sandbank, part of Shell Flat and Lune Deep SAC. The site extends protection to other rich areas of seabed outside of the SAC.

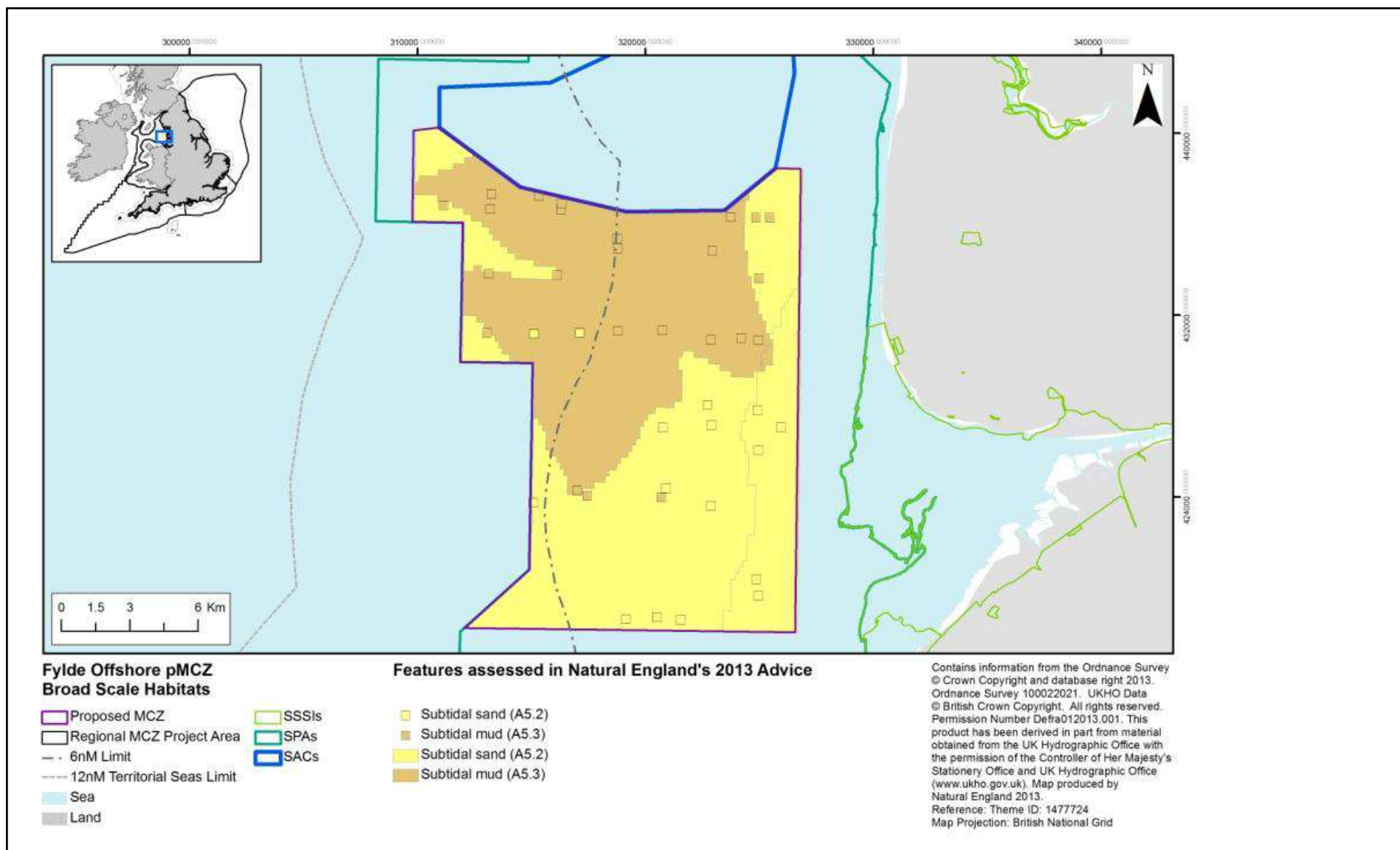
The site is co-located within the Liverpool Bay SPA. The SPA only provides protection for the SPA bird interest features (non-breeding common scoter and red-throated diver) and their supporting habitats.



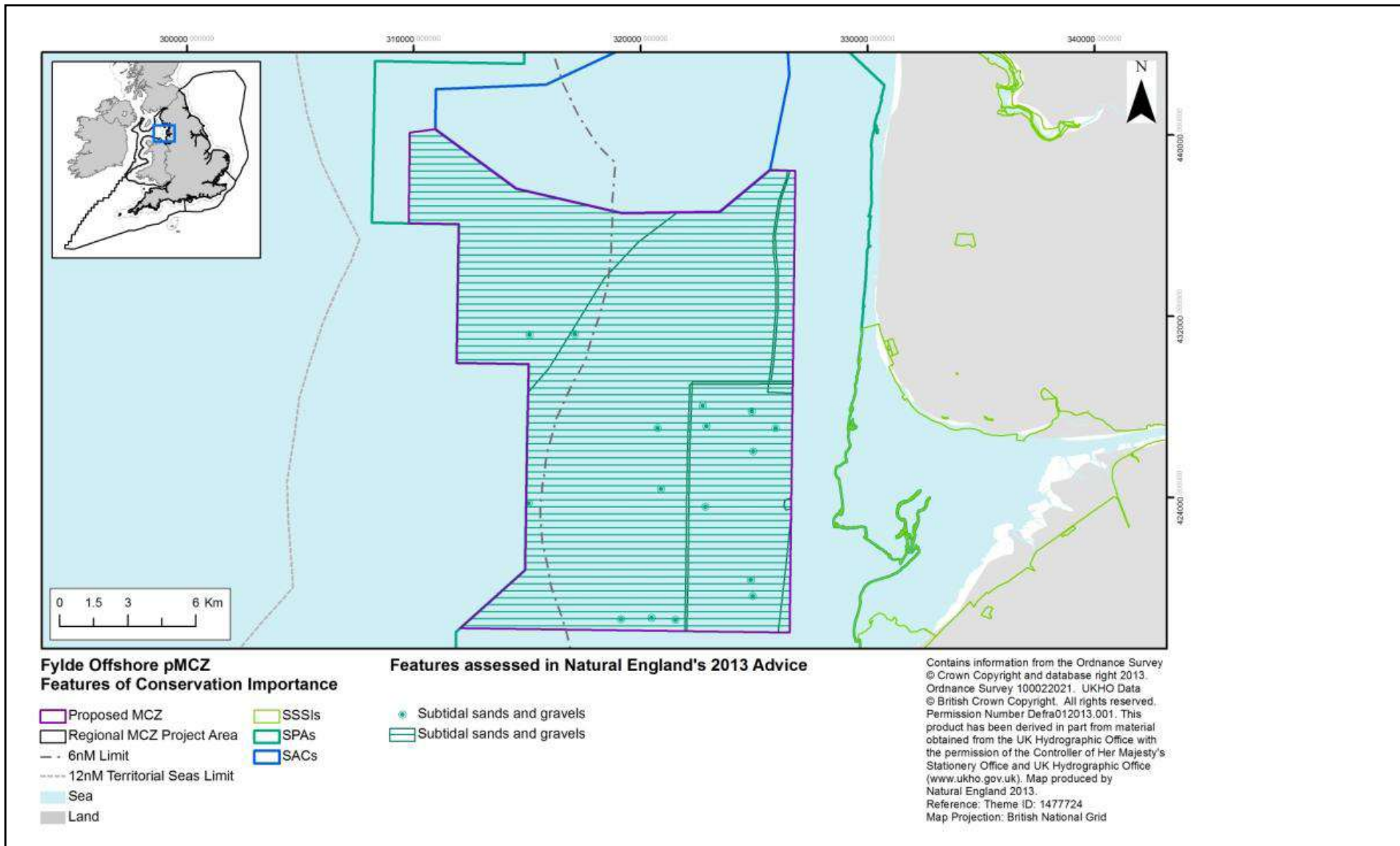
**Plate 1** Plaice (*Pleuronectes platessa*) © Paul Kay

Please note this photograph is an example photograph of the above feature only and does not necessarily represent the feature found at the site.

## A9.26.2 Site feature maps



**Figure 1** Location of mapped BSHs in Fylde MCZ ISCZ 08 (Please note this is the original map for the site from our 2013 advice prior to designation).



**Figure 2** Location of mapped FOCI in Fylde rMCZ ISCZ 08

### A9.26.3 Summary of Natural England's advice

**Table 1** Summary of Natural England's advice on confidence in presence and extent and GMA for each proposed feature of the site for Fylde rMCZ ISCZ 08

Feature name	Feature type	Feature status	Confidence assessment score for presence	Confidence assessment score for extent	GMA proposed
Subtidal mud A5.3	BSH	T1 new features	High	High	Maintain

**Table 2** Supporting documentation, reference materials and relevant survey details for Fylde rMCZ ISCZ 08

Survey ID code	MCZ source dataset	MCZ original survey	Location
D_00346	MESH Combined EUNIS 20140203	EUSeaMap 2012	MESH Project, JNCC <a href="http://www.jncc.defra.gov.uk/UKSeaMap">www.jncc.defra.gov.uk/UKSeaMap</a>
M_00346	Kaiser, M. J., et al (2006). Distribution and behaviour of Common Scoter <i>Melanitta nigra</i> relative to prey resources and environmental parameters. Ibis, 148, 110–128.	Kaiser, M. J., et al (2006) Grab surveys of North-west (2003–2004)	Ibis 148 <a href="http://www.bou.org.uk/ibis">http://www.bou.org.uk/ibis</a>

### A9.26.4 Audit trail for the development of Natural England's advice

**Table 3** Confidence assessments of presence and extent of features setting out the rationale for any changes since Natural England's advice published in 2012 for Fylde rMCZ ISCZ 08

Feature name	Feature status	2012 advice confidence assessment		2014 advice confidence assessment		Comments
		Presence	Extent	Presence	Extent	
A5.3 Subtidal mud	T1 New features	N/A	N/A	High	High	No confidence assessment for feature in 2012 as feature was added in 2013.

**Table 4** Advice on the GMA and the rationale for any changes since Natural England’s advice published in 2012 for Fylde rMCZ ISCZ 08

Feature name	Feature status	2012 CO	2014 GMA	Rationale for change between 2012 CO and 2014 GMA
A5.3 Subtidal mud	T1 new features	N/A	Maintain	New feature

#### A9.26.5 Feature risk

**Table 5** Feature risk assessments

Feature name	Feature status	Current risk assessment	Current risk narrative	Future risk assessment	Future risk narrative
A5.3 Subtidal mud	T1 new features	Low		Moderate	

## A9.26.6 Scientific basis to support feature/site designation

**Table 6** Feature data sufficiency assessment

Feature name	Feature status	Feature type	Q1a. Confidence score of at least moderate for feature presence?	Q1b. Is 1a based only on parent habitat being present?	Q1c. Confidence score of at least moderate for extent/distribution?	Outcome from question 1 assessment: Are there enough data to support feature designation?	Does feature fill a gap in MPA network based on JNCC 'Big Gap' analysis (version 5)?	Q2a: Does the feature fill a 'gap' in the network AND have confidence score of at least moderate for feature presence?	Q2b: Is the feature at high risk of damage?	Outcome from question 2 assessment: Are there additional conservation/ecological considerations that support designation?	Are new data coming that are likely to improve feature confidence?	Comments regarding 'new data coming'
A5.3 Subtidal mud	T1 new features	BSH	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Potential baseline survey



**Table 7** Site data sufficiency assessment

Q1: Are there grounds for considering designating more features at this site in order to fully protect one or more features which do have sufficient confidence?	Q2: What proportion of total site area do the features meet requirements for Q1 in the 'feature assessment' cover within the site? (Note proportions are dependent on polygon data availability, and may be based on modelled maps)	Comment on Q2 assessment	Q3: Does this site fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?
No		Tranche 1 designated MCZ – Q2 has not been calculated.	No

**Table 8** Site level commentary

Does this site still fill a 'big gap' in the network based on revised confidence assessments in feature presence and extent?	Number of features with at least moderate confidence in both presence and extent (T2 new sites only)	Site area (ha)	Additional comments from NE highlighting sites with the potential to make a particularly significant contribution to the MPA network (T2 new sites only)
Yes		26,075	

## **A9.26.7 Additional advice**

### **A9.26.7.1 Advice on specific features**

Defra requested further clarification on the reasoning for a maintain GMA for A5.3 Subtidal mud in the site and information on whether this was due to lack of *Nephrops* and an associated fishery in the site.

Natural England advised that the sandier nature of the mud habitat in the site does make it less attractive to *Nephrops* and that the lack of a fishery indicates the area is not well used by *Nephrops*. Natural England also advised that the maintain GMA is because there are no activities causing a pressure at a level to which the features of the site are moderately or highly sensitive.

### **A9.26.7.2 Advice on boundaries**

No additional advice given to Defra on boundaries for this site. Therefore Table 9 on implications of boundary changes not applicable for this site.

### **A9.26.7.3 Evidence not used**

All evidence received was used in our advice. Therefore Table 10 is not applicable to this site.

## Glossary

**Activity:** Human social or economic actions or endeavours that may have an effect on the marine environment, for example fishing or energy production.

**Anthropogenic:** Caused by humans or human activities; usually used in reference to environmental degradation (JNCC, 2009b).

**Appropriate authority:** The appropriate authority is Welsh ministers (for an area in Wales), Scottish ministers (for an area in the Scottish offshore region) and in any other case the Secretary of State.

**Benthic:** A description for animals, plants and habitats associated with the seabed. All plants and animals that live in, on or near the seabed are benthos (eg sponges, crabs and seagrass beds) (Defra, 2007).

**Best available evidence:** This is one of the Defra MPA network design principles and is described by the following: "Network design should be based on the best information currently available. Lack of full scientific certainty should not be a reason for postponing proportionate decisions on site selection" (Defra, 2010).

**Biogenic reef:** Any structure that has been formed from living material. It is normally used to describe living structures such as those created by the cold-water coral *Lophelia pertusa*, colonial worms such as *Sabellaria* spp and molluscs, including the horse mussel (*Modiolus modiolus*) (Anon, 2001).

**Biotope:** The physical habitat with its associated, distinctive biological communities. A biotope is the smallest unit of a habitat that can be delineated conveniently and is characterised by the community of plants and animals living there (eg, deep sea, (*Lophelia pertusa*) reef) (Anon, 2001). Usually, several biotopes will constitute an ecosystem.

**Broad-scale habitat (BSH):** These are taken from the European Nature Information System (EUNIS) Level 3 classification (Davies et al, 2004) and are listed in the Ecological Network Guidance (Natural England and JNCC, 2010).

**Catadromous:** Fish that spend most of their lives in fresh water and then migrate to the sea to breed.

**Circalittoral:** The subtidal zone characterised by animal-dominated communities. The depth at which the circalittoral zone begins is directly dependent on how much light reaches the seabed.

**Confidence (in a habitat map):** A statement about how reliable a map user thinks the map is given its purpose. This is not a mathematical definition like accuracy or uncertainty, but is a judgement made by the map user and may therefore vary for any map. However, this judgement can be supported by evidence from:

- accuracy measures
- supporting maps show underlying evidence used to interpret map
- evaluation of all contributing data
- independent validation
- expert opinion
- user support: generally found to be acceptable by stakeholders and the map has stood the test of time (MESH, 2007)

**Conservation objective (CO):** A statement of the nature conservation aspirations for the feature(s) of interest within a site and an assessment of those human pressures likely to affect the feature(s).

**Defra:** The UK government department responsible for the environment, for food and farming, and for rural matters.

**Defra marine area:** This is defined as English inshore waters and the offshore waters of England, Wales and Northern Ireland.

**Environment:** The physical surroundings and climatic conditions that influence the behaviour, growth, abundance and overall health of a population or species (Anon, 2001).

**European Nature Information System (EUNIS):** A European habitat classification system developed by the European Topic Centre on Biological Diversity, covering all types of habitats from natural to artificial, terrestrial to freshwater and marine.

**Exposure:** The level at which an interest feature or its supporting habitat is open to a distressing influence resulting from the possible/likely effects of operations arising from human activities currently occurring on the site. The assessment of exposure can include the spatial extent, frequency, duration and intensity of the pressure(s) associated with the activities, where this information is available.

**Extent:** The area covered by a habitat or community.

**European marine site:** The marine areas of both Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

**Favourable condition:** The state of Marine Conservation Zone (MCZ) features (habitats, species, geological and geomorphological) within a site when all requirements to meet site-specific conservation objectives have been achieved.

For MCZ habitat FOCI and BSHs, favourable condition occurs when, **within the site:**

- its extent/area is stable or increasing; and
- the specific structure and functions, such as ecological and physico-chemical structure and functions, which are necessary for its long-term maintenance exist; and
- biological diversity of its characteristic communities is maintained such that the quality and occurrence of habitats and the composition and abundance of species are in line with prevailing physiographic, geographic and climatic conditions<sup>3</sup>.

For MCZ species features favourable condition occurs when, **within the site:**

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its habitat; and
- there is sufficient habitat to maintain its population on a long-term basis.

For geological and geomorphological features favourable condition occurs when, **within the site:**

- the extent, component elements and integrity of geological and geomorphological features are maintained or able to evolve within the parameters of natural change; and
- the structure, integrity and/or inherent functioning of these features are unimpaired and remain unobscured other than through natural processes<sup>4</sup>.

In applying the term 'favourable condition' to MCZ features, Natural England and JNCC are developing draft attributes specific to MCZ features which represent the generic elements above. It is Natural England and JNCC's goal to eventually develop targets for each feature's attributes, against which favourable condition will be assessed. These targets will be closely linked to the targets for Good

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<sup>3</sup> This definition is aligned with the Marine Strategy Framework Directive's biodiversity descriptor.

<sup>4</sup> In the marine environment, recovery generally refers to natural recovery through the removal of unsustainable physical, chemical and biological pressures, rather than direct intervention (as is possible with terrestrial features).

Environmental Status being developed for Marine Strategy Framework Directive implementation. The adoption of the term 'favourable condition', which is being used for other sites in the MPA network, will encourage consistency in the use of terminology for conservation objectives and facilitate the implementation of a common approach across the MPA network. Achieving and sustaining favourable condition of MPA features will ensure their appropriate contribution to the progress towards the achievement of Good Environmental Status by 2020 (under the EU Marine Strategy Framework Directive), and of Favourable Conservation Status (under the EU Habitats Directive).

**Feature:** A species, habitat, geological or geomorphological entity for which an MPA is identified and managed.

**Feature of Conservation Importance (FOCI):** A habitat or species that is rare, threatened or declining in our waters.

**General management approach (GMA):** Generally, each MCZ has 1 conservation objective. The objective applies to all of the features being protected. The objective is that each of the features being protected be in favourable condition. To achieve this objective, the GMA required for a feature in a MCZ will either be for it to be maintained in a favourable condition (if it is currently in this state), or for it to be recovered to a favourable condition (if it is currently in a damaged state) and then to be maintained in a favourable condition. Note previously that the GMA was referred to as the conservation objective; the term was changed in 2014.

**Geo-referencing:** Aligning geographic data to a known co-ordinate system so it can be viewed, queried and analysed with other geographic data.

**Geological or geomorphological features of interest:** Geological and geomorphological features of interest may include areas of international geological importance, areas containing exceptional geological features, or areas that represent a geological or geomorphological feature or process. The Marine and Coastal Access Act (MCAA, 2009) allows for the designation of such features.

**Ground truthing:** Direct observations and samples of the seabed provide information that can be used to interpret remotely sensed images; the observations are the 'truth' with regard to the habitats actually present on the seabed. Observations used in this way provide ground truth data. The process of using ground truth data for interpretation is often termed 'ground truthing'. During this process the relationship between properties of the remote images at the observation/sample sites (in the form of points, irregular digitised areas or buffer areas around points) is determined. These relationships are then applied to the whole image to predict the distribution of habitat types (MESH, 2007).

**Habitat:** The place where an organism lives, as characterised by the physical features. For example rocky reefs, sandbanks and mud holes all provide particular habitats that are occupied by animals or algae adapted to live in or on one of them but that probably cannot thrive, or even survive, in others (Anon, 2001).

**Habitat of Conservation Importance (HOCI):** A habitat that is rare, threatened or declining in our waters.

**Impact:** The consequence of pressures (eg habitat degradation) where a change occurs that is different to that expected under natural conditions (Robinson et al, 2008).

**Impact Assessment:** An Impact Assessment reports on the anticipated environmental, economic and social costs, benefits and impacts of a proposed policy or range of policies. These impacts are assessed against a baseline scenario in which the proposed policy interventions do not take place. It is a process for analysing and selecting policy options and a tool for communicating how preferred options have been chosen.

**Infralittoral zone:** The shallowest subtidal zone (closest to the shore) characterised by plant-dominated communities.

**Intertidal:** The foreshore or area of seabed between high water mark and low water mark which is exposed each day as the tide rises and falls. Also called the 'littoral zone' (Anon, 2001).

**Joint Nature Conservation Committee (JNCC):** The statutory adviser to government on UK and international nature conservation. Its specific remit in the marine environment ranges from 12–200 nautical miles. JNCC delivers the UK and international responsibilities of the 4 country nature conservation agencies of the devolved regions, including Natural England.

**Littoral:** The edge of the sea, but particularly the intertidal zone (Anon, 2001).

**Maerl:** Twig-like, calcified red algae that act as keystone species and form a particular habitat (Anon, 2001).

**Management measures:** Management measures are ways to manage activities in a MPA to maintain or improve the condition of its features. Specific measures may include legislative measures, financial, administrative (eg permits), practical and planning measures, physical modifications (such as buoys and signs), voluntary codes of practice, and education.

**Mapping European Seabed Habitats (MESH) Project:** The MESH Project ran between 2004 and 2008 and was made up of a consortium of 12 partners from 5 European countries led by the JNCC, with financial support from the EC's INTERREG IIIB NWE Programme. The MESH partnership drew together scientific and technical habitat-mapping skills, expertise in data collation and its management, and proven practical experience in the use of seabed-habitat maps for environmental management within national regulatory frameworks.

**Marine Aggregates Levy Sustainability Fund (MALSF):** From 2002 to 2011, the government imposed a levy on all primary aggregates production (including marine aggregates) to reflect the environmental costs of winning these materials. A proportion of the revenue generated was used to provide a source of funding for research aimed at minimising the effects of aggregate production. This fund, delivered through Defra, was known as the Aggregate Levy Sustainability Fund. The MALSF supported a wide range of projects exploring ecology, geology and heritage of the seabed around the UK.

**Marine Conservation Zone (MCZ):** A type of MPA to be designated under the MCAA. Marine Conservation Zones will protect nationally important marine wildlife, habitats, geology and geomorphology and can be designated anywhere in English and Welsh inshore and UK offshore waters.

**Marine Conservation Zone (MCZ) Project:** A project established by Defra, Natural England and the JNCC to identify and recommend MCZs to government. The MCZ Project was delivered through 4 regional MCZ projects covering the South-West, Irish Sea, North Sea and Eastern Channel and worked with sea-users and interest groups to identify MCZs.

**Marine Protected Area (MPA):** A generic term to cover all marine areas that are "a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (Dudley, 2008). MPAs may vary in their objectives, design, management approach or name (eg, marine reserve, sanctuary, marine park) (IUCN-WCPA, 2008). See also 'OSPAR'

**Marine Protected Area (MPA) network:** A system of individual MPAs operating co-operatively and synergistically, at various spatial scales, and with a range of protection levels, to fulfil ecological aims more effectively and comprehensively than individual sites could acting alone. The system will also display social and economic benefits, though the latter may only become fully developed over long time frames as ecosystems recover (IUCN-WCPA, 2008).

**Metadata:** Information about the identification, the extent, the quality, the spatial and temporal schema, spatial reference, and distribution of digital geographic data.

**Natural England:** The statutory adviser to government established to conserve and enhance the natural environment for its intrinsic value, the wellbeing and enjoyment of people and the economic prosperity that it brings. Natural England has a statutory remit for England out to 12 nautical miles offshore.

**Network:** Collection of individual MPAs or reserves operating co-operatively and synergistically at various spatial scales and with a range of protection levels that are designed to meet objectives that a single reserve cannot achieve (IUCN-WCPA, 2008).

**Non-Ecological Network Guidance (ENG) feature:** habitats or species that are not listed in the ENG as features for which MCZs should be selected. However, the MCAA allows for all habitats and species to be designated within MCZs.

**OSPAR:** The Convention for the Protection of the Marine Environment of the North-East Atlantic (<http://www.ospar.org>).

**Parent feature:** The EUNIS Level 2 habitat to which the BSH belongs (eg the BSH 'High energy circalittoral rock' belongs to the EUNIS Level 2 habitat 'Circalittoral rock' (JNCC and Natural England, 2012c).

**Presence (of a feature):** Refers to a species, habitat, geological or geomorphological entity being located within a site.

**Pressure:** The mechanism through which an activity has an effect on any part of the ecosystem (eg physical abrasion caused by trawling). Pressures can be physical, chemical or biological and the same pressure can be caused by a number of different activities (Robinson et al, 2008). The nature of the pressure is determined by activity type, intensity and distribution.

**Recovery:** The absence of pressures to which the feature is sensitive, combined with evidence of ongoing improvement of the condition of the feature until a favourable stable state has been reached.

**Regional MCZ project:** Any one of the four projects that have been set up to deliver the MCZ Project (covering English inshore and English, Welsh and Northern Irish offshore waters), namely Finding Sanctuary (FS) (south-west), Irish Sea Conservation Zones (ISCZ) (Irish Sea), Net Gain (NG) (North Sea) and Balanced Seas (BS) (south-east).

**Regional stakeholder group:** A group of sea-users, regulators and interest groups that will decide upon the MCZ recommendations of the regional MCZ projects. (Note: Finding Sanctuary calls its regional stakeholder group the 'Steering Group'; Net Gain calls its regional stakeholder group the 'Stakeholder Advisory Panel'.)

**Risk:** The concept of the current level of possible loss, damage or deterioration of an interest feature, habitat and a site caused by an anthropogenic activity.

**Risk assessment:** A judgement and statement on the expected loss, damage or deterioration of an interest feature, habitat or site caused by anthropogenic activity.

**Science Advisory Panel (SAP):** The SAP was employed to provide the scientific knowledge, advice and judgement necessary to assist the regional MCZ projects in identifying MCZs and the Secretary of State in designating these sites as a contribution to an ecologically coherent network. Members and the chair of the SAP were appointed by Defra.

**Sensitivity:** A measure of tolerance (or intolerance) of a species or habitat to damage from an external factor and the time taken for its subsequent recovery. See

<http://www.marlin.ac.uk/sensitivityrationale.php> for further information.

**Site of Special Scientific Interest (SSSI):** Sites designated under the Wildlife and Countryside Act 1981 (as amended 1985, and superseded by the Countryside and Rights of Way Act 2000, and the Nature Conservation (Scotland) Act (2004)).

**Special Area of Conservation (SAC):** A protected site designated under the EU Habitats Directive for species and habitats of European importance, as listed in Annex I and II of the Directive.

**Species of Conservation Importance (SOCI):** Habitats and species that are rare, threatened or declining in our waters.

**Stakeholders:** Individuals (including members of the public), groups of individuals, organisations, or political entities interested in and/or affected by the outcome of management decisions. Stakeholders may also be individuals, groups, or other entities that are likely to have an effect on the outcome of management decisions.

**Statutory Nature Conservation Body (SNCB):** A collective term for the Countryside Council for Wales, the JNCC, Natural England, Northern Ireland's Council for Nature Conservation and the Countryside (which generally works through the Northern Ireland Environment Agency) and Scottish Natural Heritage.

**Substrate:** The surface or medium on which an organism grows or to which it is attached (eg seabed sediment).

**Subtidal:** Depths greater than the intertidal zone (Anon, 2001).

**UK Biodiversity Action Plan (UK BAP):** The UK BAP was the government's response to the Convention on Biological Diversity signed in 1992. The UK BAP included a number of specific plans for species and habitats afforded priority conservation action. More recently devolution has meant that country-level strategies have been produced (eg the England Biodiversity Strategy (Defra, 2011b)).

**Uncertainty:** The degree to which the measured value of some quantity is estimated to vary from the true value. Uncertainty can arise from a variety of sources, including limitations on the precision or accuracy of a measuring instrument or system; measurement error; the integration of data that uses different scales or that describe phenomena differently; conflicting representations of the same phenomena; the variable, unquantifiable, or indefinite nature of the phenomena being measured; or the limits of human knowledge. Uncertainty is the opposite of confidence (MESH, 2007).

**Viability:** The ability of an MPA to maintain the integrity of the features (ie population of the species or condition and extent of the habitat) for which it is designated, and to ensure individual sites are self-sustaining throughout natural cycles of variation.

**Vulnerability:** A measure of the degree of exposure of a receptor to a pressure to which it is sensitive.





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Catalogue Code: NE584

ISBN: 978-1-78367-153-3

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