Finding Sanctuary

Summary of the Final Report and Recommendations

September 2011

FINDING SANCTUARY

The Finding Sanctuary process has been designed and facilitated by Rob Angell of R K Partnership Ltd, supported by Lynn Wetenhall and Jim Welch. The facilitators hold no formal position on any of the substantive issues that have been, or might have been, considered. It was for the participants to decide what issues were raised, how they might be addressed and how any observations, conclusions and recommendations might be recorded and communicated.

This document is a summary of the following report:

Lieberknecht, L.M.; Hooper, T.E.J.; Mullier, T.M.; Murphy, A.; Neilly, M.; Carr, H.; Haines, R.; Lewin, S.; and Hughes, E. (2011) Finding Sanctuary final report and recommendations. A report submitted by the Finding Sanctuary stakeholder project to Defra, the Joint Nature Conservation Committee, and Natural England. Available at www.finding-sanctuary.org / The UK National Archives tna.europarchive.org/*/http://www.finding-sanctuary.org/

Front photographs by Roger Covey, Keith Hiscock, Rob McIntyre, David Peake and Sally Sharrock.
Rear photograph by Louise Lieberknecht.

Summary of the Final Report and Recommendations

September 2011

Lieberknecht, L.M.; Hooper, T.E.J.; Mullier, T.M.; Murphy, A.; Neilly, M.; Carr, H.; Haines, R.; Lewin, S.; and Hughes, E.

Contents

Table of Contents

Introduction

The Finding Sanctuary project was a stakeholder-centred marine protected area planning project based in south-west England, tasked with making recommendations to Government on Marine Conservation Zones (MCZs), to be designated under the UK's Marine and Coastal Access Act.

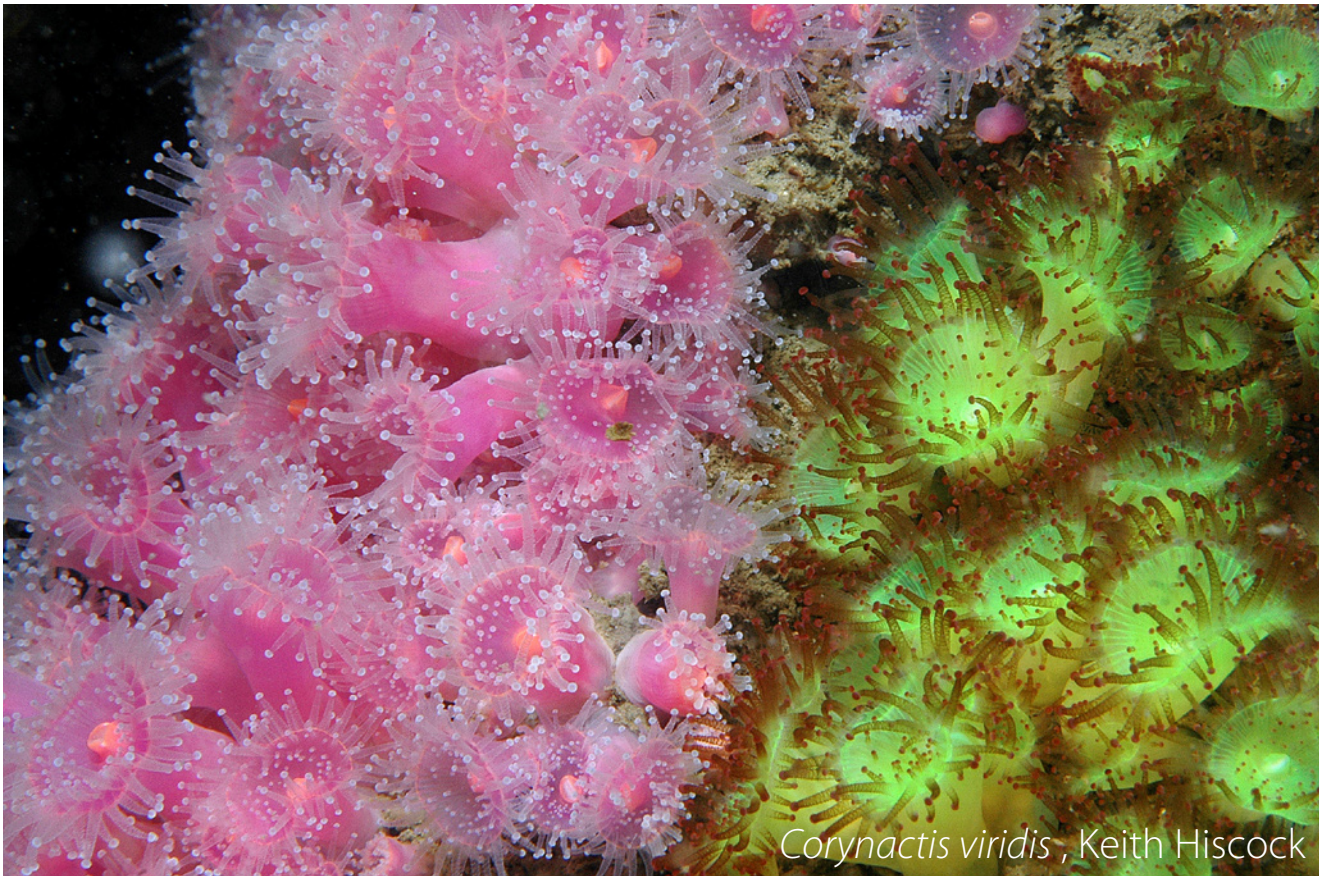
This is a summary of Finding Sanctuary's final report, published on September 7th, 2011. The final report contains a full description of the project's planning process, as well as the project's final recommendations for 58 MCZs in the south-west planning region. The final report is a very long document (over 1000 pages).

This summary aims to serve two purposes:

- To provide a summary of the content of the final report, with a very brief summary of the Finding Sanctuary process, and a regional-scale overview of the project outcome (the MCZ recommendations).
- To make the final report itself more accessible, by providing a description of its structure – this should help readers find their way around the 1000+ pages more easily.

This summary should not be seen as a replacement for the final report. It provides the essence of the process, but it does not give a comprehensive overview of everyone involved, their roles, or the project timelines. The project outcome (the final MCZ recommendations) is summarised only at the network level, leaving out a lot of site-specific information that is covered in the final report.

Readers should also be aware of additional materials supplied along with the project's final report (available via a link on the project website). These include GIS data of the recommended site boundaries, a full series of the project's stakeholder meeting reports and progress reports, and interactive maps which allow users to visualise the network configuration against a range of biophysical and socio-economic data layers.



Corynactis viridis , Keith Hiscock

Project task and context

The UK is committed to implementing a network of marine protected areas (MPAs) in order to achieve a number of national and international biodiversity conservation goals. The MPA network will consist of sites designated under European legislation and UK legislation:

- Special Areas of Conservation (SACs) and Special Protection Areas for Birds (SPAs), also referred to as 'Natura 2000' sites, under the EC Habitats and Birds Directives;
- Sites of Special Scientific Interest – SSSIs, under the Wildlife and Countryside Act;
- Ramsar sites (wetland areas designated under the Ramsar Convention[1])
- Marine Conservation Zones (MCZs), under the Marine and Coastal Access Act

Finding Sanctuary's task was to develop recommendations for MCZs (new sites), within the context of existing MPAs (SACs, SPAs, SSSIs and Ramsar sites), so that when all sites are put together, they form a coherent network. This is why the final MCZ recommendations are also referred to as 'network recommendations' or a 'network configuration'.

More information on the project's context can be found on Natural England's website[2], on the website of the Joint Nature Conservation Committee (JNCC)[3], or on Defra's website[4].

The three project phases

Finding Sanctuary started as a regional pilot project with no official remit, which was subsequently formalised and given its official role by the UK Government. It went through three phases:

- A **project initiation phase**, which developed a concept and raised funds between January 2005 and April 2007. At this stage there was no direct obligation from Government, nor any official mandate for the project. The involvement of stakeholders at a regional and local level was established as a key principle of the project's approach, as was the principle of systematically planning a protected area network at a regional scale.

- A **pilot phase**, from April 2007 until 2009, during which an initial regional stakeholder group was formed, a planning process started to be developed, and ecological guidelines for the establishment of a coherent MPA network began to be discussed. The project did not yet have any formal remit to deliver MCZ recommendations to Government, but towards the end of the pilot phase, the possibility of this formal remit was under discussion.

- A **formal phase**, beginning in a transition period over 2009, during which the project was given its official remit, the regional stakeholder group was expanded significantly to form the project's final Steering Group, national guidelines were developed, three other regional projects were established in other regions in England, local stakeholder groups were established to advise the Regional Steering Group, a national Science Advisory Panel was formed to provide independent scientific scrutiny of the project's work, and the planning and delivery of the final MCZ recommendations took place.

[1] In the Finding Sanctuary project area, all Ramsar sites overlap with other designations, so in themselves, Ramsar sites do not make a significant contribution to the regional network.

[2] http://www.naturalengland.org.uk/ourwork/marine/protectandmanage/mpa/mcz/default.aspx

[3] http://jncc.defra.gov.uk/page-2409

[4] http://www.defra.gov.uk/environment/marine/protect/mcz/

The role of stakeholders

Finding Sanctuary differed significantly from previously existing marine protected area planning processes in the UK, in that it gave a wide range of stakeholder representatives a central role in designing the recommendations from the beginning, striving for high levels of transparency throughout.

During the formal phase, the project Steering Group (SG) consisted of 41 representatives of a wide range of marine sectors (including commercial interests, recreational interests, and conservation). The SG's role was to develop the network recommendations, with support from the project team. In order to carry out detailed planning and network design work, the Steering Group formed two smaller subgroups, the Inshore and Offshore Working Groups. These two Working Groups met roughly every month from April 2010 to December 2010, at which point they merged to form the Joint Working Group (which continued to meet monthly). The SG had six formal meetings between October 2009 and July 2011, during which they reviewed the progress of the Working Groups, and provided commentary and feedback.

The Working Groups were also advised by five county-level Local Groups, who had the opportunity to put forward sites for consideration, and to review and provide feedback on the regional project's developing network recommendations from a local perspective.

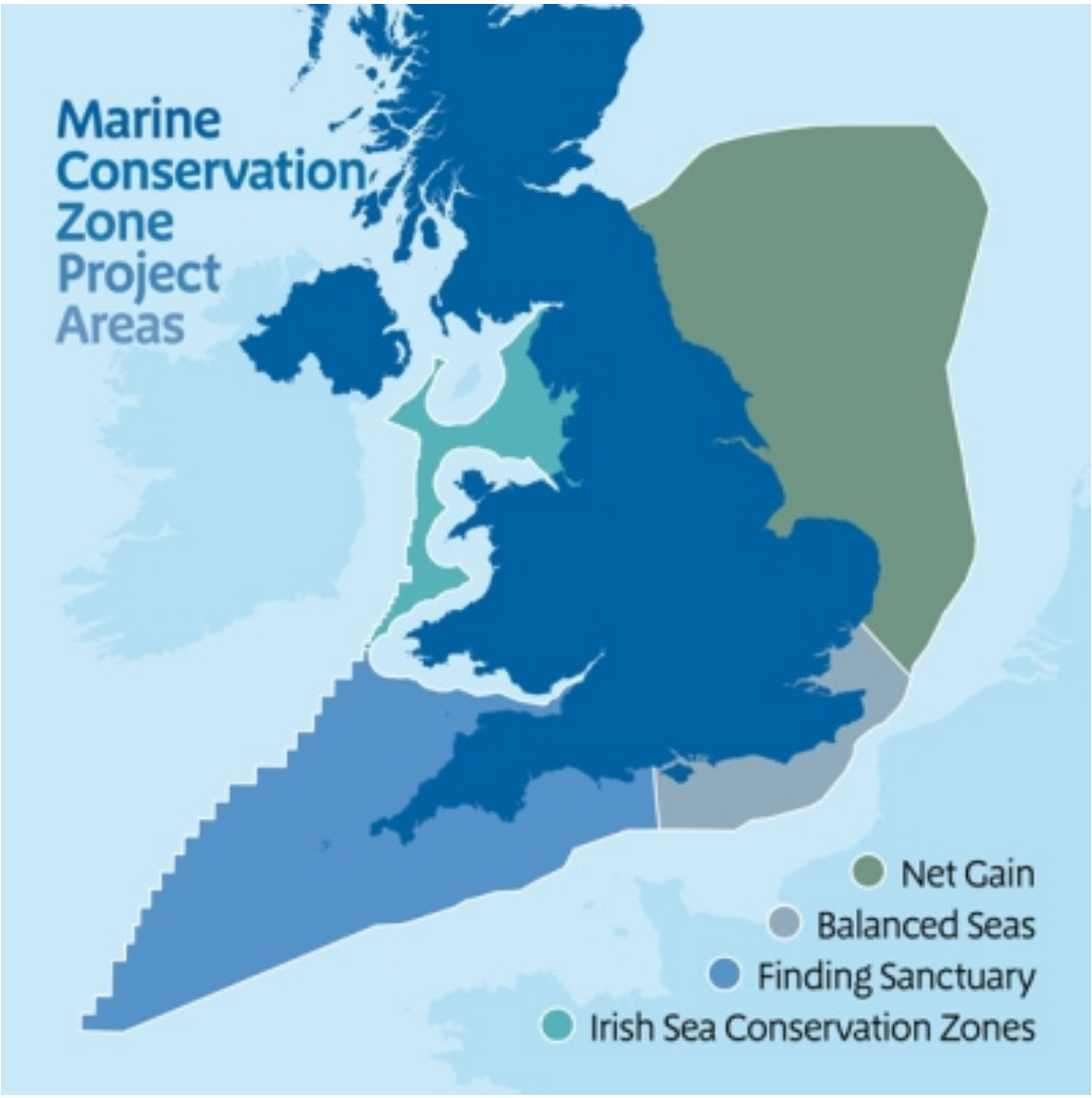
Joint Working Group meeting, Finding Sanctuary

The regional project board

English Nature (now Natural England) initiated the project in July 2004 through a partnership with Devon County Council, Cornwall County Council and South West Food and Drink. These organisations formed what became the Regional Project Board, which was widened in 2005 to include the Wildlife Trusts, Dorset County Council and the Joint Nature Conservation Committee (JNCC), and to include Somerset County Council in 2009. The Regional Project Board was responsible for managing the project, but not for developing the project's recommendations – the latter was the role of a regional cross-sectoral stakeholder group (the Steering Group).

The national MCZ project

At the beginning of the formal project phase, a national MCZ project was formed. Three other regional projects were established, based on Finding Sanctuary's model (Net Gain in the North Sea, Balanced Seas in the Eastern Channel, and the Irish Sea Marine Conservation Zone project). The regional projects covered all of England's inshore and offshore waters, and were overseen by a national MCZ Project Board, formed initially by the JNCC, Natural England and Defra. In March 2010, Defra left the national board to become a 'critical friend'.



Iterative planning

The planning process of all four regional projects was iterative, with three main planning iterations. At the end of each iteration, regional projects produced a progress report to the national Science Advisory Panel (SAP). The SAP provided feedback to the regional projects, which was integrated into subsequent planning discussions with stakeholder representatives. The aim of this iterative planning approach was to allow iterative improvements to be made to the design of the network, through the integration of regular scientific review.

The iteration deadlines were as follows:

- Progress report 1: June 30th, 2010
- Progress report 2: October 29th, 2010
- Progress report 3: February 28th, 2011

Following the three progress reports, all four projects were required to submit a draft of the final recommendations to the SAP on June 1st, 2011.

The project team and facilitators

The regional project team's role was to develop and support the planning process, to gather information to underpin planning, and to create maps and tools that allowed stakeholders to access and understand the available information. In addition to the project manager, the project team included GIS and planning specialists, a communications officer, and several stakeholder liaison staff.

The project team worked with professional facilitators, RKP, to design and support a regional planning process where stakeholders were given a central role in planning. The facilitators held no formal position on the issues discussed: Their role was to facilitate stakeholder meetings, and work with the project team to design an effective planning process.

Regional data gathering

The project team spent considerable effort gathering spatial information on the planning region's ecology, physical environment, and distribution of human activities. This is described in more detail in appendix 8 of the final report. This summary focuses on the most important regional data gathering work carried out by the project, FisherMap and StakMap.

During the pilot phase, the project identified a gap in the availability of spatial activity data for inshore fishing and recreational activities. This gave rise to the FisherMap project, and, subsequently, the StakMap project. These projects collected and mapped this information through carrying out interviews with fishermen and recreational stakeholders, getting them to draw areas they use on charts, for digitisation and subsequent GIS analysis.

Work on FisherMap began in October 2007. It focussed on mapping fishing activity in Dorset and North Devon. A report on the initial work in Devon and Dorset was published in November 2008, and is available via the project website. At the end of 2009, the other three regional projects had become established, and Finding Sanctuary's

stakeholder mapping work was adopted nationally. FisherMap interviews continued until October 2010. A total of 262 interviews were held, representing 320 fishing vessels number of vessels (approximately 30% of the Devon and Dorset fleet operating boats under 15m). Fisheries data in Cornwall was collected by the Cornish Fish Producers Organisation as part of a Defra funded project that mirrored FisherMap.

The data from FisherMap was used during the MCZ planning process, particularly by fisheries representatives, in order to identify and avoid unnecessary negative impacts on the fishing industry. At the time of writing this report, further work is underway using the FisherMap data, in combination with other offshore fisheries datasets, to carry out spatial economic modelling of commercial fishing within the region for use in the Impact Assessment (due to be finished in January 2012).

In August 2008, the FisherMap approach was rolled out to recreational sectors, in a project that became known as StakMap (short for 'stakeholder mapping'). Questionnaires and explanatory brochures for recreational boating, sea angling, charter boats, wildlife watching and recreational diving sectors were developed. The approach was piloted in North Devon and expanded from early 2009.

Given the very large number of target stakeholders within the recreational sector, clubs and organisations were targeted as a way of obtaining a representative sample of interviewees. Interviews were carried out on an individual, group or club basis which allowed us to cover large proportions of the region. Like the FisherMap project, StakMap was adopted by the other three regional projects when they became established in late 2009. The StakMap interviews continued until October 2010. A total of 639 interviews were conducted. Many of those interviews were of club representatives, and if club membership is taken into consideration, the interviews represent 247,382 sea users.

National guidance and data

In order to be able to design MCZs so they would make an ecologically coherent MPA network together with the existing sites, national Ecological Network Guidance (ENG) was provided to the project by Natural England and the Joint Nature Conservation Committee (JNCC). The ENG outlined the ecological design criteria for the network as a whole. The ENG[1] required the network to represent a listed set of marine habitats and species, and to include a set of 'reference areas', in addition to wider MCZs.

The project was also required to produce draft conservation objectives for each recommended site, listing the features for protection. A separate national guidance national guidance document was written by the JNCC and Natural England, outlining how conservation objectives had to be developed and formulated (this was referred to as the Conservation Objective Guidance or COG[2]).

The national project partners delivered the ENG and COG (as well as other guidance documents) to the four regional projects during the formal project phase, and also managed national data collation contracts that provided the regional projects with the necessary ecological and socio-economic data to underpin the planning process. These national datasets were combined with datasets collected regionally by the project team. Most of the detailed network planning work was carried out through 2010, after key guidance and datasets became available, and had been properly reviewed and understood by regional stakeholders.

[1] http://www.naturalengland.org.uk/Images/100608_ENG_v10_tcm6-17607.pdf

[2] http://jncc.defra.gov.uk/PDF/MCZ%20Project%20Conservation%20Objective%20Guidance.pdf

Developing draft conservation objectives

The Local Groups, Working Groups and the Steering Group played a central role in defining the location and boundaries of rMCZs and recommended reference areas. It was initially envisaged that these groups would play the same central role in defining draft conservation objectives for each site. Prior to the publication of the COG (which only became available very late in the process, in late 2010), stakeholder discussions related to developing conservation objectives centred on the ecological features that each site represented, and therefore contributed towards the ENG targets.

When the COG became available, it became clear that the definition and writing of draft conservation objectives was going to be a highly laborious process (referred to as a 'vulnerability assessment'), and that it would not be feasible to carry it out during stakeholder meetings. A separate set of meetings was therefore set up between Natural England and JNCC staff, project team members, and public authority representatives (Inshore Fisheries and Conservation Agencies -IFCAs, the Marine Management Organisation - MMO, and the Environment Agency - EA). The aim of the vulnerability assessment meetings was twofold:

- To define draft conservation objectives for ENG-listed features in rMCZs, i.e. decide between 'recover' and 'maintain' objectives for the features listed[1].
- To discuss the likely activity restrictions needed in order to achieve the conservation objectives.

The draft conservation objectives resulting from these meetings are listed in tables below. Because of the complexity of the vulnerability assessment process, and the uncertainties inherent in it, the discussions on activity restrictions did not have any clearly defined outcomes, in terms of any definitive management proposals. At the time of writing this report, it is clear that the process of defining activity restrictions and site management within MCZs will continue beyond the end of the Finding Sanctuary project, and that the vulnerability assessment meetings might be seen as a first step in that process. At the time of writing, it is not clear what role (if any) the regional stakeholder groups will be given in this process.

Nevertheless, the outcome of the discussions on activity restrictions and site management from the vulnerability assessment meetings was written up and shared with stakeholders (in addition to the draft conservation objectives) – this is referred to as the 'VA snapshot' throughout the final report.

More information on the Finding Sanctuary's process

The overview given above is very brief, and readers with particular interest in the project's process should refer to the full final report. The first part of the final report consists entirely of a detailed description of the project's planning process, including a list of all the planning meetings and main issues covered at each of them, and the project participants are listed in the final report's appendices. In addition, the project's stakeholder meeting reports and progress reports have been published on the project's website.

[1] The COG required conservation objectives for rMCZs to state whether a given feature (species or habitat) within the site is to be 'recovered to favourable condition' or 'maintained in favourable condition', depending on the current condition of the feature. For recommended reference areas, the COG required conservation objectives for all features in the site to be 'recover to reference condition'. Please refer to the COG for more details.

The fundamental importance of the network concept

Finding Sanctuary's final recommendations are for a network of sites, not for a series of individual protected areas which someone might pick and choose from: Finding Sanctuary was tasked with delivering recommendations for Marine Conservation Zones (MCZs) that would, together with existing MPAs, form an ecologically coherent network of marine protected areas. Some of the individual rMCZs are not 'special' in any ecological sense, but each one makes its own important contribution towards creating a protected area network configuration that represents the full range of marine biodiversity, as required by the principles outlined in the ENG.

The stakeholder comments in the final report reflect the fact that each site was planned to sit within a wider network. This is referred to explicitly in the final report's cover note, which states that '...we are satisfied that they represent the best negotiated outcome for an inter-linked and inter-dependent network...'. In order to maintain the integrity of Finding Sanctuary's recommendations, individual sites should not be evaluated in isolation from the network configuration they form part of.

Overview of the final network configuration

In addition to the existing MPAs, the recommended network configuration consists of 58 potential new sites: 45 rMCZs (recommended Marine Conservation Zones), and 13 recommended reference areas. Some of the recommended reference areas are located within rMCZs, others are located within existing MPAs. We have loosely split the 45 rMCZs into 32 'inshore' and 13 'offshore' sites. This is for presentational purposes, as the whole network cannot be represented legibly on a single A4-sized map. The split generally follows the 12 nautical mile limit as the dividing line. The recommended network configuration is shown on maps FR_001a to c, and FR_002a to c. Maps FR_023, FR_026, FR_031 and FR_041 show some of the planning region's inshore areas in more detail.

Of the 45 rMCZs, some consist of several, spatially separate areas. The Taw Torridge Estuary rMCZ, Tamar Estuary Sites rMCZ and Upper Fowey & Pont Pill rMCZs each consist of two spatially separate areas. The Isles of Scilly Sites rMCZ consists of 11 separate areas, and is a particularly complex case, as each one of the 11 areas has its own list of draft conservation objectives (in some ways, the Isles of Scilly recommendations might be considered as 11 separate sites, albeit small ones – this would bring the total number of newly recommended sites in this report to 69).

Some of the inshore rMCZs contain zones – areas within the site that have differences in the lists of features to be protected, and / or in terms of assumed activity restrictions:

- Two of the areas within the Isles of Scilly Sites rMCZ have been zoned to include 'non-disturbance areas', where there is a recommendation for higher levels of restriction of human activities than elsewhere within rMCZs (but not as high as within reference areas).
- The Padstow Bay and surrounds rMCZ includes a zone with seabird conservation objectives (in addition to conservation objectives for seafloor ENG features within the whole site).
- The Hartland Point to Tintagel rMCZ includes a zone where cetacean protection was considered in addition to the seafloor features.
- The Torbay rMCZ includes a zone around Berry Head that is recommended solely for the protection of cetaceans and loafing birds (this is the only area that remains in our current network configuration that is suggested solely for mobile non-ENG species, after careful consideration by the JWG, on the basis that there are known problems in this area with speeding leisure craft causing disturbance and wildlife collisions).

Summary of the final recommendations

Table 1. List of all recommended MCZs and reference areas, with brief comments about their location and spatial relationship to other protected areas. The individual site reports in the full final report contain more details.

Offshore rMCZs	
The Canyons	Located within the far south-west corner of the UK Continental Shelf limits. Contains The Canyons recommended reference area.
South West Deeps (West)	Abuts the UK Continental Shelf limit.
South West Deeps (East)	Abuts the UK Continental Shelf limit.
North-West of Jones Bank	
Greater Haig Fras	Contains Greater Haig Fras recommended reference area and the Haig Fras cSAC
East of Jones Bank	
East of Haig Fras	
North-East of Haig Fras	Abuts the UK Continental Shelf limit.
South of Celtic Deep	Abuts the UK Continental Shelf limit.
Celtic Deep	Contains Celtic Deep recommended reference area
East of Celtic Deep	
Western Channel	
South of the Isles of Scilly	Straddles the 12nm limit
Inshore rMCZs	
Poole Rocks	
Studland Bay	Includes intertidal area.
South Dorset	Straddles the 12nm limit. Contains South Dorset recommended reference area.
Broad Bench to Kimmeridge Bay	Intertidal site. Located within Purbeck VMCA.
South of Portland	Intersects Studland to Portland dSAC.
Chesil Beach and Stennis Ledges	Includes intertidal area.
Axe Estuary	Includes intertidal area.
Otter Estuary	Includes intertidal area.
Torbay	Includes intertidal area. Intersects Torbay to Lyme Bay cSAC.
Dart Estuary	Includes intertidal area.
Skerries Bank and surrounds	Includes intertidal area. Intersects with Prawle Point to Plymouth Sound & Eddystone cSAC, and the Start Point Inshore Potting Agreement. The southern tip of the site extends beyond 6nm.
Devon Avon Estuary	Includes intertidal area.
Erme Estuary	Includes intertidal area. Intersects with a SSSI.
Tamar estuary sites	Includes intertidal area. Consists of 2 parts, intersects with a SSSI, SAC and SPA.
Whitsand and Looe Bay	Includes intertidal area. Intersects with an existing voluntary marine conservation zone.
Upper Fowey and Pont Pill	Includes intertidal area. Consists of 2 parts.
South-East of Falmouth	Lies almost entirely outside the 12nm limit.

South of Falmouth	Lies almost entirely outside the 6nm limit.
The Manacles	Includes intertidal area.
Mounts Bay	Includes intertidal area.
Land's End	Includes intertidal area. Located on the Land's End peninsula, but not at Land's End itself (closer to Porthcurno).
Isles of Scilly Sites	Consists of 11 parts, all sit within the Isles of Scilly complex SAC, some intersect with SSSIs, most include intertidal areas.
Cape Bank	Straddles the 12nm and the 6nm limits, contains Cape Bank recommended reference area , and the Cape Bank section of Land's End and Cape Bank cSAC.
Newquay and the Gannel	Includes intertidal area.
Padstow Bay and surrounds	Includes intertidal area.
Camel Estuary	Includes intertidal area.
Hartland Point to Tintagel	Includes intertidal area, and part extends beyond 6nm.
Lundy	MCZ already designated, boundary is identical to Lundy SAC. Contains Lundy recommended reference area, the boundary of which is identical to the existing Lundy no-take zone.
Taw Torridge Estuary	Includes intertidal area. Consists of 2 parts, intersects with SSSI
Bideford to Foreland Point	Includes intertidal area.
Morte Platform	
North of Lundy (Atlantic Array area)	Straddles the 12nm and 6nm limits, follows boundary of planned Atlantic Array wind farm.
Recommended reference areas – offshore (beyond 12nm)	
The Canyons	Within The Canyons rMCZ.
Greater Haig Fras	Within Greater Haig Fras rMCZ.
Celtic Deep	Within Celtic Deep rMCZ.
Recommended reference areas – inshore (within 12nm)	
South Dorset	Within South Dorset rMCZ.
South-East of Portland Bill	Within Studland to Portland dSAC.
The Fleet	Within a SSSI, SPA and SAC.
Lyme Bay	Within Lyme Bay to Torbay cSAC.
Erme Estuary	Within the Erme Estuary rMCZ and SSSI.
Mouth of the Yealm	Within Plymouth Sound and Estuaries SAC and the Yealm Estuary SSSI.
The Fal	Within the Fal and Helford SAC.
Swanpool[1]	Within Swanpool SSSI.
Cape Bank	Within Cape Bank rMCZ and cSAC.
Lundy	Within Lundy MCZ and SAC, the boundary is that of the existing no-take zone.

[1] The Swanpool Lagoon is the only place in England where the trembling sea mat *Victorella pavida* is recorded. However, it sits above the Ordnance Survey Boundary Line mean high water line, which was used as the limit of the project's planning area – so, technically, the site is not located within Finding Sanctuary's area.

Map: FR_001a

Version: 22Aug11

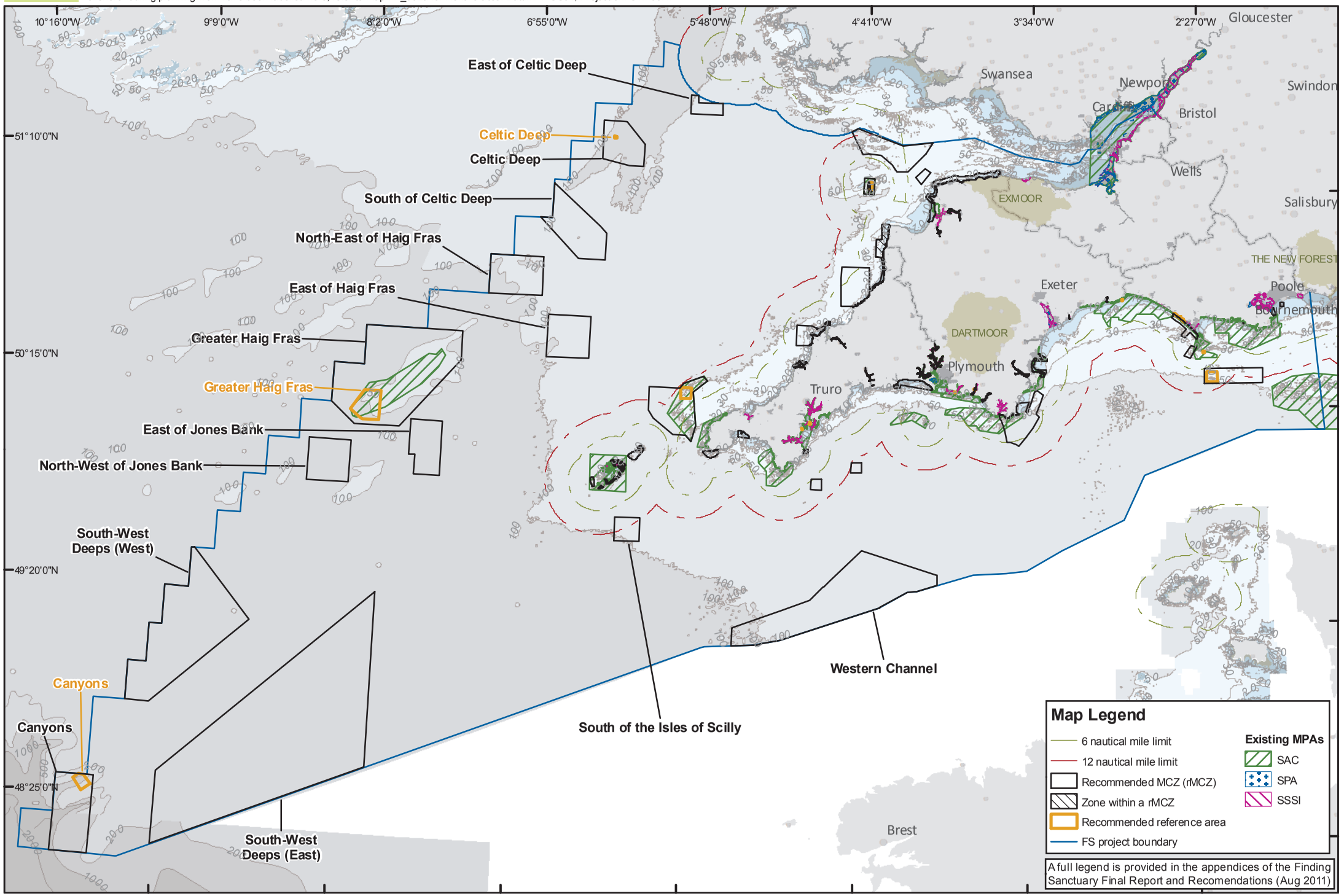
Finding Sanctuary's MCZ Recommendations (offshore map)

This map shows Finding Sanctuary's network configuration (August 2011). Only recommended MCZs and reference areas considered "offshore" during planning work have been labelled here; refer to map FR_002a for inshore sites. Datum: WGS84; Projection: UTM30N.

0 25 50 100 km

N

FINDING SANCTUARY



Map Legend

- 6 nautical mile limit
- 12 nautical mile limit
- Recommended MCZ (rMCZ)
- Zone within a rMCZ
- Recommended reference area
- FS project boundary

Existing MPAs

- SAC
- SPA
- SSSI

A full legend is provided in the appendices of the Finding Sanctuary Final Report and Recomendations (Aug 2011)

Map: FR_001b

Version: 06Sep11

Finding Sanctuary's MCZ Recommendations (offshore map)

This map shows the broad-scale habitats in Finding Sanctuary's network configuration (August 2011). Only recommended MCZs and reference areas considered "offshore" during planning work have been labelled here; refer to map FR_002b for inshore sites. Datum: WGS84; Projection: UTM30N.

0 50 100 km N

FINDING SANCTUARY

10°16'0"W 9°9'0"W 8°2'0"W 6°55'0"W 5°48'0"W 4°41'0"W 3°34'0"W 2°27'0"W

51°10'0"N 50°15'0"N 49°20'0"N 48°25'0"N

East of Celtic Deep
Celtic Deep
Celtic Deep
South of Celtic Deep
North-East of Haig Fras
East of Haig Fras
Greater Haig Fras
Greater Haig Fras
East of Jones Bank
North-West of Jones Bank
South-West Deeps (West)
Canyons
Canyons
South-West Deeps (East)
South of the Isles of Scilly
Western Channel

Gloucester
Swansea
Newport
Cardiff
Bristol
Swindon
Wells
EXMOOR
Salisbury
THE NEW FOREST
Exeter
Poole
Bournemouth
DARTMOOR
Plymouth
Truro
Brest

Map Legend

- 6 nautical mile limit
- 12 nautical mile limit
- Recommended MCZ (rMCZ)
- Zone within a rMCZ
- Recommended reference area
- FS project boundary

Existing MPAs

- SAC
- SPA
- SSSI

A full legend is provided in the appendices of the Finding Sanctuary Final Report and Recomendations (Aug 2011)

Map: FR_001c

Version: 06Sep11

Finding Sanctuary's MCZ Recommendations (offshore map)

This map shows Finding Sanctuary's network configuration (August 2011). Only recommended MCZs and reference areas considered "offshore" during planning work have been labelled here; refer to map FR_002c for inshore sites. Datum: WGS84; Projection: Mercator.

0 90 180 km

East of Celtic Deep

Celtic Deep

Celtic Deep

South of Celtic Deep

North-East of Haig Fras

East of Haig Fras

Greater Haig Fras

Greater Haig Fras

East of Jones Bank

North-West of Jones Bank

South-West Deeps (West)

Canyons

Canyons

South-West Deeps (East)

South of the Isles of Scilly

Western Channel

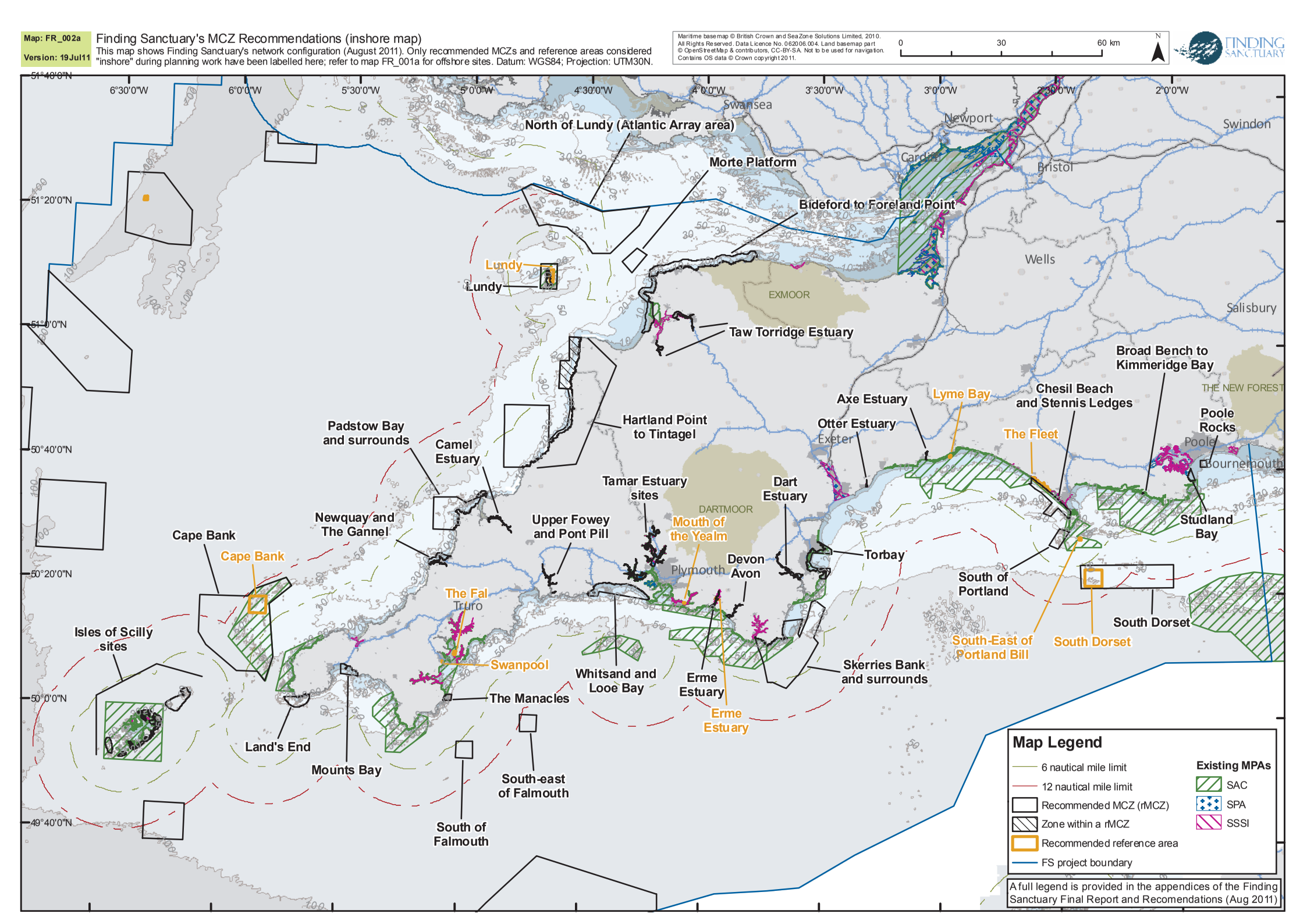
Map Legend

- 6 nautical mile limit
- 12 nautical mile limit
- Recommended MCZ (rMCZ)
- Zone within a rMCZ
- Recommended reference area
- FS project boundary

Existing MPAs

- SAC
- SPA
- SSSI

A full legend is provided in the appendices of the Finding Sanctuary Final Report and Recomendations (Aug 2011)


Map: FR_002a
Version: 19Jul11
Finding Sanctuary's MCZ Recommendations (inshore map)
This map shows Finding Sanctuary's network configuration (August 2011). Only recommended MCZs and reference areas considered "inshore" during planning work have been labelled here; refer to map FR_001a for offshore sites. Datum: WGS84; Projection: UTM30N.
Maritime basemap © British Crown and SeaZone Solutions Limited, 2010. All Rights Reserved. Data Licence No. 062006.004. Land basemap part © OpenStreetMap & contributors, CC-BY-SA. Not to be used for navigation. Contains OS data © Crown copyright 2011.
0
30
60 km
N
FINDING SANCTUARY
North of Lundy (Atlantic Array area)
Morte Platform
Bideford to Foreland Point
Lundy
Lundy
Taw Torridge Estuary
Hartland Point to Tintagel
Padstow Bay and surrounds
Camel Estuary
Newquay and The Gannel
Cape Bank
Cape Bank
Isles of Scilly sites
Land's End
Mounts Bay
The Fal
Truro
Swanpool
The Manacles
South of Falmouth
South-east of Falmouth
Upper Fowey and Pont Pill
Tamar Estuary sites
Mouth of the Yealm
Plymouth
Devon Avon
Dart Estuary
Erme Estuary
Erme Estuary
Whitsand and Looe Bay
Skerries Bank and surrounds
Torbay
Axe Estuary
Otter Estuary
Exeter
Lyme Bay
The Fleet
Chesil Beach and Stennis Ledges
Broad Bench to Kimmeridge Bay
Poole Rocks
Poole
Bournemouth
Studland Bay
South of Portland
South-East of Portland Bill
South Dorset
South Dorset
Swansea
Newport
Cardiff
Bristol
Swindon
Wells
Salisbury
EXMOOR
DARTMOOR
THE NEW FOREST
6°30'0"W
6°0'0"W
5°30'0"W
5°0'0"W
4°30'0"W
4°0'0"W
3°30'0"W
3°0'0"W
2°30'0"W
2°0'0"W
51°40'0"N
51°20'0"N
51°0'0"N
50°40'0"N
50°20'0"N
50°0'0"N
49°40'0"N
Map Legend
6 nautical mile limit
12 nautical mile limit
Recommended MCZ (rMCZ)
Zone within a rMCZ
Recommended reference area
FS project boundary
Existing MPAs
SAC
SPA
SSSI
A full legend is provided in the appendices of the Finding Sanctuary Final Report and Recomendations (Aug 2011)

Map: FR_002b

Version: 06Sep11

Finding Sanctuary's MCZ Recommendations (inshore map)

This map shows the broad-scale habitats in Finding Sanctuary's network configuration (August 2011). Only recommended MCZs and reference areas considered "inshore" during planning work have been labelled here; refer to map FR_001b for offshore sites. Datum: WGS84; Projection: UTM30N.

0 30 60 km N

FINDING SANCTUARY

North of Lundy (Atlantic Array area)
Morte Platform
Bideford to Foreland Point
Lundy
Lundy
Taw Torridge Estuary
Hartland Point to Tintagel
Padstow Bay and surrounds
Camel Estuary
Newquay and The Gannel
Cape Bank
Cape Bank
Isles of Scilly sites
Land's End
Mounts Bay
South of Falmouth
South-east of Falmouth
The Manacles
Swanpool
The Fal
Truro
Upper Fowey and Pont Pill
Tamar Estuary sites
Mouth of the Yealm
Plymouth
Whitsand and Looe Bay
Erme Estuary
Erme Estuary
Devon Avon
Dart Estuary
Torbay
Skerries Bank and surrounds
Axe Estuary
Otter Estuary
Exeter
Lyme Bay
The Fleet
Chesil Beach and Stennis Ledges
Broad Bench to Kimmeridge Bay
Poole Rocks
Poole
Bournemouth
Studland Bay
South of Portland
South Dorset
South-East of Portland Bill
South Dorset
Swansea
Newport
Cardiff
Bristol
Swindon
Wells
Salisbury
EXMOOR
DARTMOOR
THE NEW FOREST

Map Legend

- 6 nautical mile limit
- 12 nautical mile limit
- Recommended MCZ (rMCZ)
- Zone within a rMCZ
- Recommended reference area
- FS project boundary

Existing MPAs

- SAC
- SPA
- SSSI

A full legend is provided in the appendices of the Finding Sanctuary Final Report and Recomendations (Aug 2011)

Map: FR_002c

Version: 06Sep11

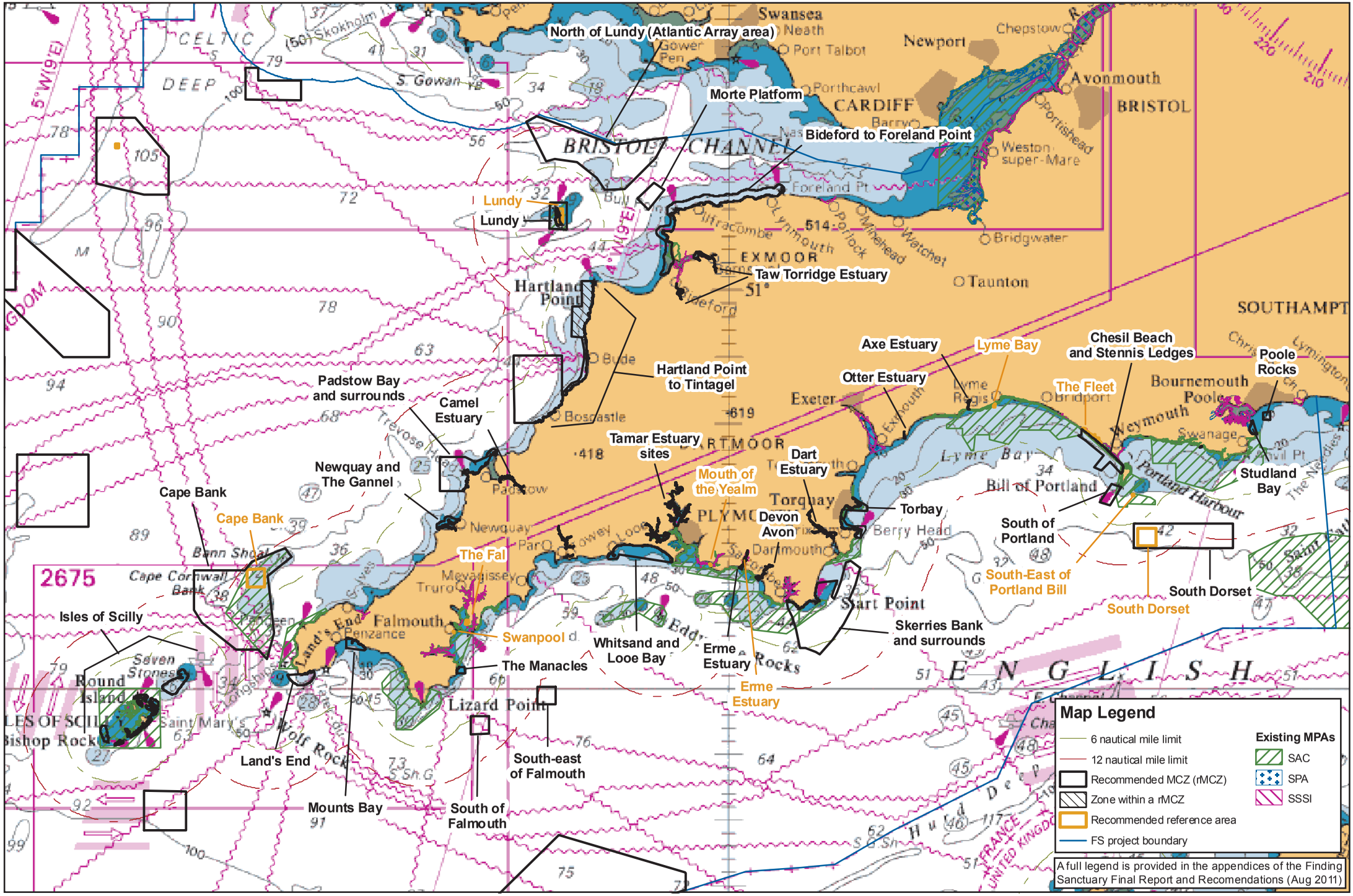
Finding Sanctuary's MCZ Recommendations (inshore map)

This map shows Finding Sanctuary's network configuration (August 2011). Only recommended MCZs and reference areas considered "inshore" during planning work have been labelled here; refer to map FR_001c for offshore sites. Datum: WGS84; Projection: Mercator.

0 45 90 km

N

FINDING SANCTUARY



Map: FR_023a

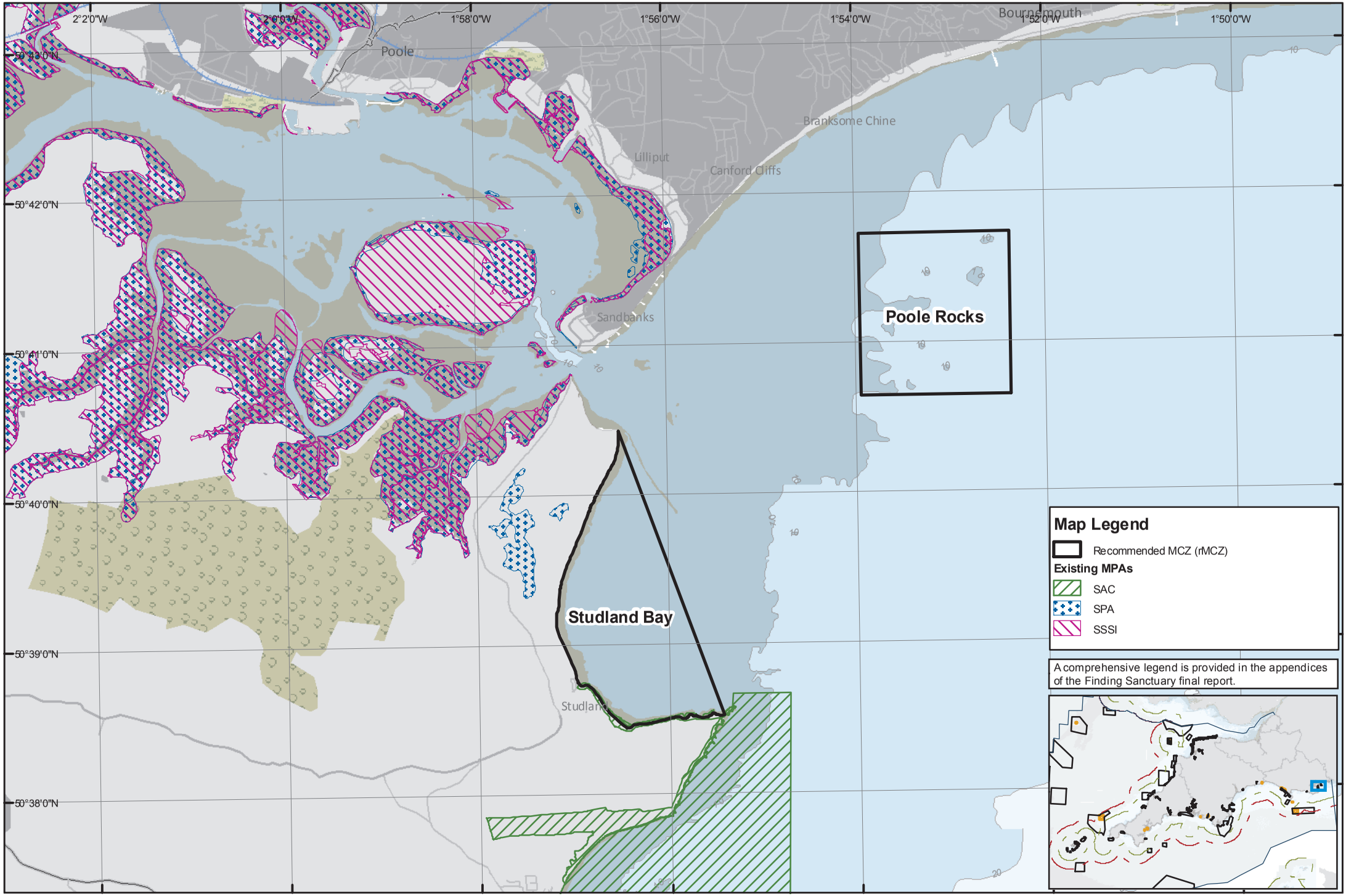
Version:16Aug11

Overview Map: Poole Rocks and Studland Bay rMCZs and surrounding coast

This is one of a series of maps showing Finding Sanctuary's final MCZ and reference area recommendations, designed to be viewed within the context of the project's final report. Datum: WGS84. Projection: UTM30N.

0 1.5 3 km N

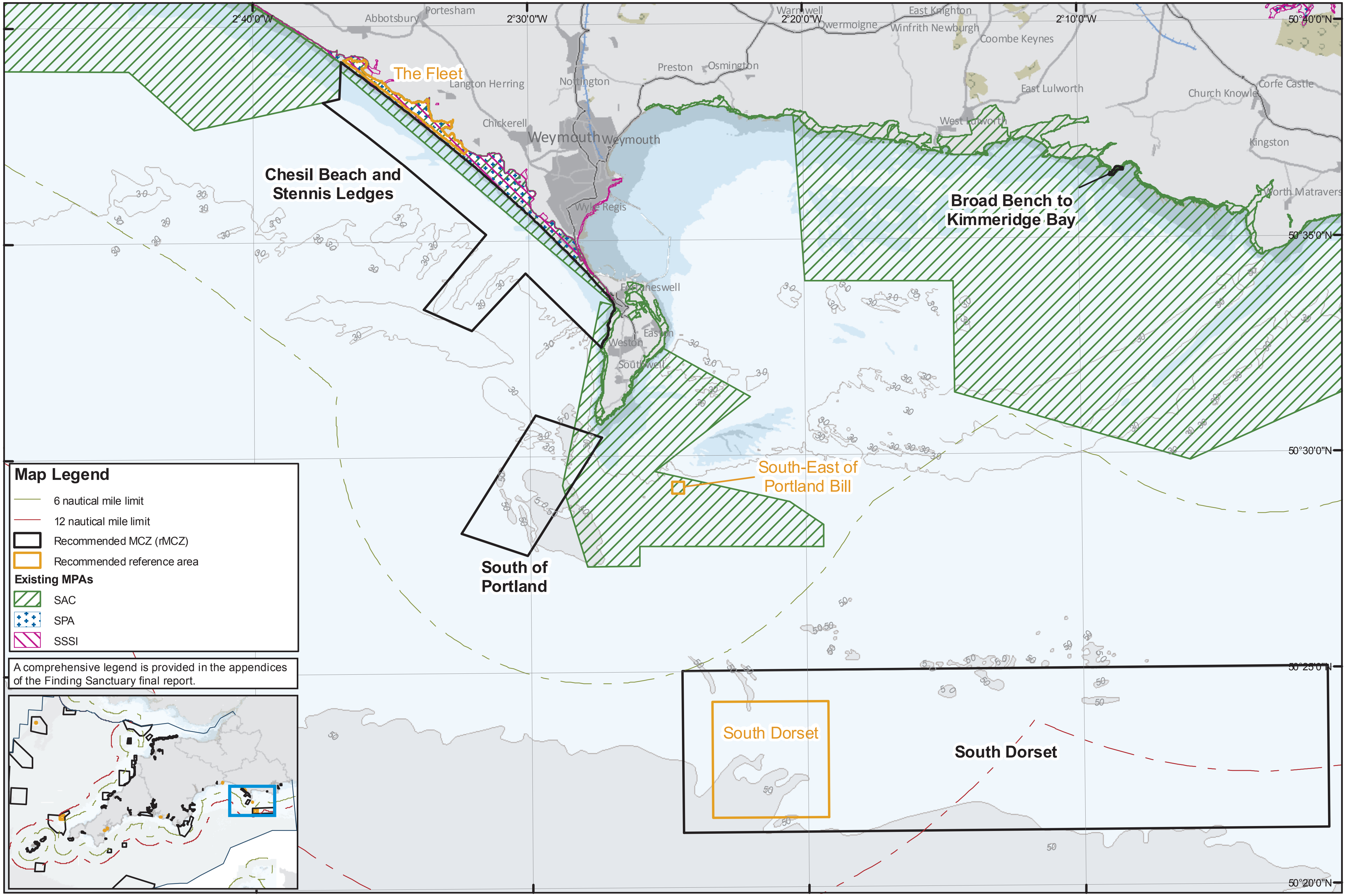
FINDING SANCTUARY



Map: FR_026a
Version:16Aug11

Overview Map: rMCZs and Recommended Reference Areas from Kimmeridge Bay to Chesil Beach

This is one of a series of maps showing Finding Sanctuary's final MCZ and reference area recommendations, designed to be viewed within the context of the project's final report. Datum: WGS84. Projection: UTM30N.



Map: FR_031a

Version:17Aug11

Overview Map: Axe Estuary rMCZ and Lyme Bay Recommended Reference Area and surrounding coast

This is one of a series of maps showing Finding Sanctuary's Network Configuration at 1 June 2011. The blue rectangle on the small map in the bottom corner of this page indicates the location in the south west of the large zoomed map. Datum: WGS84; Projection: UTM30N.

0 0.4 0.8 1.6 km

N

FINDING SANCTUARY

3°4'0"W 3°2'0"W 3°0'0"W 2°58'0"W 2°56'0"W

50°44'0"N 50°43'0"N 50°42'0"N 50°41'0"N

Colyford

Axe Estuary

Axmouth

Seaton

Rousdon

Lyme Regis

Lyme Bay

Map Legend

- Recommended MCZ (rMCZ)
- Recommended reference area

Existing MPAs

- SAC

A comprehensive legend is provided in the appendices of the Finding Sanctuary final report.

Map: FR_041a

Version:16Aug11

Overview Map: rMCZs and Recommended Reference Areas around the Fal and Helford

This is one of a series of maps showing Finding Sanctuary's final MCZ and reference area recommendations, designed to be viewed within the context of the project's final report. Datum: WGS84. Projection: UTM30N.

0 2.5 5 10 km

N

FINDING SANCTUARY

Redruth

Camborne

Falmouth

Helston

5°10'0"W

5°0'0"W

4°50'0"W

4°40'0"W

4°30'0"W

50°10'0"N

50°5'0"N

Swanpool

The Fal

The Manacles

South of Falmouth

South-east of Falmouth

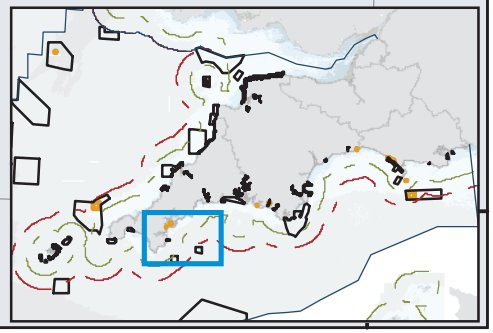
Map Legend

- 6 nautical mile limit
- 12 nautical mile limit
- Recommended MCZ (rMCZ)
- Recommended reference area

Existing MPAs

- SAC
- SSSI

A comprehensive legend is provided in the appendices of the Finding Sanctuary final report.



Draft conservation objective summary

The tables on the following pages provide a summary of the draft conservation objectives for each rMCZ and each recommended reference area in the south-west. The vulnerability assessment process through which the draft conservation objectives were determined is described in part I of the full final report.

In general, draft conservation objectives have been set for all ENG-listed features present within each site (species, habitats, geological and geomorphological features): The presence of these features was the basis on which the sites were selected. There are some exceptions, which are noted in the individual site reports (in the full final report). One exception that applies across the whole network is that no conservation objectives have been included for the FOCI habitat 'subtidal sands and gravels', either for inshore or offshore sites, even where the habitat has been recorded. It is a very widespread and broad-scale feature, and we consider that by including conservation objectives for broad-scale habitats listed in the ENG, any conservation requirements of this habitat would be met.

For some inshore sites, draft conservation objectives have also been included for non-ENG listed seabirds and cetaceans.

There are three draft conservation objective summary tables presented below: one for offshore rMCZs, one for inshore rMCZs, and one for recommended reference areas. In essence, the three tables contain the same information, but there are differences in presentation between them:

- Table 2 (the offshore rMCZ table) simply lists site name, feature name, and whether the objective is 'maintain' in or 'recover' to 'favourable condition' (as defined in the COG).
- Table 3 (the inshore rMCZ table) essentially does the same, but has extra columns for common species names and comments.
- Table 4 (the reference area table) splits features into two columns, depending on whether or not the site is large enough to meet the minimum viable size criteria for the feature. Features in both columns have draft conservation objectives, which are always 'recover to reference condition' – so there is no 'maintain / recover' column.

The full text of the draft conservation objectives (following the layout required in the COG) is in appendix 15 of the final report.

In all three tables below, the different feature types are colour-coded as follows:

Broad-scale habitat (no colour)
FOCI habitat
FOCI species
Mobile species not listed in ENG
Geological / geomorphological feature

Table 2. Conservation Objectives: summary table for offshore sites. In the last column, 'recover' stands for 'recover to favourable condition', and 'maintain' stands for 'maintain in favourable condition'. Where a question mark is recorded, the Joint Working Group discussed at length whether or not to include conservation objectives for seabirds or cetaceans (for the whole site or a zone within the site. However, the JWG could reach no agreement on whether or not this was appropriate (refer to the report from the 5th Joint Working Group meeting in May 2011).

Site name	Feature	Conservation Objective
Canyons	Deep-sea bed	recover
	Subtidal coarse sediment	recover
	Subtidal sand	recover
	Cold-water coral reefs	recover
	Seabirds?	?
	Cetaceans?	?
South-West Deeps (West)	Subtidal coarse sediment	recover
	Subtidal sand	recover
	Subtidal mixed sediments	recover
	Celtic sea relict sandbanks	maintain
	Seabirds (summer, zoned)?	?
South-West Deeps (East)	Subtidal coarse sediment	recover
	Subtidal sand	recover
	Deep-sea bed	recover
	Celtic sea relict sandbanks	?
North-West of Jones Bank	Subtidal sand	recover
	Subtidal mud	recover
	Subtidal coarse sediment	recover
	Seabirds (zoned)?	?
Greater Haig Fras	Moderate energy circalittoral rock	recover
	Subtidal coarse sediment	recover
	Subtidal mixed sediments	recover
	Subtidal mud	recover
	Subtidal sand	recover
	Fragile sponge & anthozoan communities on subtidal rocky habitats	to be confirmed[1]
	Haig Fras rock complex	maintain
East of Jones Bank	Moderate energy circalittoral rock	recover
	Subtidal mud	recover
	Subtidal sand	recover
East of Haig Fras	Moderate energy circalittoral rock	recover
	Subtidal coarse sediment	recover
	Subtidal sand	recover
North East of Haig Fras	Subtidal coarse sediment	recover
	Subtidal mixed sediments	recover

	Subtidal mud	recover
	Subtidal sand	recover
South of Celtic Deep	Subtidal coarse sediment	recover
	Subtidal mixed sediments	recover
	Subtidal mud	recover
	Subtidal sand	recover
Celtic Deep	Subtidal mud	recover
	Mud habitats in deep water	recover
	Seabirds?	?
	Common dolphins?	?
East of Celtic Deep	Subtidal sand	recover
	Subtidal mud	recover
	Subtidal coarse sediment	recover
	Seabirds?	?
	Cetaceans?	?
Western Channel	Subtidal coarse sediment	recover
	Subtidal mixed sediments	recover
	Moderate energy circalittoral rock	recover
	Seabirds?	?
	Cetaceans?	?
South of the Isles of Scilly	Subtidal sand	recover
	Subtidal coarse sediment	recover

[1]Pending check; presence of records outside SAC boundary to be confirmed.

Table 3. Conservation Objectives (COs): summary table for inshore sites. M = 'maintain in favourable condition', R = 're-cover to favourable condition'. The individual parts of the Isles of Scilly rMCZ are listed separately at the end of the table, each has its own list of draft conservation objectives. Based on Local Group feedback, the draft conservation objectives lists for the Isles of Scilly sites include features that are listed as protected within the Isles of Scilly SAC (see appendix 11 of the full final report).These features are marked in red. This is inconsistent with other rMCZs, where features that are already protected by an existing designation have not been included here.

Site name/feature	Common name	CO	Comments
Poole Rocks			
Subtidal mixed sediments		M	
Subtidal sand		M	
Moderate energy circalittoral rock		M	Included based on local knowledge and on the basis of charted sea feature.
Gobius couchi	Couch's goby	M	Single record, species difficult to identify. However, species is known to occur in Poole Bay (media reports), and the habitat in this site is appropriate.
Ostrea edulis	Native oyster	M	
Studland Bay			
Subtidal mixed sediments		M	
Subtidal sand		M	
Intertidal mud		M	
Intertidal sand and muddy sand		M	
Seagrass beds		R	
Hippocampus hippocampus	Short snouted seahorse	R	
Ostrea edulis	Native oyster	M	
Raja undulata	Undulate ray	R	
South Dorset			
High energy circalittoral rock		R	
Moderate energy circalittoral rock		R	
Subtidal coarse sediment		M	
Subtidal mixed sediments		M	
Subtidal chalk		R	
Broad Bench to Kimmeridge Bay			
Intertidal coarse sediment		M	
Moderate energy intertidal rock		M	
Padina pavonica	Peacock's tail seaweed	M	
Paludinella littorina	Sea snail	M	

South of Portland			
High energy circalittoral rock		M	
Moderate energy circalittoral rock		M	
Subtidal coarse sediment		M	
Subtidal mixed sediments		M	
Subtidal sand		M	
Portland Deep		M	
Chesil Beach and Stennis Ledges			
High energy infralittoral rock		R	
Subtidal coarse sediment		R	
Subtidal sand		R	
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Eunicella verrucosa	Pink sea-fan	R	
Ostrea edulis	Native oyster	R	
Axe Estuary			
Subtidal mixed sediments		M	
Coastal saltmarshes and saline reedbeds		M	
Intertidal coarse sediment		M	
Intertidal mixed sediments		M	
Intertidal mud		M	
Anguilla anguilla	European eel	M/R ? (tbc)	
Otter Estuary			
Subtidal sand		M	
High energy infralittoral rock		M	
Coastal saltmarshes and saline reedbeds		M	
Intertidal coarse sediment		M	
Intertidal mud		M	
Anguilla anguilla	European eel	M/R? (tbc)	

Torbay			
Subtidal mud		R	Probably sandy mud and muddy sand, not pure mud.
Intertidal coarse sediment		M	
Intertidal mixed sediments		M	
Intertidal mud		M	Likely to be predominantly sandy habitat.
Intertidal sand and muddy sand		M	
Low energy intertidal rock		M	
Moderate energy intertidal rock		M	
Intertidal under boulder communities		M	
Sabellaria alveolata reefs	Honeycomb worm reefs	M	
Seagrass beds		R	
Hippocampus guttulatus	Long snouted seahorse	M	
Ostrea edulis	Native oyster	M	
Padina pavonica	Peacock's tail seaweed	M	Single record older than 30 years but habitat is right for this species so kept on the CO list.
Paludinella littorina	Sea snail	M	
Gavia arctica	Black throated diver	M	Only within zone around Berry Head. Wintering divers and grebes.
Gavia immer	Great northern diver	M	
Podiceps cristatus	Great crested grebe	M	
Podiceps nigricollis	Black necked grebe	M	
Podiceps grisegena	Red necked grebe	M	
Podiceps auritus	Slavonian grebe	M	
Uria aalge	Guillemot	M	
Phocoena phocoena	Harbour porpoise	M	
Dart Estuary			
Subtidal mud		M	
Intertidal mud		M	
Low energy intertidal rock		M	
Coastal saltmarsh & saline reedbeds		M	
Estuarine rocky habitats		M	
Intertidal under boulder communities		M	
Alkmaria romijni	Tentacled lagoon-worm	M	No records in our data but NE knowledge of recent survey finding this species, tbc.
Anguilla anguilla	European eel	M/R? (tbc)	

Skerries Bank and surrounds			
Subtidal coarse sediment		M	
Subtidal mud		M	
Subtidal sand		M	
Moderate energy circalittoral rock		M	
Moderate energy infralittoral rock		M	
High energy infralittoral rock		M	
Moderate energy intertidal rock		M	
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Intertidal mixed sediments		M	
Intertidal mud		M	
Intertidal sand and muddy sand		M	
Intertidal under boulder communities		M	
Eunicella verrucosa	Pink sea-fan	M	
Hippocampus hippocampus	Short snouted seahorse	M	
Palinurus elephas	Spiny lobster	R	
Devon Avon Estuary			
Subtidal mud		M	
Subtidal sand		M	
High energy infralittoral rock		M	
Coastal saltmarshes and saline reedbeds		M	
Intertidal coarse sediment		M	
Intertidal mud		M	
Intertidal sand and muddy sand		M	
Moderate energy intertidal rock		M	
Alkmaria romijni	Tentacled lagoon-worm	M	This is a single record but habitat is right for this species so kept this on the CO list.
Anguilla anguilla	European eel	M/R? (tbc)	

Erme Estuary			
Subtidal mud		M	
Subtidal sand		M	
Low energy infralittoral rock		M	
Moderate energy infralittoral rock		M	
High energy infralittoral rock		M	
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Intertidal mixed sediments		M	
Low energy intertidal rock		M	
Moderate energy intertidal rock		M	
Estuarine rocky habitats		M	
Sheltered muddy gravels		M	
Anguilla anguilla	European eel	M/R? (tbc)	
Tamar estuary sites			
Intertidal biogenic reefs		M	
Intertidal coarse sediment		M	
Blue Mussel beds (including intertidal beds on mixed and sandy sediments)		M	
Ostrea edulis	Native oyster	M	
Osmerus eperlanus	Smelt	M/R? (tbc)	
Anguilla anguilla	European eel	M/R? (tbc)	

Whitsand and Looe Bay			
Subtidal coarse sediment		M	
Subtidal sand		M	
Moderate energy circalittoral rock		M	
High energy infralittoral rock		M	
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Intertidal mixed sediments		M	
Intertidal sand and muddy sand		M	
Low energy intertidal rock		M	
Moderate energy intertidal rock		M	
Seagrass beds		M	
Amphianthus dohrnii	Sea-fan anemone	M	
Arctica islandica	Ocean quahog	M	
Eunicella verrucosa	Pink sea-fan	M	
Gobius cobitis	Giant Goby	M	
Haliclystus auricula	Stalked jellyfish	M	
Hippocampus guttulatus	Long snouted seahorse	M	
Upper Fowey and Pont Pill			
Coastal saltmarshes and saline reedbeds		M	
Intertidal coarse sediment		M	
Intertidal mud		M	
Intertidal sand and muddy sand		M	
Low energy intertidal rock		M	
Estuarine rocky habitats		M	
Sheltered muddy gravels		M	
Anguilla anguilla	European eel	M/R? (tbc)	
South-East of Falmouth			
Subtidal coarse sediment		R	
Subtidal sand		R	

South of Falmouth			
Moderate energy circalittoral rock		R	
Subtidal coarse sediment		R	
The Manacles			
Subtidal coarse sediment		M	
Subtidal macrophyte-dominated sediment		M	
Subtidal mixed sediments		M	
Subtidal sand		M	
Moderate energy circalittoral rock		M	
Moderate energy infralittoral rock		M	
Intertidal coarse sediment		M	
Intertidal mixed sedi-ments		M	
Intertidal mud		M	
Intertidal sand and muddy sand		M	
Moderate energy intertidal rock		M	
Maërl beds		M	
Amphianthus dohrnii	Sea-fan anemone	M	
Eunicella verrucosa	Pink sea-fan	M	
Haliclystus auricula	Stalked jellyfish	M	
Leptopsammia pruvoti	Sunset cup-coral	M	
Palinurus elephas	Spiny lobster	R	
Cetorhinus maximus	Basking shark	M	
Phocoena phocoena	Harbour porpoise	M	

Mounts Bay			
Subtidal mixed sediments		M	
Subtidal sand		M	
High energy infralittoral rock		M	
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Intertidal mixed sediments		M	
Intertidal sand and muddy sand		M	
Moderate energy intertidal rock		M	
Seagrass beds		M	
Arctica islandica	Ocean quahog	M	
Gobius cobitis	Giant Goby	M	
Haliclystus auricula	Stalked jellyfish	M	
Lucernariopsis campanulata	Stalked jellyfish	M	
Lucernariopsis cruxmelitensis	Stalked jellyfish	M	
Land's End			
Subtidal coarse sediment		M	
Subtidal sand		M	
Moderate energy circalittoral rock		M	
Moderate energy infralittoral rock		M	
High energy circalittoral rock		M	
High energy infralittoral rock		M	
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Intertidal mud		M	more likely to be sand
Intertidal sand and muddy sand		M	
Eunicella verrucosa	Pink sea-fan	M	
Paludinella littorina	Sea snail	M	
Cetorhinus maximus	Basking shark	M	
Tursiops truncatus	Bottlenose dolphin	M	
Phocoena phocoena	Harbour porpoise	M	
Seabirds		M	Species to be confirmed

Cape Bank			
Moderate energy circalittoral rock		R	protected within SAC boundaries, some un-protected feature occurs within rMCZ
Subtidal coarse sediment		R	
Palinurus elephas	Spiny lobster	R	
Newquay and the Gannel			
Subtidal coarse sediment		M	
Subtidal mud		M	
Subtidal sand		M	
Coastal saltmarshes and saline reedbeds		M	
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Intertidal mud		M	On exposed beaches, this is sand not mud
Intertidal sand and muddy sand		M	
Low energy intertidal rock		M	
Moderate energy intertidal rock		M	
Eunicella verrucosa	Pink sea-fan	M	
Gobius cobitis	Giant Goby	M	
Ostrea edulis	Native oyster	M	
Paludinella littorina	Sea snail	M	
Anguilla anguilla	European eel	M/R? (tbc)	

Padstow Bay and surrounds			
Subtidal coarse sediment		M	
Moderate energy circalittoral rock		M	
Moderate energy infralittoral rock		M	
High energy circalittoral rock		M	
High energy infralittoral rock		M	
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Intertidal mud		M	likely to be sand
Intertidal sand and muddy sand		M	
Moderate energy intertidal rock		M	
Arctica islandica	Ocean quahog	M	
Eunicella verrucosa	Pink sea-fan	M	
Haliclystus auricula	Stalked jellyfish	M	
Lucernariopsis cruxmelitensis	Stalked jellyfish	M	
Palinurus elephas	Spiny lobster	R	
Tursiops truncatus	Bottlenose dolphin	M	
Fulmarus glacialis	Fulmar	M	
Uria aalge	Guillemot	M	
Fratercula arctica	Puffin	M	
Alca torda	Razorbill	M	
Rissa tridactyla	Kittiwake	M	
Camel Estuary			
Coastal saltmarshes and saline reedbeds		M	
Intertidal coarse sediment		M	
Intertidal mud		M/R? (tbc)	
Low energy intertidal rock		M	
Estuarine rocky habitats		M	
Anguilla anguilla	European eel	M/R? (tbc)	

Hartland Point to Tintagel			
Subtidal coarse sediment		M	
Subtidal sand		M	
High energy infralittoral rock		M	
Coastal saltmarshes and saline reedbeds		M	
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Intertidal mixed sediment		M	
Intertidal mud		M	unlikely to be present, this is probably sand.
Intertidal sand and muddy sand		M	
Moderate energy intertidal rock		M	
Fragile sponge & antho-zoan communities on subtidal rocky habitats		M	
Sabellaria alveolata reefs	Honeycomb worm reefs	M	No records in our data but there is pers. comm. of MarClim records nr Bude, to be pursued.
Eunicella verrucosa	Pink sea-fan	M/R?	(tbc)
Padina pavonica	Peacock's tail seaweed	M	
Lundy			
Palinurus elephas	Spiny lobster	R	
Mud habitats in deep water		M	
Puffinus puffinus	Manx shearwater	M	
Uria aalge	Guillemot	M	
Alca torda	Razorbill	M	
Fratercula arctica	Puffin	M	
North of Lundy (Atlantic Array area)			
Moderate energy circalittoral rock		M	In NW, probably coarse sediment.
Subtidal coarse sediment		M	
Subtidal mixed sediments		M	
Subtidal sand		M	

Morte Platform			
High energy circalittoral rock		M	
Moderate energy circalittoral rock		M	
Subtidal coarse sediment		M	
Bideford to Foreland Point			
Subtidal coarse sediment		M	
Subtidal sand		M	
Moderate energy infralittoral rock		M	
High energy circalittoral rock		R	
High energy infralittoral rock		M	
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Intertidal mixed sediments		M	
Intertidal mud		M	
Intertidal sand and muddy sand		M	
Low energy intertidal rock		M	
Moderate energy intertidal rock		M	
Sabellaria alveolata reefs		M	
Eunicella verrucosa	Pink sea-fan	M	
Paludinella littorina	Sea snail	M	
Phocoena phocoena	Harbour porpoise	M	
Halychoerus grypus	Grey Seals	M	
Uria aalge	Guillemot	M	
Alca torda	Razorbill	M	
Taw Torridge Estuaries			
Subtidal mud		M	
Subtidal sand		M	
Coastal saltmarshes and saline reedbeds		M	
Intertidal coarse sediment		M	
Intertidal sand and muddy sand		M	
Low energy intertidal rock		M	
Anguilla anguilla	European eel	M/R?	(tbc)

Isles of Scilly sites Red = feature protected by SAC; Black = feature is not protected by SAC.			
Site name/feature	Common name	CO	Comments
Bristows to the Stones			
High energy infralittoral rock		R	Based on local data
High energy circalittoral rock		R	Based on local data
Moderate energy circalittoral rock		R	
Moderate energy infralittoral rock		R	
Subtidal coarse sediment		M	
Subtidal mixed sediments		M	
Fragile sponge & antho-zoan communities on subtidal rocky habitats		R	
Eunicella verrucosa		R	Based on local data
Palinurus elephas		R	Based on local data
Men a Vaur to White Island			
Subtidal sand		M	
Moderate energy circalittoral rock		M	
Moderate energy infralittoral rock		M	
High energy infralittoral rock		M	
High energy circalittoral rock		M	Based on local data
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Intertidal mud		M	
Intertidal sand and muddy sand		M	
Moderate energy intertidal rock		M	Based on local data
Fragile sponge & antho-zoan communities on subtidal rocky habitats		M	
Intertidal under boulder communities		M	
Seagrass beds		M	
Tide-swept channels		M	Based on local data

Men a Vaur to White Island, continued			
Amphianthus dohrnii		M	
Eunicella verrucosa		M	
Haliclystus auricula		M	
Lucernariopsis campanulata		M	
Palinurus elephas		R	
Tean			
Subtidal macrophyte-dominated sediment		M	
Subtidal mixed sediments		M	
Subtidal sand		M	
Moderate energy infralittoral rock		M	
High energy infralittoral rock		M	
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Intertidal mud		M	Check for accuracy of records for IoS
Intertidal sand and muddy sand		M	
Moderate energy intertidal rock		M	Based on local data
Fragile sponge & antho-zoan communities on subtidal rocky habitats		M	
Intertidal under boulder communities		M	
Seagrass beds		M	
Tide-swept channels		M	Based on local data
A stalked jellyfish (2 spe-cies)		M	Based on local data; to be confirmed by LG
Tean non-disturbance area			
Subtidal macrophyte-dominated sediment		M	
Subtidal mixed sediments		M	
Moderate energy infralittoral rock		M	
Intertidal coarse sediment		M	
Moderate energy intertidal rock		M	Based on local data

Tean non-disturbance area, continued			
Fragile sponge & antho-zoan communities on subtidal rocky habitats		M	Based on local data
Intertidal under boulder communities		M	Based on local data
Seagrass beds		M	
Tide-swept channels		M	Based on local data
A stalked jellyfish (2 spe-cies) to be confirmed by LG		M	Based on local data
Hanjague to Deep Ledge			
Subtidal mixed sediments		M	
Subtidal sand		M	
Low energy circalittoral rock		M	
Low energy infralittoral rock		M	
Moderate energy circalit-toral rock		M	
Moderate energy infralit-toral rock		M	
High energy infralittoral rock		M	Based on local data
High energy circalittoral rock		M	Based on local data
High energy intertidal rock		M	
Intertidal coarse sediment		M	
Moderate energy intertidal rock		M	Based on local data
Fragile sponge & antho-zoan communities on subtidal rocky habitats		M	
Intertidal under boulder communities		M	Based on local data
Amphianthus dohrnii		M	
Eunicella verrucosa		M	
Leptopsammia pruvoti		M	Based on local data
Palinurus elephas		R	

Higher Town			
Subtidal macrophyte-dominated sediment		M	
Subtidal mixed sediments		M	
Subtidal sand		M	
Moderate energy infralittoral rock		M	
High energy infralittoral rock		M	
Intertidal coarse sediment		M	
Intertidal mud		M	Check the accuracy of this record
Intertidal mud and muddy sand		M	Check the accuracy of this record
Low energy intertidal rock		M	
Moderate energy intertidal rock		M	Based on local data
Intertidal under boulder communities		M	
Peat & clay exposures		M	
Seagrass beds		M	
Tide-swept channels		M	Based on local data
Haliclystus auricula		M	
Lucernariopsis campanulata		M	
Lower Ridge to Innisvouls			
Subtidal macrophyte-dominated sediment		M	
Subtidal mixed sediments		M	
Subtidal sand		M	
High energy circalittoral rock		M	
High energy infralittoral rock		M	
Moderate energy circalittoral rock		M	
Moderate energy infralittoral rock		M	
Moderate energy intertidal rock		M	Based on local data
Fragile sponge & antho-zoan communities on subtidal rocky habitats		M	
Tide-swept channels		M	Based on local data

Lower Ridge to Innisvouls, continued			
Seagrass beds		M	To be checked
Eunicella verrucosa		M	
Amphianthis dohrnii		M	Based on local data
Palinurus elephas		R	Based on local data
Leptopsammia pruvoti		M	
Peninnis to Dry Ledge			
Subtidal coarse sediment		M	
Subtidal mixed sediments		M	
Subtidal sand		M	
Moderate energy circalittoral rock		M	
Moderate energy infralittoral rock		M	
High energy infralittoral rock		M	
High energy circalittoral rock		M	Based on local data
Intertidal coarse sediment		M	
Intertidal mixed sediments		M	
Intertidal mud		M	Check the accuracy of this record
Intertidal sand and muddy sand		M	
Low energy intertidal rock		M	
Moderate energy intertidal rock		M	
Fragile sponge & antho-zoan communities on subtidal rocky habitats		M	
Intertidal under boulder communities		M	
Amphianthus dohrnii		M	
Arctica islandica		M	
Eunicella verrucosa		M	
Gobius cobitis		M	
Haliclystus auricula		M	
Leptopsammia pruvoti		M	
Lucernariopsis campanu-lata		M	
Palinurus elephas		R	
Paludinella littorina		M	

Plympton to Spanish Ledge			
Subtidal sand		M	
Moderate energy circalittoral rock		M	
Moderate energy infralittoral rock		M	
High energy circalittoral rock		M	Based on local data
High energy infralittoral rock		M	
High energy intertidal rock		M	
Intertidal sand and muddy sand		M	
Moderate energy intertidal rock		M	
Fragile sponge & antho-zoan communities on subtidal rocky habitats		M	
Intertidal under boulder communities		M	
Amphianthus dohrnii		M	
Eunicella verrucosa		M	
Leptopsammia pruvoti		M	
Palinurus elephas		R	Based on local data
Smith Sound Tide Swept Channel			
Subtidal sand		M	
Moderate energy circalittoral rock		M	Based on local data
Moderate energy infralittoral rock		M	
High energy infralittoral rock		M	
High energy intertidal rock		M	
Moderate energy intertidal rock		M	Based on local data
Tide-swept channels		M	Based on local data
Cruoria cruoriaeformis		M	
Eunicella verrucosa		M	Based on local data
Amphianthus dohrnii		M	Based on local data
Gobius cobitis		M	
Lucernariopsis cruxmelitensis		M	
Palinurus elephas		R	Based on local data

Smith Sound non-disturbance area			
High energy infralittoral rock		M	
Moderate energy infralittoral rock		M	
Moderate energy intertidal rock		M	Based on local data
Tide-swept channels		M	Based on local data
Eunicella verrucosa		M	Based on local data
Amphianthus dohrnii		M	Based on local data
Palinurus elephas		R	Based on local data
Gilstone to Gorregan			
High energy infralittoral rock		M	
High energy circalittoral rock		M	Based on local data
Moderate energy circalittoral rock		M	
Moderate energy infralittoral rock		M	
Subtidal coarse sediment		M	
High energy intertidal rock		M	Based on local data
Moderate energy intertidal rock		M	Based on local data
Fragile sponge & antho-zoan communities on subtidal rocky habitats		M	
Tide-swept channels		M	Based on local data
Eunicella verrucosa		M	
Amphianthus dohrnii		M	
Gobius cobitis		M	
Haliclystus auricula		M	
Palinurus elephas		R	
Paludinella littorina		M	

Bishop to Crim			
High energy circalittoral rock		M	
High energy infralittoral rock		M	
Moderate energy circalittoral rock		M	
Moderate energy infralittoral rock		M	
Subtidal coarse sediment		M	
Fragile sponge & antho-zoan communities on subtidal rocky habitats		M	Based on local data
Eunicella verrucosa		M	
Palinurus elephas		R	Based on local data

Table 4. Conservation Objectives: summary list for recommended reference areas. All features listed have a draft conservation objective of 'recover to reference condition', irrespective of which column they are listed in. For features in the right-hand column, the site does not meet minimum viable size guidelines listed in the ENG, so these features are only counted towards the representation figures in for the whole network if explicitly stated.

Site name	Viable size guidelines met	Viable size guidelines not met
The Canyons		
Broad-scale habitats	Deep-sea bed	
FOCI habitats	Cold water coral reefs	
Greater Haig Fras		
Broad-scale habitats	Moderate energy circalittoral rock	
	Subtidal coarse sediment	
	Subtidal mixed sediments	
	Subtidal mud	
	Subtidal sand	
Celtic Deep		
Broad-scale habitats		Subtidal mud
FOCI habitats	Mud Habitats in Deep Water	
South Dorset		
Broad-scale habitats	High energy circalittoral rock	
	Moderate energy circalittoral rock	
	Subtidal mixed sediments	
FOCI habitats	Subtidal chalk	
South-East of Portland Bill		
Broad-scale habitats		High energy circalittoral rock
FOCI habitats	Blue Mussel beds	
The Fleet		
Broad-scale habitats		Subtidal coarse sediment
		Coastal saltmarshes and saline reed-beds[1]
		Intertidal coarse sediments[1]
		Intertidal mud[1]
		Intertidal sediments dominated by aquatic angiosperms[1]
FOCI habitats		Seagrass Beds
FOCI species		*Tenellia adspersa*[2]

Summary of the final recommendations

Lyme Bay		
Broad-scale habitats		High energy infralittoral rock
		Subtidal mixed sediments
		Intertidal coarse sediments[1]
FOCI habitats	Sabellaria alveolata reefs	
FOCI species	*Haliclystus auricula*	
	Padina pavonica	
Erme Estuary		
Broad-scale habitats		Low energy infralittoral rock
		Subtidal mud
		Coastal saltmarshes and saline reed-beds[1]
		Intertidal mixed sediments[1]
		Intertidal mud[1]
FOCI habitats	Sheltered muddy gravels	
FOCI species	*Anguilla anguilla*[3]	
Mouth of the Yealm		
Broad-scale habitats		High energy intertidal rock[1]
		Intertidal coarse sediments[1]
		Moderate energy intertidal rock[1]
FOCI habitats		Estuarine rocky habitats[4]
		Seagrass Beds[4]
The Fal[5]		
Broad-scale habitats		Subtidal coarse sediment
		Subtidal macrophyte-dominated sediment
		Subtidal sand
		Intertidal coarse sediments[1]
		Low energy intertidal rock[1]
FOCI habitats	Maërl Beds	
	Seagrass Beds	
FOCI species	*Lithothamnion corallioides*	*Cruoria cruoriaeformis*
	Ostrea edulis	*Gobius couchi*
	Phymatolithon calcareum	*Grateloupia montagnei*
	Anguilla anguilla[3]	
Swanpool[6]		
FOCI species		*Victorella pavida*

Cape Bank		
Broad-scale habitats	High energy circalittoral rock	
	High energy infralittoral rock	
	Moderate energy circalittoral rock	
	Moderate energy infralittoral rock	
	Subtidal coarse sediment	
FOCI species	*Palinurus elephas*[7]	
	Eunicella verrucosa[7]	
Lundy		
Broad-scale habitats		Moderate energy circalittoral rock
		Moderate energy infralittoral rock
		Subtidal coarse sediment
		Subtidal sand
FOCI habitats	Fragile sponge & anthozoan communities on subtidal rocky habitats	Mud Habitats in Deep Water
FOCI species	*Amphianthus dohrnii*	*Eunicella verrucosa*
	Leptopsammia pruvoti	*Palinurus elephas*
	Phymatolithon calcareum	

[1] None of the intertidal broad-scale habitats are represented in recommended reference areas that meet the minimum size guideline (5km), but SAP, Natural England and JNCC advice recognised that the size guideline was not realistic for intertidal habitats. The intertidal habitats have been highlighted in green to show that we are considering these to be represented within the current set of recommended reference areas, i.e. they are counted towards the figures presented for set of reference areas as a whole, unlike the other features listed in the right hand column.

[2] The minimum patch size for Tenellia adspersa is the whole feature (to be interpreted as meaning the whole lagoon that the species is found in). As this recommended reference area does not cover the entire Fleet Lagoon, this site does not meet the minimum size guidance for this species. However, the site is included as a replicate for this species in the figures for the full set of reference areas.

[3] The European eel is included in draft conservation objectives for estuarine sites on the basis of evidence provided by the Environment Agency (see appendix 8 in the full final report). No minimum viable patch size for the species is included in the ENG. Both sites with eel listed have been counted as replicates in the figures for the full set of reference areas.

[4] The Mouth of the Yealm recommended reference area only covers the intertidal. Estuarine rocky habitats and seagrass beds may be present in the intertidal, or they might only be found only in the subtidal area. If the latter is the case, the features should come off the list for this site.

[5] The Fal recommended reference area is a little smaller than the minimum size requirement of 1km for Cruoria cruoriaeformis, Gobius couchi and Grateloupia montagnei, and the site is not counted as a replicate for these species in the figures for the full set of reference areas. Enlarging this site westwards, however, would not capture more of the same habitat (maërl and seagrass beds), as the depth increases to the west – so enlarging the site to meet the minimum size guidelines would probably not provide more habitat suitable for these species.

[6] The Swanpool Lagoon in Falmouth is the only place in English waters where the trembling sea mat Victorella pavida has been recorded. It would need to be a reference area in order to meet the ENG. However, the site falls above the OS Boundary Line mean high water line, which is the line we use to define the limit of our study region. The site is counted as a replicate for the species in the figures for the full set of reference areas.

[7] There are no records in our spatial datasets of these species within the boundaries of this site, but a recent NE SAC survey (Natural England, 2010) confirmed the presence of both species on Cape Bank. We therefore assume these species are represented within this site.

Summary of the stakeholder narrative

Introduction to the stakeholder narrative

From the point that it became clear to stakeholder representatives that they were being asked to actively participate in planning marine protected areas, two key questions were asked repeatedly from across the spectrum of interests. Essentially, they boiled down to:

- What do you want?
- What does it mean for me?

The answer to the first question was provided in the shape of the national ENG.

The answer to the second question was never provided to stakeholders within the timescale of the project, as there never was any unambiguous guidance or answer on what activities will be restricted within MCZs. This posed the single most significant obstacle to constructive discussions throughout the duration of the project. Most participants in the process found it very difficult to be faced with the task of designing a network when they did not know what restrictions would be put in place, and how the sites would impact on themselves or others.

In order to help achieve progress in the face of uncertainty, Finding Sanctuary devoted considerable effort to the development of a stakeholder narrative to accompany the final recommendations (see part I of the final report). The stakeholder narrative describes the working assumptions that underpinned the stakeholders' planning work, implications of potential sites which stakeholder representatives highlighted during their discussions and negotiations, uncertainties, and additional comments made about the developing network configuration as the planning progressed. It draws together the work carried out by the Working Groups, the wider Steering Group, the Local Groups and the project team over the course of the whole planning period. The narrative was developed over the course of many months of planning work, and its development can be traced back through progress reports and meeting reports from 2010 onwards.

The implications that are highlighted in the stakeholder narrative are those that were highlighted during the planning discussions. At the time of writing up the final recommendations, a much more in-depth and comprehensive Impact Assessment is being conducted by the project economist, which is due to be finalised in January 2012. The impact assessment work continues to engage with key stakeholders who may be affected by the recommended sites, including many of those who were represented on the Steering Group and Local Groups.

The sections below present a summarised stakeholder narrative for rMCZs, split into three headings: working assumptions, uncertainties, and additional comments, followed by a separate narrative section on reference areas. It is a summary formulated by the project team, applicable to the network as a whole in generic terms. It is not exhaustive and there are sites within the network where the generic narrative does not apply in full, or where additional important site-specific issues are raised. The Isles of Scilly Sites rMCZ is an example, where the Local Group made significant contributions to the narrative that are not reflected in this summary. Readers are advised to refer to the site reports within the full final report if they have a particular interest in a specific rMCZ.

Working assumptions and implications for rMCZs

Fundamental working assumption

At the time that the network configuration was being shaped, before the vulnerability assessment process had started, several working assumptions were formulated. The fundamental working assumption was that current activities within an MCZ would be allowed to continue, unless they prevent the conservation objectives of the site from being achieved. This applied to all activities.

For reference areas, it was understood that high levels of restrictions would be placed on ongoing activities, because this was clearly set out in the draft reference area guidance (a national guidance document provided to the project during the formal phase). For wider MCZs, it was more difficult to try and formulate more specific assumptions on what activities would need restricting in what ways. The following paragraphs summarise, what the more specific assumptions were for rMCZs (not including reference areas). They are not exhaustive, and readers should always refer to the site reports in the full final report for a complete site-specific narrative.

Commercial Fishing

A generic assumption was made early on in the process that mobile bottom-towed fishing gear would not be permitted in any MCZs. Offshore fisheries representatives did not agree that this assumption was realistic, and asked for an alternative wording to be used, which in essence stated that 'all fishing activities can continue unless it prevents conservation objectives from being achieved'. Whilst accurate, that wording goes no further than the fundamental working assumption that applied to all activities.

In reality, the assumption that mobile bottom-towed gears would not be permitted in any MCZs ran through the entire planning process, and this was acknowledged by fishing representatives. As a consequence, the planning process avoided areas most intensively used by benthic mobile gear fishermen, in as much as it was possible to meet the ENG elsewhere. This has had a direct bearing on the final configuration of the recommended network. Implications that stakeholders highlighted as arising from an assumed closure of MCZs to these gear types centred around the loss of fishing grounds to mobile gear fishermen, negative displacement effects, and negative economic consequences to fishermen.

For other types of fishing activity, the generic assumption was that present levels of activity would be allowed to continue in MCZs, although stakeholders discussed and acknowledged that there may need to be an upper limit on intensity of use (should activity levels increase and evidence show that the activity is preventing conservation objectives from being achieved). This upper limit was discussed, specifically, for static gear types that make contact with the seafloor, as the conservation objectives for rMCZs centre on the protection of the seafloor.

Note that for the Skerries Bank and surrounds rMCZ, one of the areas most intensively fished by static gears within the region, the recommendation for the rMCZ is explicitly made only on the condition that current management is maintained – any additional restrictions resulting from an MCZ designation would seriously compromise levels of support for the site (see site report for more details).

In terms of implications of MCZ designation for fishing activity other than bottom-towed gears, stakeholder representatives highlighted potential risks to local fishermen should the working assumption not hold true, i.e. should current levels of use not be allowed to continue as a result of the MCZ being designated. These centred on concerns about economic losses, especially for local inshore fishermen operating small boats, who have limited capacity to travel longer distances in order to seek alternative fishing grounds.

On the other side of the argument, science and conservation representatives commented that there could be economic benefits to the fishing sector as a result of MPAs being put in place, if the protection levels within MPAs are high enough. These benefits could result from a healthier ecosystem, and spillover of larvae and fish.

Renewable energy developments

For renewables, the final network configuration was based on the assumption of compatibility, i.e. the assumption that renewable energy installations (wind, wave and tidal) would be permitted within MCZs. The assumption included a caveat based on SAP feedback, i.e. that renewable energy installations should not be constructed on all instances of any particular broad-scale habitat type protected in the network. In effect this meant that the assumption cannot be applied simultaneously to every site in the network, despite it being recorded in every site report (a caveat to this effect is included in the site reports).

Several implications were recorded which would arise if the assumption on compatibility turned out to be wrong, which centred on the costs to the energy sector as well as the possible compromising of the UK's renewable energy targets. The narrative presented in individual site reports also highlights which sites in the network coincide with renewable energy resource, based on feedback received from the renewables sector.

Despite the ultimate assumption of compatibility, during the planning discussions the renewables sector was keen to steer the location of rMCZs away from areas of high renewables interest, wherever it was possible to meet the ENG elsewhere. This was a direct result of the ongoing uncertainty on what implications an MCZ designation might have for human activities, including potential future renewables developments within or near the boundaries of a given site.

Submarine cables

For submarine power and telecommunications cables, the assumption was made that existing cables would be allowed to stay operational within rMCZs, and that new cables would be permitted with no additional need for mitigation beyond those that would be required anyway under current management and licensing regimes. Stakeholder representatives highlighted implications that would arise from that assumption not holding true, including some of the added costs that might be faced by cable operators and renewables developers.

Aggregate extraction

Aggregate extraction was assumed to be incompatible with MCZs, and as a consequence, the rMCZs were sited away from currently licensed aggregate extraction areas.

Dumping and disposal

Dumping and disposal was assumed to be incompatible with MCZs, and generally, rMCZs were located away from active disposal sites, in some cases with boundary adjustments made to increase buffer zones (e.g. for Mounts Bay rMCZ). The one exception is Padstow Bay and surrounds rMCZ, which overlaps with a small part of a current disposal site – this was highlighted as a potential problem by stakeholder representatives at the end of the process, but there was no more time to make further boundary adjustments at that stage.

Recreational activities

Recreational activities, including recreational angling, were assumed to be permitted within MCZs, as was the passage of vessels. Anchoring and its potential damage to the seafloor were discussed, and a generic assumption was recorded that anchoring of large vessels would not be permitted in MCZs, but that for small vessels, it would

generally be permitted, with a possible exception if particularly sensitive seafloor habitats were present. In one instance in particular (Studland Bay rMCZ), a possible restriction on anchoring over sensitive seagrass areas has been the subject of a long-standing conflict between local stakeholders, and this is discussed further in the site report contained within the full final report.

Several stakeholder representatives highlighted that there could be benefits to recreational activities from effectively managed MCZs, especially for coastal sites. There is potential for an increase in the amount and quality of recreational activities (diving, sea angling, environmental tourism, etc), and a local MCZ might provide a selling point that could attract visitors to a particular area.

Coastal activities

A series of assumptions were formulated that apply to coastal sites in particular, such as an assumption that aquaculture installations would be permitted in MCZs (with mitigation if necessary), that wastewater management and the location of wastewater outfalls would not be affected by MCZs (given that mechanisms are already in place to improve and maintain good coastal water quality, e. g. through the Water Framework Directive), and that coastal management and defence would not be impacted by MCZ designation. The implications arising around these assumptions are detailed in site reports.

The Environment Agency highlighted that all lengths of the coast, including estuaries, have a flood risk and coastal management policy assigned to it in shoreline management plans (e.g. hold the line, managed retreat, extend the line). The basic assumption during the network planning was that flood and coastal risk management activities can continue in coastal MCZs.

Ports

Like the renewables sector, the ports sector faced a great deal of uncertainty of the risk associated with MCZs, both in terms of what ports-related activities might be impacted, and in terms of what additional regulatory hurdles might result from MCZ designations in order to be able to carry out port-related activities and operations within or close to a given MCZ. As a result, the ports sector was keen to steer the selection of MCZs away from ports, wherever possible. This meant that the selection of estuarine MCZs was delayed significantly in the planning process (see part I.7.5 of the full final report). The ports representative collated a great deal of information with respect to possible implications of MCZs to ports, and these are included in the relevant site reports within the final report.

Assumptions relating to draft conservation objectives for mobile species

Finally, some of the inshore rMCZs have draft conservation objectives for seabirds, basking sharks or cetaceans. In order to protect such species within the relevant sites, it was assumed that the management necessary would centre on education, awareness raising, and putting in place voluntary codes of conduct to avoid disturbance and wildlife collisions. Earlier on in the process, assumptions had been recorded that some types of fishing (netting and longlining) may need restriction or mitigation strategies to avoid bycatch of seabirds and cetaceans, but the validity of these assumptions was strongly questioned by many stakeholder representatives early on, so these early assumptions became invalid (refer to previous progress reports).
Key uncertainties

As stated in the introduction to the stakeholder narrative, the most significant uncertainty faced by the project was the lack of knowledge on how human activities will be affected within MCZs. There was also uncertainty over what management measures will be taken to ensure any activity restrictions are put in place (e.g. byelaws, voluntary measures).

Another area of uncertainty that applied to most of the components of the network related to gaps in ecological and socio-economic data. These gaps in knowledge were widely discussed and acknowledged as a reality during the planning process. Nevertheless, the project had the clear remit to pursue the delivery of MCZ recommendations based on the best available information, accepting that this information is often less than perfect. Appendix 8 in the final report discusses the ecological datasets that underpinned the project's work in detail.

Additional comments

Comments on meeting the ENG

A small number of ENG-listed Features of Conservation Importance (FOCI) are represented in more sites than the minimum required in the ENG. A commercial fishing representative raised the question whether the group would have any opportunity to revise the draft conservation objective list for each site, and remove 'excess' features from the list in some of the sites, leaving the sites to protect only those features for which there would otherwise be a shortfall. A statement was recorded to say that commercial fishing cannot support the inclusion of 'excess' features in the conservation objectives. For the same reason, they do not support the inclusion of non-ENG listed mobile species (seabirds and cetaceans) on the draft conservation objectives list. Similarly, the commercial fishing sector strongly questioned the inclusion of a large number of estuaries in the network, because the ENG does not stipulate any quantitative guidelines for the number or types of estuary to be represented.

Named Consultative Stakeholder feedback

Named Consultative Stakeholders (NCS) were stakeholders (including international fishing representatives) that did not have a representative on the Steering Group, but who expressed an interest in providing regular feedback to the project over the course of the planning iterations (see part I of the full final report for details on NCS status and role). Amongst other feedback, fishing representatives from other European countries stated that they were not in support of the developing recommendations, but there were no suggestions of alternative ways of meeting the ENG.

Fisheries management beyond 6 nautical miles and the Common Fisheries Policy

One comment that was highlighted from the earliest stakeholder meetings was that it would not be acceptable to have in place any measures that unilaterally prevented UK fishermen from fishing in certain areas, if other European vessels still had access to those areas. Given that in many areas, non-UK vessels have historic fishing rights beyond the 6nm limit, and that beyond the 12nm limit all EU vessels have equal rights to fish, this effectively means that in all MCZs beyond 6nm, fishing restrictions would need to be implemented through the Common Fisheries Policy.

At the time of the third progress report, we received the following statement from the Natural England, the JNCC, and Defra: 'When considering the impacts of fishing restrictions on non UK vessels, it is the Government's intention that fishing restrictions will not be imposed unilaterally on UK vessels before they can be applied to equivalent EU vessels operating within the relevant areas. In the case of those EU fishing vessels with historic fishing rights in UK waters between 6 and 12 nm, Defra will negotiate with the relevant Member States and the European Commission before introducing byelaws, or orders that are applicable to all EU vessels, or seeking Common Fisheries Policy (CFP) regulation measures. Once introduced, these would apply to all EU vessels (including UK vessels) equally and at the same time.'

This assurance led to a related concern being voiced by fishing representatives. Based on the assumption that implementing management through the CFP may be more difficult and take longer than implementing management within 6nm, there was concern that this might lead to a 'tranching' approach where inshore sites would be implemented in preference to offshore sites, or earlier than offshore sites. This would not be acceptable to inshore UK fishermen, especially small-scale fishermen with small boats and limited capacity to find alternative grounds, who would be disproportionately affected compared to offshore UK and EU fishermen.

Reactions to the vulnerability assessment

The most significant additional comments from stakeholders with respect to the network recommendations as a whole relate to the vulnerability assessment (VA) process and its initial outcomes. After having played a central role in determining a configuration of rMCZs and recommended reference areas that would meet the ENG, and spending a lot of time formulating the accompanying narrative, stakeholder representatives felt sidelined in the vulnerability assessment process. In addition to misgivings about the process, there were also concerns about the outcome of the management discussions (although it was understood that the VA snapshot was not definitive).

The process concerns centred on the lack of involvement of the stakeholder group in the vulnerability assessments. Concerns about the activity restriction and management outcome (the VA snapshot) centred on the lack of alignment with the working assumptions. The latter concerns were focussed on inshore sites more than on offshore sites. In particular, the lack of indicated restrictions on bottom-towed fishing gear in many sites caused consternation amongst many of the stakeholder representatives.

The discussions about the process and outcome of the vulnerability assessment gave rise to the Steering Group making a statement about their work at their final meeting in July 2011, which is included below.

Stakeholder narrative for recommended reference areas

The ENG required the network to include a set of reference areas of a minimum size, representing a list of species and habitats. The draft reference area guidance (another national guidance document[1]) stated that all depositional and extractive activities would be excluded from reference areas, and that

Many stakeholder representatives felt uncomfortable with the high levels of restrictions to be put in place within reference areas, and fishing representatives stated outright that they do not support their inclusion in the network. The process of developing reference area recommendations therefore focussed on finding locations with limited ongoing human activities, that were also efficient and valuable in terms of their contribution to the ENG. Despite significant time and effort having been spent on developing reference area recommendations, the set of 13 sites included in the network recommendations fall short of meeting the ENG requirements for reference areas.

In total, 157 different reference area options were drawn during the process. This is the number of GIS shapes that were created, so it includes shapes that overlap where boundaries were adjusted, or where several options were considered at the same location – nevertheless, this large number illustrates how much effort was spent on the task. At their final meeting in July 2011, the Steering Group stated that they wished the final recommendations to highlight that the Joint Working Group got as far as they could with a challenging piece of work, and that the rationale and the reason for not going further was the high socio-economic impact of inshore reference areas. Any attempt to 'fill in the gaps' from outside the stakeholder group would risk the agreement and compromise reached between stakeholders on the sites that were included in their final recommendations (rMCZs as well as reference areas).

[1] http://www.naturalengland.org.uk/Images/MCZ-regional-guidance_tcm6-23451.pdf

Summary of the stakeholder narrative

More site-specific commentary is included in the site reports for recommended reference areas. Appendix 10 includes a table of activities which, in the draft reference area guidance, are listed as not compatible or requiring possible management in reference areas. This table is laid out in the same way as the assumptions / implications tables in rMCZ site reports, and was used to capture stakeholder comments on the implications of individual recommended reference areas during meetings. The intention was to include one of these tables in each site report. Ultimately, however, a lot of the stakeholder narrative on the recommended reference areas was recorded during plenary sessions rather than on the tables, and the table format proved somewhat unwieldy and unnecessary. The table is therefore not replicated in each recommended reference area site report.

Steering Group commentary on its work

At their final meeting on July 26th, 2011, the Finding Sanctuary Steering Group agreed to make the following statement about their work. The statement was made in the context of having seen the initial outcomes of the vulnerability assessment meetings (the VA snapshot). It followed on from the suggestion that most members of the Joint Working Group had made at their final meeting in June 2011, in response to the VA snapshot, which was for the Steering Group to make an explicit recommendation that all mobile bottom-towed fishing gear should be excluded from all rMCZs (based on the working assumption that had underpinned the planning process).

FINDING SANCTUARY STEERING GROUP COMMENTARY ON ITS WORK

We have worked hard as a group to achieve the targets set by ENG guidance. As a project we have worked with a set of assumptions that enabled us to construct a network of MCZs.

As an example, although a blanket ban on bottom trawling was used by the group as a working assumption, we are not comfortable turning this into a recommendation because of the reasons below, and also because different gear types have different impacts on different sea bed types and habitats. Therefore there could be different management measures for different gear types providing evidence on impacts can be risk assessed.

The VA process appears to be an attempt to provide the certainty that we used our assumptions for. We are not comfortable with the VA outputs (in particular for the inshore sites) because:

- The information and evidence arrived too late so we have had no time to consider what it means and to review our decisions in the light of it
- The evidence underpinning it is too scant
- for at least some sites (e.g. Torbay), applying the VA outputs appears to go against input from, and agreement by, local stakeholders
- in some cases local knowledge has led us to believe that management measures don't seem to support the draft conservation objectives
- some draft conservation objectives are wrong, e.g. set as maintain when should be recover and vice versa

SUGGESTIONS ON NEXT STEPS

To achieve meaningful implementation and necessary levels of buy in to MCZs:
There should be a review of the MMs proposed from the final (sense checked) VA process. This should include us as regional stakeholders, enabling us to work through them in the appropriate level of detail. This should take place before the SNCB advice to DEFRA and therefore well before the public consultation, and the results from it fed into the public consultation. We would want to have time to take the results of this to the local stakeholders that participated in the Finding Sanctuary process for their views and response.

The public consultation process would encompass conservation objectives and management measures. The rationale for each management measure should also be provided.

In order to fully understand the context within which this statement was recorded, please refer to the process description in part I of the final report, the stakeholder narrative in section II.2.2 of the final report, and the reports from the Steering Group meeting on July 26th and the sixth Joint Working Group meeting in June 2011.

Project team reflection on levels of support for the network recommendations

The project team were requested by Defra to provide information on 'levels of stakeholder support' for the site recommendations. In order to meet the request, the project team have written their own reflection on 'levels of support' for the recommendations. Whilst what is written here is based on stakeholder discussions that took place over the course of the project, it is a project team interpretation and synthesis, and not a direct record of statements made by stakeholder representatives.

As reflected in the cover note, not all stakeholder representatives necessarily support all aspects of the project's final recommendations. Nevertheless, there is a general view that the recommendations, if implemented as recommended, constitute a set of sites that most stakeholders involved in the process could support, live with, or (as a minimum) accept as 'less bad than it might have been had we not been involved in the process'. This statement applies to the network recommendations as an integral whole, including the narrative and the working assumptions that underpinned the planning. It is based on the need to meet the ENG, and an acknowledgement that the work was carried out based on the best available (often less than perfect) data, within the timeframe available. The statement cannot be taken out of this wider context, nor would it apply to any isolated parts of the recommendations (e.g. site boundaries without the accompanying narrative, changes to the underpinning assumptions on management, or a subset of the recommended sites).

With respect to recommended reference areas, the fishing industry representatives stated clearly that they do not support reference areas. Fishing representatives largely chose not to participate in the planning discussions for reference areas, although some of them were present during the Joint Working Group meetings when this work happened, and they were given the opportunity to participate in or comment on the discussions at any stage.

At their last meeting in July 2011, the Steering Group were asked to mark on a simple scale how satisfied they felt with the network. This task was carried out at the very end of the meeting, and not all group members were present (please refer to the meeting report for details). Of those that were present, most marked their satisfaction near the middle or slightly above the middle of the scale. Several people commented that the reason for not placing the mark higher was based on what they considered to be failings of the process: the lack of clarity on management in particular, the lack of opportunity to review the outcomes of the VA process, and uncertainty around what happens next. Reasons for placing the mark higher than the middle included a sense that the recommendations were as good as they could have been within the process and time available, that stakeholders genuinely had an influence on the recommendations, and that the outcome had outstripped expectations.

Despite the fundamental differences between the sectors represented on the stakeholder group, representatives from a wide diversity of sectors were ultimately been able to work together constructively throughout the process. Many put their own time (and, therefore, money) into the project, and all worked hard to find a way of meeting the ENG, listening to each other, understanding and taking each other's interests into account. There are still plenty of uncertainties, conflicts of interest, misgivings about the process, and misgivings about the need for MPAs in the first place – but despite all of it, this stakeholder process resulted in a set of recommendations that is underpinned by a sense of collective ownership by a group of representatives from across a diverse spectrum of interests.

Introduction

This summary presents statistics relating to some of the key network design principles in the ENG:

- Representativity: The requirement to represent a list of species, habitats, geological features, and broad-scale habitats
- Replication: The requirement to represent listed species, habitats and broad-scale habitats in several different sites within the network
- Adequacy: The requirement to capture certain minimum amounts of broad-scale habitats within the network
- Connectivity: The requirement to have sites with similar habitats spaced closely enough together to allow movement of animals (including larvae) between protected areas

Broad-scale habitats are often referred to as 'EUNIS level 3 habitats' - EUNIS is a Europe-wide standardised habitat classification system. The abbreviation 'FOCI' refers to Features of Conservation Importance – a list of specific species and habitats listed in the ENG.

This summary does not report on the ENG principle of viability, which required individual sites to meet minimum size guidelines. However, the site reports (in the full final report) map the size and dimensions of each rMCZ and recommended reference area.

The figures presented here reflect features that are protected within existing MPAs, rMCZs and rRAs, unless indicated otherwise. Where rMCZs overlap with existing protected areas, features that are already protected in the existing MPA are not counted towards the figures for the rMCZ (i.e. they are not double-counted where sites overlap).

Recommended reference areas are counted towards the figures for the whole network where they contribute features that are otherwise not protected within the surrounding rMCZ or existing MPA. A separate section towards the end of this summary focuses specifically on recommended reference areas, describing how the set of 13 included in the network recommendations perform against the specific ENG requirements for reference areas.

Summary of the contribution of existing protected areas

There are 46 relevant existing marine protected areas in the south-west region, most of which are small, coastal sites. They consist of Natura 2000 sites (Special Areas of Conservation – SACs, and Special Protection Areas for birds, SPAs) and Sites of Special Scientific Interest (SSSIs). They are shown on map FR_003.

Existing protected areas contribute significantly towards meeting the network design principles. This was taken into account in assessing the performance of the network as a whole, especially in relation to intertidal broad-scale habitats. A national 'gap analysis' was carried out by Natural England and the JNCC, quantifying what the existing sites contribute to the replication and adequacy targets in the ENG. The full gap analysis report for the region contains figures summarising how the existing MPAs contribute towards the adequacy and replication targets in the ENG. While we have not replicated the figures and tables here, a table describing the broad-scale habitats and FOCI protected in existing protected areas can be found in appendix 11 of the full final reports.

Map: FR_003

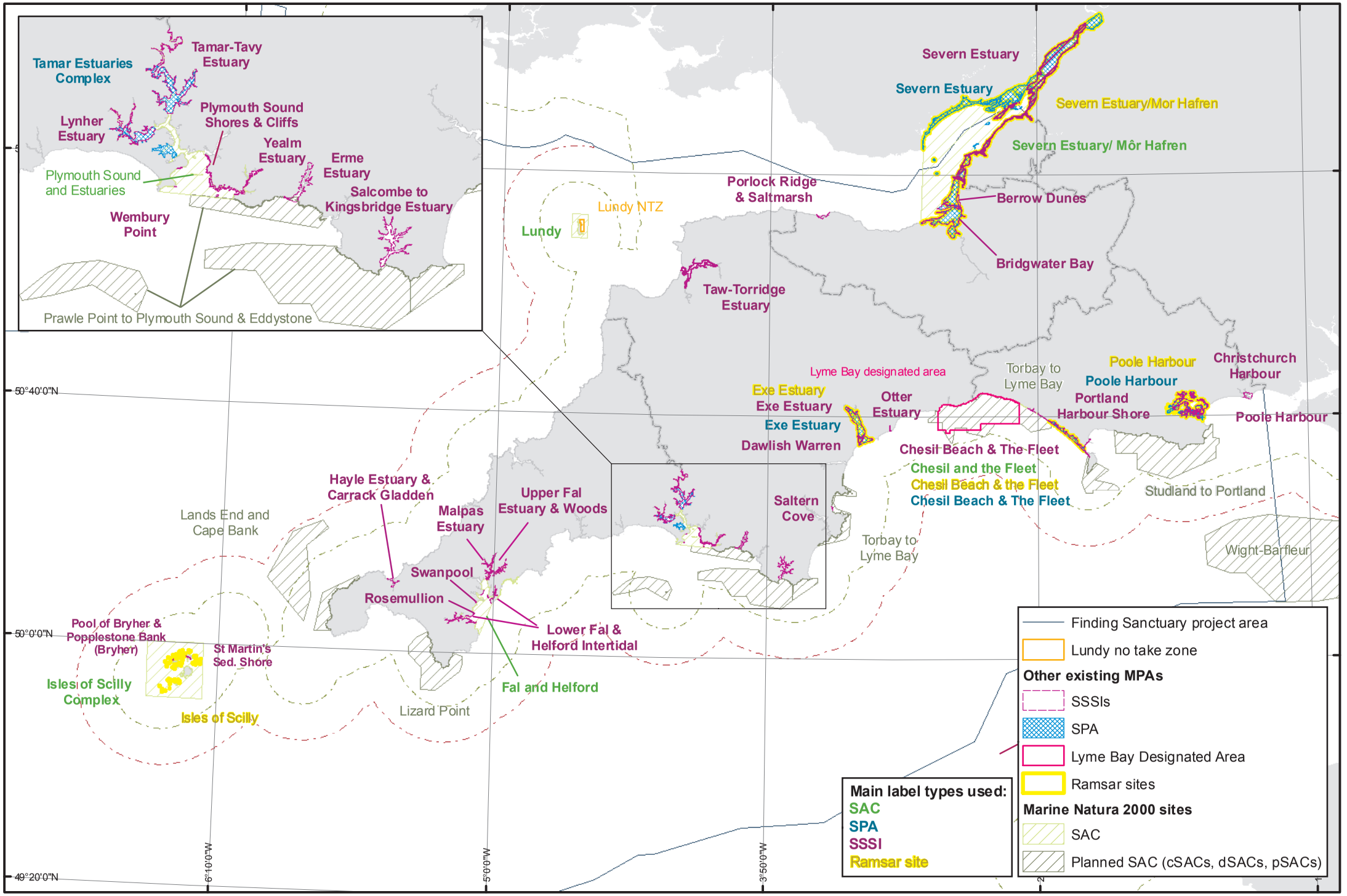
Version: 6Sep11

Existing and proposed MPAs in the south-west

This map shows existing and planned marine protected areas in the south-west. Many sites overlap, so label colours match the legend symbology. Please refer to Finding Sanctuary's final report for more detail. Datum: WGS84; Projection: UTM30N.

0 35 70 km N

FINDING SANCTUARY



ENG-related statistics for the network configuration

Statistical methods

Network statistics were calculated using ESRI ArcGIS version 9.3.1 in ETRS89/LAEA (European Terrestrial Reference System 1989 with Lambert Azimuthal Equal Area projection). The ecological datasets we used are described in detail in appendix 8 of the full final report. Using the national gap analysis table (in appendix 11 of the full final report) to define which features are protected within existing MPAs, we calculated the contribution of the existing sites towards the ENG from our combined FOCI and broad-scale habitat datasets.

Following this, the EUNIS level 3 broad-scale habitat dataset, FOCI habitats and FOCI species datasets were split into those habitats protected in existing MPAs and those not. Prior to calculations, two versions of the network configuration were created. One where rMCZs and rRAs were amalgamated into a single shape for generating network level statistics and one where relevant rMCZs and rRAs were copied into new feature classes for the generation of individual site statistics (the latter are included in the individual site reports in the full final report, but are not included in this summary document).

The network statistics were generated by intersecting the broad-scale habitat, FOCI and geological data layers with the overall network shape. Pivot tables were created showing those habitats that were represented within existing MPAs and within the MCZ network.

The replication figures for the network level reports were calculated by summing the appropriate conservation objectives (tables 2, 3 and 4), and the replication figures for existing MPAs provided in the national gap analysis.

General statistics

Table 5 shows the number of sites and the area covered within the network, split into existing MPAs, rMCZs and recommended reference areas. Existing marine protected areas consist of SACs, SPAs and SSSIs with marine components. The total area listed below only includes that which intersects the Finding Sanctuary study area.

Table 5. General statistics for the network, all areas are in km^2.

	Existing MPAs	rMCZs	Recommended reference areas
Total area	3,173.79	16,823.60	241.13[2]
Number of sites	46	45[1]	13

[1] There are 45 rMCZs, one (Isles of Scilly Sites rMCZ) consists of 11 spatially distinct areas, and three further ones consist of two spatially distinct areas (Tamar Estuary Sites, Upper Fowey and Pont Pill, and the Taw Torridge Estuary).

[2] Reference areas fall within rMCZs and existing MPAs, as such this figure should not be added to the total area protected.

The total footprint of the MPA network (MCZs, reference areas and existing protected areas) is 19,078.42 km^2 - 20.1% of the total area available.

Broad-scale habitats: representativity, replication and adequacy

The figures for broad-scale habitats within the network are presented separately for subtidal and intertidal habitats in tables 6 and 7 and charts 1 to 4. Subtidal broad-scale habitat representativity, adequacy and replication targets are very well met by the network (tables 6 and 7 and charts 1 and 2). Based on our GIS data, all subtidal broad-scale habitats listed in the ENG are represented in the network (table 6). Only three habitat types do not fully meet adequacy and replication targets. These are:

- Low energy circalittoral rock. This mapped only in small patches on the combined EUNIS level 3 habitat layer. Given the coarse resolution of the modelled data, these small patches come with a degree of uncertainty, and we have not focussed on meeting any targets for this habitat.
- Subtidal biogenic reefs. These are not represented at all in the figures presented here, as it is not found in the combined broad-scale habitat dataset. However, we have represented several FOCI habitats in the network that are considered to fall within this broad category (ENG table 6, page 38). These are cold-water coral reefs (in The Canyons rMCZ), blue mussel beds, Sabellaria spinulosa reefs, and Sabellaria alveolata reefs (table 10 and 11).
- Deep-sea bed. This is only replicated in two sites. This habitat only occurs in one location in the far south-west (off the continental shelf break) and meeting the 'minimum 3-5 replicates' target would be artificial. No adequacy target is included in the ENG for this habitat. The SAP had previously advised that there is a case for including all of the study area beyond the shelf break in the network, as this broad-scale habitat is so rare in southern UK waters. Some stakeholder representatives questioned the rationale for this, as the actual extent of the shelf break and deep sea habitat is large (extending far beyond UK waters). Overall, rMCZs cover almost half of the available deep-sea bed habitat within the study region.

Stakeholder discussions around two sites led to areas within them not being counted towards broad-scale habitat targets. Within the Skerries Bank rMCZ, the broad-scale habitats inside trawling corridors are not counted, and within the Bideford to Foreland Point rMCZ, the area within a potential dredge channel has not been counted (details are in the site reports within the full final report).

Table 6. Subtidal broad-scale habitats represented in the network. All area figures are in km². Total area available shows the total area of habitat in the study region. Red text highlights targets that have not been met.

Habitat Name	ENG target	Total area available	Existing MPAs	rMCZs and rRAs	Total area protected
High energy infralittoral rock	15 - 31%	727.56	463.49	61.19	524.68 (72.1%)
Moderate energy infralittoral rock	17 - 32%	314.19	142.22	13.04	155.25 (49.4%)
Low energy infralittoral rock	16 - 32%	7.79	4.30	0.47	4.77 (61.2%)
High energy circalittoral rock	11 - 25%	1294.31	398.86	48.26	447.12 (34.5%)
Moderate energy circalittoral rock	13 - 28%	18778.99	744.90	1931.44	2676.34 (14.3%
Low energy circalittoral rock[1]	16 - 32%	3.50	0.61	0	0.61 (17.4%)
Subtidal coarse sediment	17 - 32%	28623.73	54.89	4871.03	4925.92 (17.2%)
Subtidal sand	15 - 30%	33567.34	146.25	6760.47	6906.72 (20.6%)
Subtidal mud	15 - 30%	6295.15	95.37	1209.67	1305.05 (20.7%)
Subtidal mixed sediments	16 - 32%	3569.19	127.15	504.59	631.74 (17.7%)
Subtidal macrophyte-dominated sediment	No target	20.26	14.70	1.12	15.82 (78.1%)
Subtidal biogenic reefs[2]	No target	0	0	0	0
Deep-sea bed	No target	1594.84	0	782.27	782.27 (49.0%)

[1] Low energy circalittoral rock has a very limited distribution in the South-west.

[2] We do not have subtidal biogenic reefs mapped as broad-scale habitats, however areas of Sabellaria reef and blue mussel bed have been captured as habitat FOCI.

Table 7. Replication of subtidal broad-scale habitats. Replication refers to the number of sites within the network that contain the habitat and has been calculated from the conservation objectives derived from the vulnerability analysis and the gap analysis of existing protected areas. Red text highlights a shortfall in meeting ENG targets.

Habitat Name	Existing MPAs	rMCZs and rRAs	**Total replicates**
High energy infralittoral rock	11	11	**22**
Moderate energy infralittoral rock	11	7	**18**
Low energy infralittoral rock	5	2	**7**
High energy circalittoral rock	8	7	**15**
Moderate energy circalittoral rock	11	17	**28**
Low energy circalittoral rock[1]	1	0	**1**
Subtidal coarse sediment	7	28	**35**
Subtidal sand	6	29	**35**
Subtidal mud	4	14	**18**
Subtidal mixed sediments	4	14	**18**
Subtidal macrophyte-dominated sediment	2	1	**3**
Subtidal biogenic reefs[2]	0	0	**0**
Deep-sea bed[3]	0	2	**2**

[1] Low energy circalittoral rock has a very limited distribution in the South-west.

[2] We do not have subtidal biogenic reefs mapped as broad-scale habitats, however areas of Sabellaria reef and blue mussel bed have been captured as habitat FOCI.

[3] Deep-sea bed only occurs in one part of the south-west, so the replication target cannot be met.

Intertidal broad-scale habitat representativity is also well achieved (table 8 and charts 3 and 4). Eight out of ten intertidal broad-scale habitats listed in the ENG are represented in the network, using figures from the combined EUNIS level 3 habitat layer. The two habitats that are not represented are intertidal sediments dominated by aquatic angiosperms and intertidal biogenic reefs. Both consist of very small areas within the broad-scale habitat dataset and have not been priorities at this level. Instead, we focussed on the FOCI habitats that are considered to fall within these categories (Ecological Network Guidance table 6, p. 38). For intertidal sediments dominated by aquatic angiosperms we have represented the FOCI habitat seagrass beds, and for intertidal biogenic reefs we have represented Sabellaria alveolata reefs.

Adequacy and replication targets are also well met for intertidal broad-scale habitats (table 9). Existing protected areas contribute significantly to these targets.

Evaluation of the network against ENG criteria

Table 8. Intertidal broad-scale habitats represented in the network. All area figures are in km². Total area available shows the total area of habitat in the study region.

Habitat Name	ENG target	Total area available	Existing MPAs	rMCZs and rRAs	Total area protected
High energy intertidal rock	21 - 38%	7.26	0.23	3.80	4.02 (55.4%)
Moderate energy intertidal rock	21 - 38%	4.94	0.97	0.88	1.85 (37.5%)
Low energy intertidal rock	22 - 39%	3.28	1.23	0.38	1.61 (49.3%)
Intertidal coarse sediment	25 - 42%	19.37	2.56	4.16	6.73 (34.7%)
Intertidal sand and muddy sand	25 - 42%	11.50	6.74	1.38	8.12 (70.6%)
Intertidal mud	25 - 42%	169.96	122.03	19.86	141.89 (83.5%)
Intertidal mixed sediments	25 - 42%	4.50	0.13	2.01	2.14 (47.6%)
Coastal saltmarshes and saline reedbeds[1]	No target	3.07	2.55	0.37	2.93 (95.4%)
Intertidal sediments dominated by aquatic angiosperms	No target	0.02	<0.01	<0.01	<0.01 (0.3%)
Intertidal biogenic reefs	No target	0.05	<0.01	0.01	0.01 (15.4%)

[1] This overlaps with the habitat 'coastal saltmarsh' which is not listed in the ENG as a Habitat of Conservation Importance, but has been included in the figures provided in the national gap analysis.

Table 9. Replication of intertidal broad-scale habitats. Replication refers to the number of sites within the network that contain the habitat and has been calculated from the conservation objectives derived from the vulnerability analysis and the gap analysis of existing protected areas. Red text highlights a shortfall in meeting ENG targets.

Habitat Name	Existing MPAs	rMCZs and rRAs	**Total replicates**
High energy intertidal rock	2	10	**12**
Moderate energy intertidal rock	5	13	**18**
Low energy intertidal rock	5	10	**15**
Intertidal coarse sediment	3	21	**24**
Intertidal sand and muddy sand	7	15	**22**
Intertidal mud	16	16	**32**
Intertidal mixed sediments	2	10	**12**
Coastal saltmarshes and saline reedbeds[1]	7	9	**16**
Intertidal sediments dominated by aquatic angiosperms[2]	0	0	**0**
Intertidal biogenic reefs[2]	0	1	**1**

[1] This overlaps with the habitat 'coastal saltmarsh' which is not listed in the ENG as a Habitat of Conservation Importance, but has been included in the figures provided in the national gap analysis.

[2] There are only very small areas of these habitats within the broad-scale habitat data layer, however seagrass beds and Sabellaria reef have been captured as habitat FOCI.

Charts are included that illustrate how the network performs against the ENG broad-scale habitat targets for representativity and adequacy. The figures represented in the charts are the same as those in tables 6 and 8, but some readers may find the charts quicker and easier to interpret. Charts 1 and 3 show percentage figures in comparison to ENG targets. Charts 2 and 4 show actual areas covered, using a logarithmic scale (base 10) on the y-axis. Logarithmic scales were chosen as the area of different habitats covered vary widely and presenting these on a linear scale limit the usability of the charts. Note that the use of a log scale means that values less than 1 km2 are not visible on the charts, and the relative distance between large and small values is compressed.

Chart 1. Percentage of subtidal broad-scale habitat represented with lower and upper ENG adequacy targets shown. The figures are derived from those shown in table 6. There are no ENG adequacy targets for the subtidal macrophyte-dominated sediment or deep-sea bed habitats.

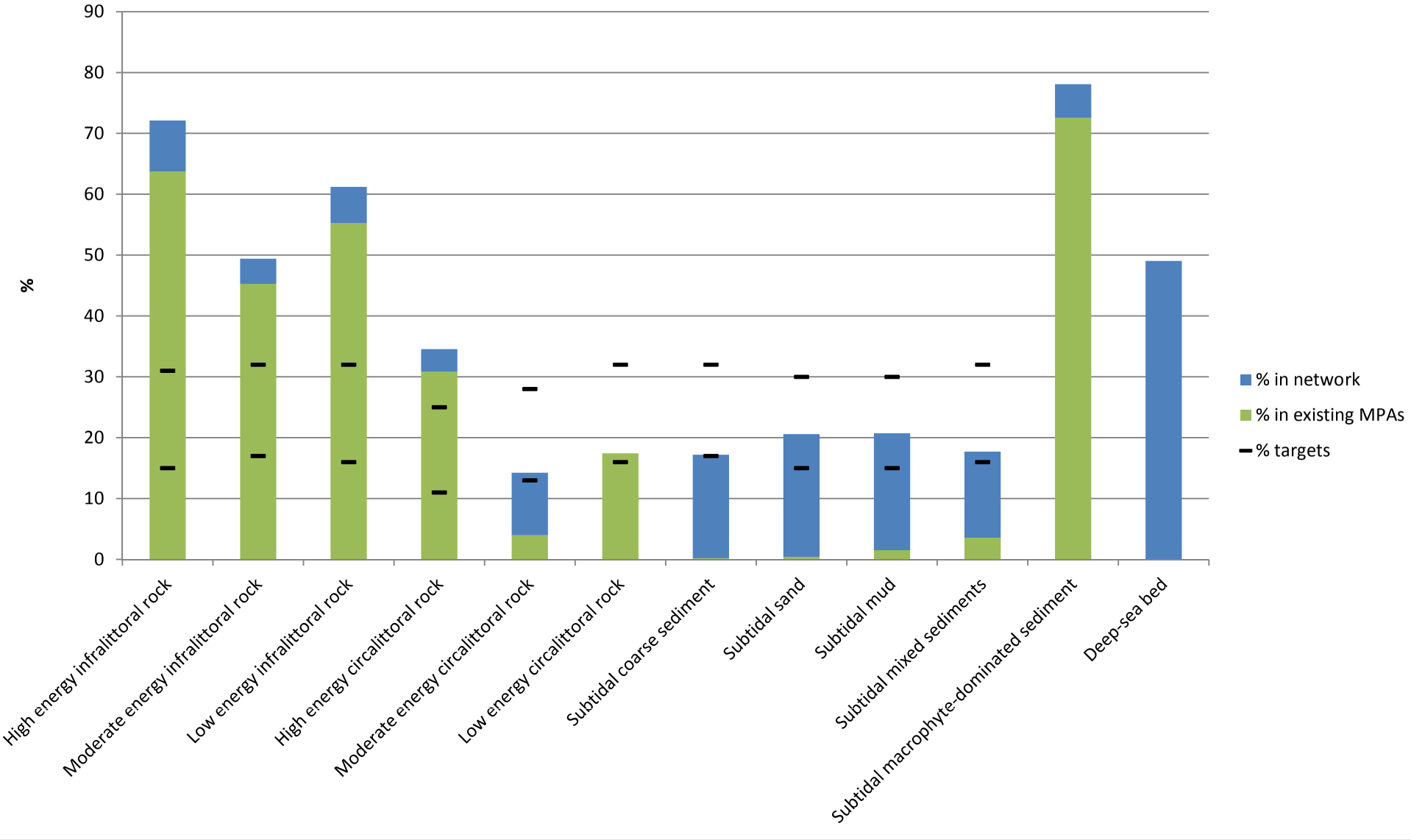


Chart 2. Area of subtidal broad-scale habitat represented with lower and upper ENG adequacy targets shown. The figures are the same as those shown in table 6. The y axis is represented as a logarithmic scale as the area of habitats represented vary significantly - as a result any areas less that 1km^2 are not visible. There are no ENG adequacy targets for the subtidal macrophyte-dominated sediment or deep-sea bed habitats.

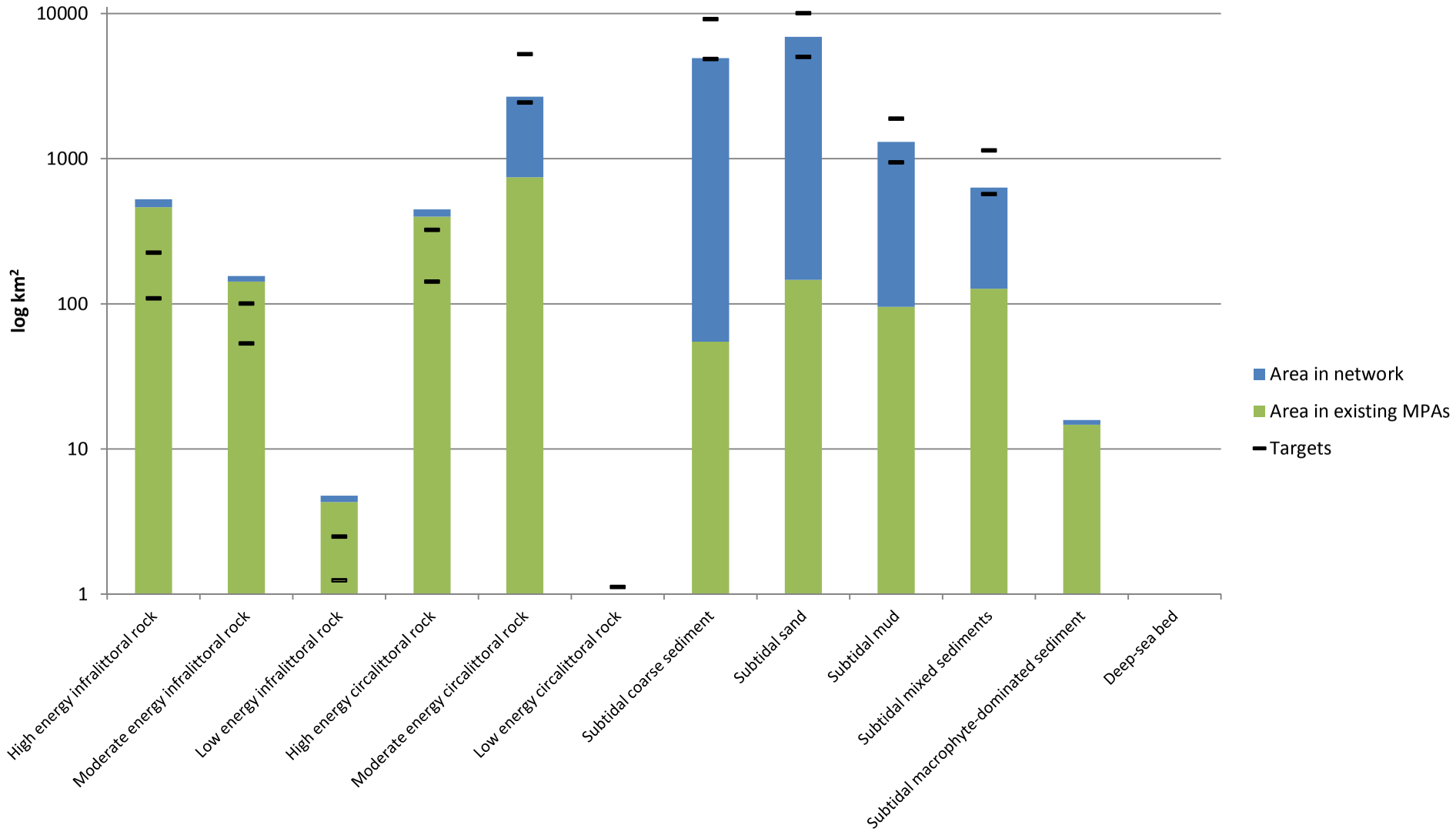


Chart 3. Percentage of intertidal broad-scale habitat represented with lower and upper ENG adequacy targets shown. The figures are derived from those shown in table 8. There are no ENG adequacy targets for the coastal saltmarshes and saline reedbeds, intertidal sediments dominated by aquatic angiosperms or intertidal biogenic reef habitats.

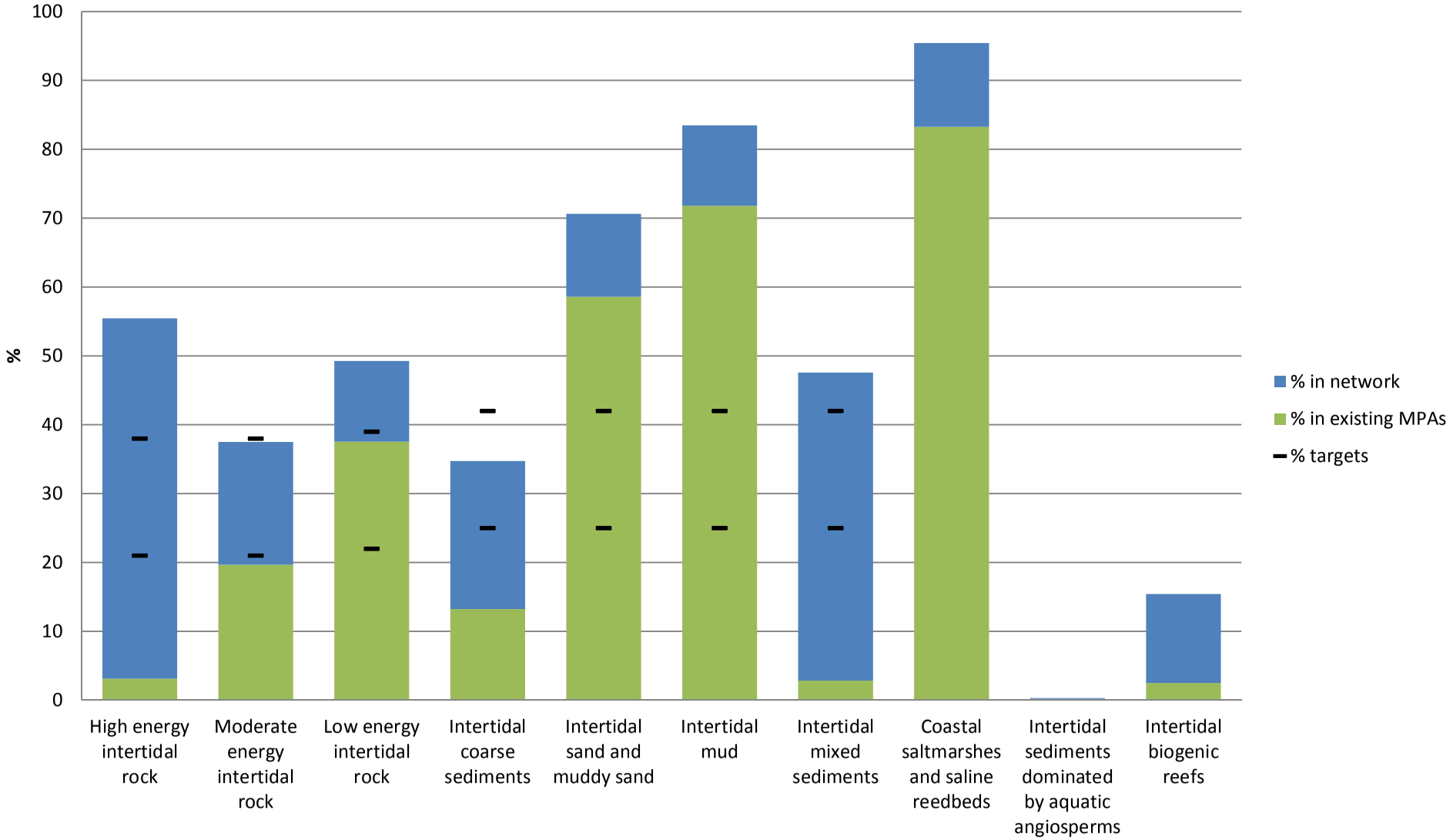
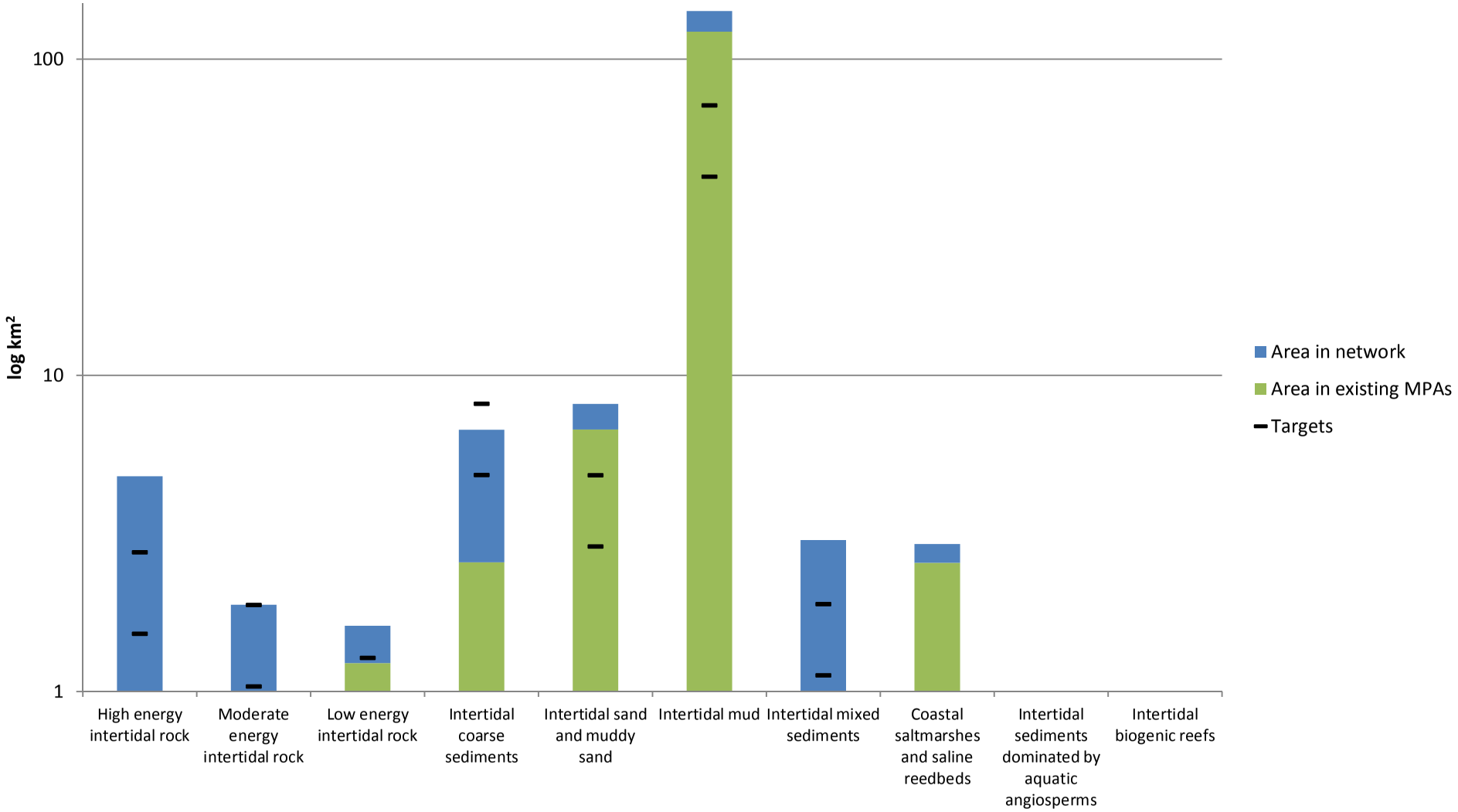


Chart 4. Area of intertidal broad-scale habitat represented with lower and upper ENG adequacy targets shown. The figures are the same as those shown in table 8. The y axis is represented as a logarithmic scale as the area of habitats represented vary significantly - as a result any areas less that 1km^2 are not visible. There are no ENG adequacy targets for the coastal saltmarshes and saline reedbeds, intertidal sediments dominated by aquatic angiosperms or intertidal biogenic reef habitats.



Habitats of Conservation Importance: representativity, replication and adequacy

The network has achieved good replication of ENG-listed Habitats of Conservation Importance, within the confines of the data available and the distribution of the species in the region. Table 10 shows which FOCI habitats are represented in the network, and how many sites they are replicated within. The table accounts for existing protected areas (data from the gap analysis) as well as rMCZs. Note that most of the FOCI habitat data dates from 1980 onwards.

At first glance, table 10 shows that thirteen out of twenty two Habitats of Conservation Importance do not meet the targets for replication within the network, and of those thirteen, seven are not represented at all. However, closer inspection of the data shows that for many of these habitats, we have either no records or only a very limited number of records within the region. Bearing in mind these limitations, the network performs well for habitat FOCI. The bullet points below provide summary comments for those habitats which do not meet their targets.

- Cold-water coral reefs are only recorded in one small patch, within The Canyons rMCZ.

- There are no records of Coral Gardens, Deep-sea sponge aggregations, File shell beds, Littoral Chalk communities, Horse Mussel (Modiolus modiolus) beds, Sea pen and burrowing megafauna communities, or Native oyster (Ostrea edulis) beds in our region within the datasets we have available. Whilst we have no records describing Native oyster beds, we are aware of this feature existing in the Fal, where we have many records of the species (which are protected by the existing SAC).

- We only have six records of Peat and clay exposures in our datasets. One single record is located in Poole Harbour (outside the SSSI/SPA boundaries), three records are located in the Salcombe to Kingsbridge estuaries SSSI (but the habitat is not listed in the designation), and two in the Isles of Scilly SAC (again, the habitat is not protected by the existing designation). One of the Isles of Scilly records is located within one of the rMCZs in that area and one replicated is counted within the network.

- Our data only shows Ross worm (Sabellaria spinulosa) reefs along the coast of Dorset. Several records are located within the Studland to Portland dSAC (but the habitat is not listed as protected). An older version of the gap analysis listed this habitat as protected within the Lyme Bay to Torbay cSAC, though this has been removed in the most recent edition.

- We have a very limited dataset for subtidal chalk. The habitat is listed as protected within the Plymouth Sound and Estuaries SAC (though we have no records for the habitat in this area). We have additional records for the habitat located within the South Dorset rMCZ, and there is one single additional record located within the Lyme Bay portion of the Lyme Bay and Torbay cSAC (where it is not listed as a protected feature).

- The only location where we have records of tide-swept channels is the Isles of Scilly, where we have records of the BAP habitat from recent Seasearch data (provided through Cornwall Wildlife Trust), and additional polygon data for the habitat mapped by the Isles of Scilly Local Group. Tide-swept channels are considered protected within the Isles of Scilly SAC, though this record was omitted from the official gap analysis. As such, there is one replicated counted in the network.

- Maërl beds have a limited distribution within the study area. The best examples of maërl beds in the area are found in the Fal and Helford estuaries where they are listed in the Fal and Helford SAC. We have also captured additional records in The Manacles rMCZ.

Evaluation of the network against ENG criteria

The interactive PDF maps supplied with the final report allow the exploration of the exact location of the FOCI records referred to above.

Note that subtidal sands and gravels was not treated as a FOCI habitat during the planning process - it was not included on FOCI maps or reported against during stakeholder meetings. This is a very broad category and we were confident that the network would meet the requirements for this habitat through focussing on the relevant broad-scale habitat targets. There are three conservation objectives written for this habitat, resulting in three replicates in table 10, however the habitat is found in more than half of the rMCZs and covered by conservation objectives for the relevant broad-scale habitats.

The gap analysis provided us with replication figures (within existing MPAs) for three additional habitats, which although they are not on the FOCI list in the ENG, are considered of wider conservation importance. These are coastal saltmarsh, intertidal mudflats, and saline lagoons. We have included these figures here for context, and consider the coastal saltmarsh figures particularly relevant, given that the ENG stipulates replication targets for a broad-scale habitat called 'Coastal saltmarshes and saline reedbeds'. Although the target for this broad-scale habitat has been met, the replication figures for coastal saltmarsh in table 11 might better reflect how well the feature is represented within the network (Ecological Network Guidance table 6, p. 38).

For additional information we have included a table showing the number of records of habitat FOCI represented within rMCZs (table 12). Records of habitats protected within existing MPAs have not been counted and the total number of 'unprotected' records is shown for reference. Table 13 shows the equivalent for area figures calculated using polygonal FOCI habitat data and the percentage of total unprotected habitat captured.

Table 14 shows all the point records for habitat FOCI in the region (including those representing habitats that are already protected within existing MPAs), broken down by decade. Polygonal data is not included in this table, as all habitat polygon data we have falls in the 2000s bracket.

Table 10. Replication of FOCI habitats (the number of rMCZs and existing protected areas within which records of FOCI habitats are located). Habitats highlighted in green have met their replication target.

Habitat name	Total replicates	Replicates in eMPAs	Pre 1980 replicates
Blue mussel beds[1]	3	1	
Cold-water coral reefs[1]	1		
Coral gardens[2]			
Deep-sea sponge aggregations[2]			
Estuarine Rocky Habitats	7	3	
File shell beds[2]			
Fragile sponge & anthozoan communities on subtidal rocky habitats	14	11	
Intertidal underboulder communities	8	4	
Littoral chalk communities[2]			
Maërl Beds	2	1	
Horse Mussel (*Modiolus modiulus*) beds[2]			
Mud Habitats in Deep Water[1]	2		
Sea-pen and burrowing megafauna communities[2]	1	1	
Native oyster (*Ostrea edulis*) beds[2]			
Peat and clay exposures[1]	1		
Honeycomb worm (*Sabellaria alveolata*) reefs	4	1	
Ross worm (*Sabellaria spinulosa*) reefs[1]			
Seagrass beds	8	4	
Sheltered muddy gravels	4	2	
Subtidal chalk[1]	2	1	
Subtidal sands and gravels[3]	3	3	
Tide-swept channels[1]	1	1	

[1] Habitats with a limited distribution, a very small number of records or where all locations are already protected and further work to incorporate them into the network is not needed, not possible or not appropriate.

[2] There are no records for this habitat in the Finding Sanctuary area.

[3] Conservation objectives have not been included for subtidal sands and gravels as we have considered any conservation requirements met by listed broad-scale habitats.

Table 11. Non-ENG habitats within the gap analysis.

Habitat	Replicates in existing MPAs
Coastal saltmarsh	9
Intertidal mudflats	6
Saline lagoons	2

Table 12. Number of point records of Habitats of Conservation Importance in the south-west region and within the network. This table reflects the number of currently 'unprotected' records, not those that are protected within existing MPAs.

Habitat	Total unprotected records		Records captured in network	
	All	Pre-80	All	Pre-80
Blue mussel beds	25	1	1	
Cold-water coral reefs				
Coral gardens				
Deep-sea sponge aggregations				
Estuarine Rocky Habitats	76		23	
File Shell beds				
Fragile sponge & anthozoan communities on subtidal rocky habitats	5	1	1	1
Intertidal underboulder communities	26		8	
Littoral chalk communities				
Maërl Beds	97			
Horse mussel (*Modiolus modiulus*) beds				
Mud Habitats in Deep Water	40	14	29	14
Sea-pens and burrowing megafauna communities				
Native oyster (*Ostrea edulis*) beds				
Peat and clay exposures	9		1	
Honeycomb worm (*Sabellaria alveolata*) reefs	21	1	3	
Ross worm (*Sabellaria spinulosa*) reefs	12			
Seagrass beds	65		9	
Sheltered muddy gravels				
Subtidal chalk	6		4	
Subtidal sands and gravels				
Tide-swept channels	11		7	

Table 13. Area of Habitats of Conservation Importance in the south-west region and within the network. This table reflects the number of currently 'unprotected' records, not those that are protected within existing MPAs.

Habitat	Total unprotected area	Area captured in network
Blue mussel beds	0.12	
Cold-water coral reefs		
Coral gardens		
Deep-sea sponge aggregations	0.01	<0.01 (15.5%)
Estuarine Rocky Habitats		
File Shell beds		
Fragile sponge & anthozoan communities on subtidal rocky habitats		
Intertidal underboulder communities	<0.01	
Littoral chalk communities		
Maërl Beds	9.38	1.01 (10.8%)
Horse mussel (*Modiolus modiulus*) beds		
Mud Habitats in Deep Water	103.56	101.42 (97.9%)
Sea-pens and burrowing megafauna communities		
Native oyster (*Ostrea edulis*) beds		
Peat and clay exposures		
Honeycomb worm (*Sabellaria alveolata*) reefs	0.02	
Ross worm (*Sabellaria spinulosa*) reefs	0.95	
Seagrass beds	16.33	1.83 (11.2%)
Sheltered muddy gravels	0.49	0.07 (14.8%)
Subtidal chalk		
Subtidal sands and gravels	58267.48[1]	10665.43 (18.3%)
Tide-swept channels		

[1] Conservation objectives have not been included for subtidal sands and gravels as we have considered any conservation requirements met by listed broad-scale habitats.

Species of Conservation Importance: representativity, replication and adequacy

The network has achieved good replication of Species of Conservation Importance, within the confines of the data available and the distribution of the species in the region. Table 15 shows which benthic FOCI species are represented in the MPA network, and how many sites they are replicated within. For the existing protected areas, the gap analysis stated the number of replicate sites for each species, but no indication was given of the age of records within those sites.

At first glance, table 15 shows that 16 out of 29 benthic Species of Conservation Importance do not meet the targets for replication within the network, and of those 16, 4 are not represented at all. Closer inspection of the data shows that for many of these species, we only have a very limited number of records in the region, or no records at all. Bearing in mind these limitations, the network performs well for benthic species FOCI. The bullet points below provide summary comments for those species which do not meet their targets.

- The lagoon sandworm *Armandia cirrhosa* is only recorded in one location in our region, the Fleet lagoon, where it is already has protected status through the SAC designation.

- The fan mussel *Atrina pectinata* has been recorded in several locations along the far south-west coastline of our study region, including in the Isles of Scilly. The majority of the records are historic (including from as far back as the 19th Century). More recent records are located within estuaries, bays and inlets in south Cornwall, and most of these locations already have protected status (though the fan mussel is not listed as protected within them). This includes records within the Fal and Helford SAC, the Eddystone portion of the Prawle Point to Plymouth Sound & Eddystone cSAC, the Plymouth Sound SAC, and the Salcombe to Kingsbridge Estuaries SSSI.

- We have a single record of Defonlin's lagoon snail *Caecum armoricum* in the Fleet lagoon, where the species is already protected through the SAC designation.

- There are only 2 locations in the south-west with records of the burgundy maërl paint weed *Cruoria cruoriaeformis*. There is one replicate in the network, within the Isles of Scilly rMCZ. It has also been recorded in the Fal/Helford SAC, where it is not listed as a protected species, however it is associated with maërl beds, and maërl beds are a listed protected feature within the SAC. Given that the maërl is protected, we might consider the Fal/Helford as another replicate.

- There are only five records of *Gammarus insensibilis*, the lagoon sand shrimp. Three of these are off Chesil Beach and, as this is a lagoon species, they can be considered as a positional error - they are likely to fall within the Fleet lagoon, where the SAC already affords protection for this species. The other records are inside Poole Harbour and outside Christchurch harbour.

- There are only two single records of the amphipod shrimp *Gitanopsis bispinosa* in our region, both of which might be considered serendipitous records. These have not influenced the location of rMCZs.

- There are a limited number of records of Couch's goby, *Gobius couchi*. These include two SACs, though the species is not specifically listed as protected (the Fleet lagoon and the Fal/Helford). There is a single replicate from a single record in the Poole Rocks rMCZ.

- Grateloup's little-lobed weed (*Grateloupia montagnei*), like the burgundy maërl paint weed, is a red seaweed associated with maërl beds. Most of the records in the south-west are located in the Fal/Helford, where the maërl beds are protected by the SAC designation. This indicates that the associated red seaweeds are unlikely to need additional protection (even though they are not specifically listed as protect-

ed species in the SAC). In addition to the Fal/Helford records, the other records in the region are located in the Isles of Scilly (two records within one rMCZs), and a single record in the estuary near Salcombe.

- We have limited records of *Hippocampus guttulatus* in the study area, however The Seahorse Trust has indicated that these species are more widespread than our point data indicates.

- *Lithothamnion corallioides* and *Phymatolithon calcareum* are species of maërl. We have focussed on meeting the targets for the FOCI habitat, maërl beds, than for individual maërl species. Outside the Fal/Helford SAC (where the species is already protected), the other location where a large number of records of L. corallioides are present is in Poole Bay. A small number of additional individual records exist.

- The largest concentration of records of the stalked jellyfish *Lucernariopsis campanulata* are found in the Isles of Scilly, where records are located in three of the rMCZs. Additional records are in Mounts Bay, which is a rMCZ. The other records are within the Fal/Helford SAC, Plymouth Sound SAC, an additional three records off North Cornwall, and one record in Whitsand Bay.

- We only have four records of *Nematostella vectensis* (the starlet sea anemone), two in Poole harbour and one in the Fleet lagoon (the species is protected in both locations through existing designations), and an additional record just north of Weston-super-Mare.

- The gooseneck barnacle, *Pollicipes pollicipes*, has only been recorded in a single location in the region - the Land's End peninsula (i.e. the coastline between Newlyn and St. Ives), including at Land's End itself and Tater Du.

- The lagoon sea slug *Tenellia adspersa* has only been recorded in the Fleet, where it is protected through the SAC designation (an additional record exists in our data, off Chesil Beach, but as this is a lagoon species, this is likely to be a positional error).

- The trembling sea mat *Victorella pavida* has only been recorded in one location in the south-west - Swanpool lagoon in Falmouth. This is already a SSSI, which protects the species. The lagoon lies above the mean high water line (OS Boundary Line) used to delimit our study region, so technically it might be seen to lie outside our planning area.

The interactive PDF supplied to the SAP along with this report allows the exploration of the location of the FOCI records referred to above.

For additional information we have included a table showing the number of records of benthic species represented within rMCZs (table 16). Records of species protected within existing MPAs have not been counted and the total number of 'unprotected' records is shown for reference. The table also includes figures calculated from the seahorse distribution polygon data that was mapped by the Seahorse Trust (this is in a separate row, labelled Hippocampus sp.). Refer to Appendix 8 of the full final report for details of data sources.

Table 17 shows all the point records for benthic species FOCI in the region (including those representing species that are already protected within existing MPAs), broken down by decade. All polygonal information we hold for species distribution dates from 2000 and later, and is not included in this table. It consists of the Seahorse Trust polygon data referred to above, and additional localised polygon data for the distribution of Eunicella verrucosa off Dorset (the E. verrucosa polygon data does not overlap with any rMCZs).

Table 18 shows replication figures for mobile FOCI. Information sources are found in the footnotes. We have not considered the mobile FOCI data provided through the national data layers contract (MB102), as the scale is too coarse to be meaningful.

Note that during meetings and in stakeholder communications the spiny lobster, Palinurus elephas, was often referred to as crawfish.

Table 15. Number of replicates of Species of Conservation Importance in the south-west region and within the network. This table reflects the number of currently 'unprotected' records, not those that are protected within existing MPAs. Green rows indicate that ENG targets have been met for that species. Note that the gap analysis did not include information on the age of records within existing protected areas.

Species name	**Total replicates**	Replicates in eMPAs	Pre 1980 replicates
Alkmaria romijni (Tentacled lagoon-worm)[1]	**3**	1	
Amphianthus dohrnii (Sea-fan Anemone)	**3**	1	
Arctica islandica (Ocean quahog)	**4**		1
Armandia cirrhosa (Lagoon Sandworm)[1]	**1**	1	
Atrina pectinata (Fan Mussel)[1]			
Caecum armoricum (Defolin's lagoon snail)[1]	**1**	1	
Cruoria cruoriaeformis (Burgundy maërl paint weed)[1,2]	**1**		
Eunicella verrucosa (Pink Sea-fan)	**18**	8	
Gammarus insensibilis (Lagoon sand shrimp)[1]	**1**	1	
Gitanopsis bispinosa (Amphipod shrimp)[1]			
Gobius cobitis (Giant Goby)	**4**		
Gobius couchi (Couch's goby)[1]	**1**		
Grateloupia montagnei (Grateloup's little-lobed weed)[1,2]			
Haliclystus auricula (stalked jellyfish)	**5**		2
Hippocampus guttulatus (Long snouted seahorse)	**1**		
Hippocampus hippocampus (Short snouted seahorse)	**3**		
Leptopsammia pruvoti (Sunset Cup Coral)	**6**	5	
Lithothamnion corallioides (Coral Maërl)[1,3]	**1**	1	
Lucernariopsis campanulata (stalked jellyfish)[1]	**2**		1
Lucernariopsis cruxmelitensis (stalked jellyfish)	**3**		1
Nematostella vectensis (Starlet sea anemone)[1]	**2**	2	
Ostrea edulis (Native Oyster)	**7**	1	2
Padina pavonica (Peacock's tail)	**3**		2
Palinurus elephas (Spiny Lobster)	**6**		1
Paludinella littorina (Sea snail)	**7**	1	2
Phymatolithon calcareum (Common Maërl)[3]	**1**	1	
Pollicipes pollicipes (Gooseneck Barnacle)[1]			
Tenellia adspersa (Lagoon sea slug)[1]	**1**	1	
Victorella pavida (Trembling sea mat)[1]	**1**		

[1] Species with a very small number of records or where all locations are already protected and further work to incorporate them into the network is not needed, not possible or not appropriate.

[2] Red seaweeds that are associated with maërl beds.

[3] Coral maërl - included in habitat FOCI.

Table 16. Number of records of Species of Conservation Importance in the south-west region and within the network. This table reflects the number of currently 'unprotected' records, not those that are protected within existing MPAs.

Species name	Total unprotected records		Records captured in network	
	All	Pre-80	All	Pre-80
Alkmaria romijni	16		1	
Amphianthus dohrnii	52	1	17	1
Arctica islandica	59	20	9	2
Armandia cirrhosa	1			
Atrina pectinata	64	26		
Caecum armoricum				
Cruoria cruoriaeformis	8	2	3	
Eunicella verrucosa	353	51	119	19
Gammarus insensibilis	2			
Gitanopsis bispinosa	2			
Gobius cobitis	88	23	14	5
Gobius couchi	14	3	2	
Grateloupia montagnei	8		3	
Haliclystus auricula	127	60	23	9
Hippocampus guttulatus	23	9	2	
Hippocampus hippocampus	10		2	
Hippocampus sp.[1]	386.39 km^2			
Leptopsammia pruvoti	6		2	
Lithothamnion corallioides	17	2		
Lucernariopsis campanulata	31	18	7	5
Lucernariopsis cruxmelitensis	9	5	3	1
Nematostella vectensis	2			
Ostrea edulis	191	30	22	6
Padina pavonica	35	27	8	6
Palinurus elephas	73	32	25	8
Paludinella littorina	44	8	7	2
Phymatolithon calcareum	150	10	1	
Pollicipes pollicipes	11	2		
Tenellia adspersa	1			
Victorella pavida[2]	102		102	

[1] Polygon data for the distribution of seahorses in the south-west as provided by the Seahorse Trust (local knowledge).

[2] Records of Victorella pavida technically fall outside of the study area. As Swanpool is the only location in the UK where this species is found, it has been considered as a suitable location for a recommended reference area.

Table 18. Replication of mobile Species of Conservation Importance. These figures have been calculated from the conservation objectives developed during the vulnerability assessment process.

Mobile Species of Conservation Importance	Replicates
Osmerus eperlanus (Smelt)[1]	1
Anguilla anguilla (European eel)[2]	10
Raja undulata (Undulate ray)[3]	1

[1] Environment Agency surveys have found smelt in the Tamar Estuary.

[2] Information supplied by the Environment Agency indicates that migratory species including eel are common to all of the estuaries along the south coast of Cornwall and Devon.

[3] A recent report from the Shark trust indicates that Studland Bay is a breeding area for undulate ray (Richardson, 2011 – full reference is in the final report).

Geological and geomorphological features

The ENG lists geological and geomorphological features of importance, as well as coastal Geological Conservation Review (GCR) sites, which should be considered for MCZ designation.

The geological datasets have not been a driver in our planning process. Nevertheless, all three geological and geomorphological features of importance that fall within our region are represented within the network, one of them in full (table 19).

Table 19. Geological and geomorphological features of interest.

Feature	Total area available (km^2)	Area within rMCZs (km^2)
Celtic Sea relict sandbanks	1308.38	550.53 (42.1%)
Haig Fras rock complex	74.73	74.73 (100%)
Portland Deep	15.85	8.72 (55.0%)

When our planning process started, no geographical boundary data existed for the GCR sites listed in the ENG. As this only became available late in the process, GCR sites were not considered during the stakeholder meetings. Nevertheless, the network intersects with the following coastal Geological Conservation Review (GCR) sites: Axmouth to Lyme Regis Undercliffs, Eastern Isles, Northam Burrows, Rame Head & Whitsand Bay, Slapton Ley/Hallsands to Beesands, Tean.

Connectivity

In order to provide a visual representation of how the network is performing against the ENG connectivity criteria, we have presented a series of five maps (FR_004 to FR_008) showing 20km and 40km buffers (representing 40km and 80km connectivity) around each of the EUNIS level 2 habitats found within the rMCZs and existing marine protected areas. We have not included a connectivity buffer map for the EUNIS level 2 habitat 'Deep sea', as this habitat is only found beyond the shelf break, and the entire patch that occurs within our region would fall within the 40km buffer.

FR_004 and FR_005 represent the EUNIS level 2 habitats intertidal rock (shown in green) and intertidal sediment (shown in orange). Where these habitats exist in an MCZ or existing MPA they are highlighted in a brighter version of that habitats colour. At this scale it is difficult to see these coastal habitats, so we have enlarged them slightly to aid visibility (this hasn't affected the calculation of the buffers). The habitats highlighted in FR_006, FR_007 and FR_008 are easier to see and have not been enlarged to the same degree.

Map: FR_004

Version: 02Sep11

Network connectivity - intertidal rock (A1)

Map showing 20 and 40 km buffers (representing 40km and 80km connectivity) around all of the EUNIS level 2 habitat intertidal rock that is covered within pMCZs and existing MPAs. Datum: WGS84; Projection: UTM30N.

0 35 70 km N

FINDING SANCTUARY

Broadscale habitats (EUNIS level 2)

- Intertidal rock (A1) inside protected areas
- Intertidal rock (A1) outside protected areas
- Intertidal sediment (A2)
- Infralittoral rock (A3)
- Circalittoral rock (A4)
- Sublittoral sediment (A5)
- Deep-sea bed (A6)

Buffers

- 20km buffer around intertidal rock (A1)
- 40km buffer around intertidal rock (A1)

6°0'0"W 5°0'0"W 4°0'0"W 3°0'0"W 2°0'0"W

51°0'0"N 50°30'0"N 50°0'0"N 49°30'0"N

Gloucester Swansea Newport Swindon Cardiff Bristol Wells EXMOOR Salisbury Southampton THE NEW FOREST Exeter Poole Bournemouth DARTMOOR Plymouth Truro

Map Legend

- Recommended MCZ (rMCZ)
- Recommended reference area

Existing MPAs

- SAC
- SPA
- SSSI
- Lundy NTZ

A full legend is provided in the appendices of the Finding Sanctuary Final Report and Recomendations (Aug 2011)

Map: FR_005

Version: 02Sep11

Network connectivity - intertidal sediment

Map showing 20 and 40 km buffers (representing 40km and 80km connectivity) around all of the EUNIS level 2 habitat intertidal sediment that is covered within pMCZs and existing MPAs. Datum: WGS84; Projection: UTM30N.

0 35 70 km

N

FINDING SANCTUARY

Broadscale habitats (EUNIS level 2)

- Intertidal sediment (A2) inside protected areas
- Intertidal sediment (A2) outside protected areas
- Intertidal rock (A1)
- Infralittoral rock (A3)
- Circalittoral rock (A4)
- Sublittoral sediment (A5)
- Deep-sea bed (A6)

Buffers

- 20km buffer around intertidal sediment (A2)
- 40km buffer around intertidal sediment (A2)

6°0'0"W 5°0'0"W 4°0'0"W 3°0'0"W 2°0'0"W

51°0'0"N 50°30'0"N 50°0'0"N 49°30'0"N

Gloucester Swansea Newport Swindon Cardiff Bristol Wells EXMOOR Salisbury Southampton THE NEW FOREST Exeter Poole Bournemouth DARTMOOR Plymouth Truro

Map Legend

- Recommended MCZ (rMCZ)
- Recommended reference area

Existing MPAs

- SAC
- SPA
- SSSI
- Lundy NTZ

A full legend is provided in the appendices of the Finding Sanctuary Final Report and Recomendations (Aug 2011)

Map: FR_006

Version: 02Sep11

Network connectivity - infralittoral rock

Map showing 20 and 40 km buffers (representing 40km and 80km connectivity) around all of the EUNIS level 2 habitat infralittoral rock that is covered within pMCZs and existing MPAs. Datum: WGS84; Projection: UTM30N.

0 35 70 km N

FINDING SANCTUARY

Broadscale habitats (EUNIS level 2)

- Infralittoral rock (A3) inside protected areas
- Infralittoral rock (A3) outside protected areas
- Intertidal rock (A1)
- Intertidal sediment (A2)
- Circalittoral rock (A4)
- Sublittoral sediment (A5)
- Deep-sea bed (A6)

Buffers

- 20km buffer around infralittoral rock (A3)
- 40km buffer around infralittoral rock (A3)

6°0'0"W 5°0'0"W 4°0'0"W 3°0'0"W 2°0'0"W

51°0'0"N 50°30'0"N 50°0'0"N 49°30'0"N

Gloucester Swansea Newport Swindon Cardiff Bristol Wells EXMOOR Salisbury Southampton THE NEW FOREST Exeter Poole Bournemouth DARTMOOR Plymouth Truro

Map Legend

- Recommended MCZ (rMCZ)
- Recommended reference area

Existing MPAs

- SAC
- SPA
- SSSI
- Lundy NTZ

A full legend is provided in the appendices of the Finding Sanctuary Final Report and Recomendations (Aug 2011)

Map: FR_007

Version: 02Sep11

Network connectivity - circalittoral rock

Map showing 20 and 40 km buffers (representing 40km and 80km connectivity) around all of the EUNIS level 2 habitat circalittoral rock that is covered within pMCZs and existing MPAs. Datum: WGS84; Projection: UTM30N.

0 50 100 km

N

FINDING SANCTUARY

Broadscale habitats (EUNIS level 2)

- Circalittoral rock (A4) inside protected areas
- Circalittoral rock (A4) outside protected areas
- Intertidal rock (A1)
- Intertidal sediment (A2)
- Infralittoral rock (A3)
- Sublittoral sediment (A5)
- Deep-sea bed (A6)

Buffers

- 20km buffer around circalittoral rock (A4)
- 40km buffer around circalittoral rock (A4)

8°0'0"W 7°0'0"W 6°0'0"W 5°0'0"W 4°0'0"W 3°0'0"W 2°0'0"W

50°30'0"N 50°0'0"N 49°30'0"N 49°0'0"N 48°30'0"N 48°0'0"N

Gloucester Swansea Newport Cardiff Bristol Swindon Wells EXMOOR Salisbury THE NEW FOREST Exeter Poole Bournemouth DARTMOOR Plymouth Truro Brest

Map Legend

- Recommended MCZ (rMCZ)
- Recommended reference area

Existing MPAs

- SAC
- SPA
- SSSI
- Lundy NTZ

A full legend is provided in the appendices of the Finding Sanctuary Final Report and Recomendations (Aug 2011)

Map: FR_008

Version: 02Sep11

Network connectivity - sublittoral sediment

Map showing 20 and 40 km buffers (representing 40km and 80km connectivity) around all of the EUNIS level 2 habitat sublittoral sediment that is covered within pMCZs and existing MPAs. Datum: WGS84; Projection: UTM30N.

0 50 100 km N

FINDING SANCTUARY

Broadscale habitats (EUNIS level 2)

- Sublittoral sediment (A5) inside protected areas
- Sublittoral sediment (A5) outside protected areas
- Intertidal rock (A1)
- Intertidal sediment (A2)
- Infralittoral rock (A3)
- Circalittoral rock (A4)
- Deep-sea bed (A6)

Buffers

- 20km buffer around sublittoral sediment (A5)
- 40km buffer around sublittoral sediment (A5)

8°0'0"W 7°0'0"W 6°0'0"W 5°0'0"W 4°0'0"W 3°0'0"W 2°0'0"W

50°30'0"N 50°0'0"N 49°30'0"N 49°0'0"N 48°30'0"N 48°0'0"N

Gloucester Swansea Newport Cardiff Swindon Bristol Wells EXMOOR Salisbury THE NEW FOREST Exeter Poole Bournemouth DARTMOOR Plymouth Truro Brest

Map Legend

- Recommended MCZ (rMCZ)
- Recommended reference area

Existing MPAs

- SAC
- SPA
- SSSI
- Lundy NTZ

A full legend is provided in the appendices of the Finding Sanctuary Final Report and Recomendations (Aug 2011)

Recommended reference areas summary

The ENG stipulates that each listed broad-scale habitat and FOCI needs to be represented within a reference area, with additional guidelines describing minimum reference area or feature patch sizes:

- Broad-scale habitats need to be represented in reference areas with a minimum dimension of 5km, although the patch of habitat can be smaller. The Working Group considered it unrealistic to have reference areas of this dimension close to the shoreline, and during the process the SAP, Natural England and the JNCC advised that intertidal broad-scale habitats could be represented in smaller reference areas. This resulted in a preference for finding larger recommended reference areas away from the coastline to represent subtidal broad-scale habitats, and smaller areas nearer the coast to represent FOCI.
- FOCI each have their own minimum viable size guidelines - a minimum patch size of each feature needs to be represented in a reference area (refer to tables 7 and 8 in the ENG).

Because most of our FOCI data consists of point samples, we do not know what patch sizes are present where. In order to do our best to develop reference areas that meet the viability criterion for FOCI, we have instead ensured that (as far as possible) the size of the reference area is big enough to contain the minimum patch size for a feature.

Table 20 to 23 show that the set of 13 recommended reference areas represents 9 subtidal broad-scale habitats, 8 intertidal broad-scale habitats, 9 FOCI habitats and 10 FOCI species.

The only three subtidal broad-scale habitats not represented in the set of recommended reference areas are low energy infralittoral and circalittoral rock (both of which have a very limited distribution), and subtidal macrophyte-dominated sediment (which we can assume is adequately represented at the FOCI level, by having represented seagrass beds and maërl beds). The only two intertidal broad-scale habitats not represented are intertidal sand and muddy sand, and intertidal biogenic reefs (table 21). The latter can be assumed to be represented through intertidal Sabellaria alveolata reefs in the Lyme Bay recommended reference area.

Of the FOCI habitats present in the study region, 9 are represented in the set of recommended reference areas, whilst 5 are not represented (table 22). There are no records of the remaining 6 habitats in the Finding Sanctuary area.

Of the 29 FOCI species on the ENG list, 10 are represented in the set of recommended reference areas (table 23). An additional three (the red seaweeds Grateloupia montagnei and Cruoria cruoriaeformis, and Couch's goby Gobius couchi) are present in the Fal recommended reference area, which is slightly smaller than the minimum size requirement of 1km. Enlarging this site westwards would probably not provide more habitat suitable for these species (maërl and seagrass beds), as the depth increases to the west. The lagoon sea slug Tenellia adspersa has been recorded in The Fleet recommended reference area, but as the site only covers part of the lagoon, it has not been counted.

Only one of the mobile FOCI, European eel (Anguilla anguilla) is found within recommended reference areas - there are replicates in the Fal rRA and the Erme rRA.

Table 20. Replication of subtidal broad-scale habitats within the current set of recommended reference areas. Red text highlights targets that have not been met.

Habitat	Minimum viable patch size	Replicates in recommended RAs
High energy infralittoral rock	5 km	1
Moderate energy infralittoral rock	5 km	1
Low energy infralittoral rock	5 km	
High energy circalittoral rock	5 km	2
Moderate energy circalittoral rock	5 km	3
Low energy circalittoral rock	5 km	
Subtidal coarse sediment	5 km	2
Subtidal sand	5 km	1
Subtidal mud	5 km	1
Subtidal mixed sediments	5 km	2
Subtidal macrophyte-dominated sediment	5 km	
Deep-sea bed	5 km	1

Table 21. Replication of intertidal broad-scale habitats within the current set of recommended reference areas. Red text highlights targets that have not been met.

Habitat	Minimum viable patch size[1]	Replicates in recommended RAs
High energy intertidal rock	5 km	1
Moderate energy intertidal rock	5 km	1
Low energy intertidal rock	5 km	1
Intertidal coarse sediments	5 km	4
Intertidal sand and muddy sand	5 km	
Intertidal mud	5 km	2
Intertidal mixed sediments	5 km	1
Coastal saltmarshes and saline reedbeds	5 km	2
Intertidal sediments dominated by aquatic angiosperms	5 km	1
Intertidal biogenic reefs[2]	5 km	

[1] Intertidal broad-scale habitats present in sites that are smaller than the minimum have been counted as represented – see main text for explanation.

[2] Intertidal biogenic reefs can be assumed to be represented through intertidal Sabellaria alveolata reefs in the Lyme Bay recommended reference area.

Table 22. Replication of FOCI habitats within the current set of recommended reference areas. Red text highlights targets that have not been met.

Habitat	Minimum viable patch size	Replicates in recommended RAs
Blue Mussel beds	0.5 km	1
Cold-water coral reefs	Whole feature	1
Coral gardens[1]	None given	
Deep-sea sponge aggregations[1]	5 km	
Estuarine rocky habitats	0.5 km	
File shell beds[1]	0.5 km	
Fragile sponge & anthozoan communities on subtidal rocky habitats	0.5 km	1[2]
Intertidal underboulder communities	0.5 km	
Littoral chalk communities[1]	1 km	
Maërl Beds	0.5 km	1
Modiolus modiolus beds[1]	0.5 km	
Mud Habitats in Deep Water	1 km	1
Sea-pen and burrowing megafauna communities	1 km	
Ostrea edulis beds[1]	0.5 km	
Peat and clay exposures	0.5 km	
Sabellaria alveolata reefs	0.5 km	1
Sabellaria spinulosa reefs	0.5 km	
Seagrass Beds	0.5 km	1
Sheltered muddy gravels	0.5 km	1
Subtidal chalk	0.5 km	1

[1] There are no records for this habitat in the Finding Sanctuary area, so this feature has been greyed out.

[2] The replicate for this feature is from records prior to 1980.

Table 23. Replication of FOCI species within the current set of recommended reference areas. Red text highlights targets that have not been met.

Species	Common name	Min. viable patch size	Replicates
Alkmaria romijni	Tentacled lagoon-worm	0.5 km	
Amphianthus dohrnii	Sea-fan Anemone	0.5 km	1
Arctica islandica	Ocean quahog	0.5 km	
Armandia cirrhosa	Lagoon Sandworm	Whole feature	
Atrina pectinata	Fan Mussel	0.5 km	
Caecum armoricum	Defolin's lagoon snail	1 km	
Cruoria cruoriaeformis[1]	Burgundy maërl paint weed	1 km	
Eunicella verrucosa	Pink Sea-fan	5 km	1
Gammarus insensibilis	Lagoon sand shrimp	0.5 km	
Gitanopsis bispinosa	Amphipod shrimp	1 km	
Gobius cobitis	Giant Goby	1 km	
Gobius couchi[2]	Couch's goby	1 km	
Grateloupia montagnei[3]	Grateloup's little-lobed weed	1 km	
Haliclystus auricula	Stalked jellyfish	0.5 km	1
Hippocampus guttulatus	Long snouted seahorse	0.5 km	
Hippocampus hippocampus	Short snouted seahorse	0.5 km	
Leptopsammia pruvoti	Sunset Cup Coral	0.5 km	1
Lithothamnion corallioides	Coral Maërl	0.5 km	1
Lucernariopsis campanulata	Stalked jellyfish	1 km	
Lucernariopsis cruxmelitensis	Stalked jellyfish	1 km	
Nematostella vectensis	Starlet sea anemone	0.5 km	
Ostrea edulis	Native Oyster	0.5 km	1
Padina pavonica	Peacock's tail	0.5 km	1
Palinurus elephas[4]	Spiny Lobster	5 km	1
Paludinella littorina	Sea snail	1 km	
Phymatolithon calcareum	Common Maërl	0.5 km	2
Pollicipes pollicipes	Gooseneck Barnacle	0.5 km	
Tenellia adspersa[5]	Lagoon sea slug	Whole feature	1
Victorella pavida[6]	Trembling sea mat	Whole feature	1

[1, 2, 3] Species is present within the Fal recommended reference area, which has a minimum dimension of 0.71km, slightly less than the required 1km.

[4] This is counted as represented within Cape Bank recommended reference area. Although our spatial data does not show this species within the site, Natural England have recently recorded it (Natural England, 2010).

[5] This feature is represented in the Fleet Lagoon, only part of which is covered by a reference area.

[6] *Victorella pavida* is only found within Swanpool Lagoon in Falmouth. This may not be considered an area within the project boundary, as it lies above the OS Boundary Line mean high water line.

Overview of the full final report

Introduction to the structure of the full final report

The full final report contains 2 parts. Part I covers the Finding Sanctuary process, and part II contains the final recommendations.

Part I briefly describes the project origins and its pilot stage. It then gives an in-depth description of the period between 2009 and 2011, when the work on developing recommendations was carried out. Part I addresses questions like:

- How did the project came to exist, what was its purpose and official remit?
- Who was involved in the process, and what role did they play?
- What guidance and information was the process underpinned by, and when did it become available?
- What meetings took place when, and which tasks did they address?

Part II describes the project's final MCZ recommendations. It contains a network section (which takes a regional-scale look at the network of rMCZs and existing MPAs as a whole), followed by individual site reports that are specific to each rMCZ and each potential reference area.

The final report is accompanied by a range of additional materials, such as interactive PDF maps, data in excel tables, and reports from the planning meetings that took place throughout the project. All these materials are listed in one of the report appendices (appendix 14).

In order to make it easier for readers to work with the full final report, an annotated table of contents is provided below. It lists the main headings of the full final report, with a brief commentary on what information is in each section. Following that, an annotated structure of the site reports is shown (the final report contains one site report for each of the 58 sites in the final recommendations).

Final report: annotated table of contents

(starts overleaf)

Part I – The Finding Sanctuary Process

I.1 Finding Sanctuary's origins and early work

I.1.1 The three phases of Finding Sanctuary
This describes the original inception of the project, and the three phases of the project (the project initiation phase, during which fundraising took place and the initial project plan was developed, the pilot phase during which an initial Steering Group of 15 members met, and the formal phase during which the project had an official remit for delivering MCZ recommendations)
I.1.2 Project origins and initiation phase
This gives a bit more detail on what happened prior to 2007.
I.1.3 Pilot Project Phase 2007 - 2009
This describes the project launch in 2007, and the work of the project team and the initial Steering Group prior to the establishment of the project's formal remit.
I.1.4 Transition to the formal phase in 2009
This describes the transition to the formal phase, the establishment of the national MCZ project and the other three regional projects in 2009.

I.2 National MCZ Project 2009 - 2011: Participants and Roles

I.2.1 The four Regional Projects
Finding Sanctuary, Balanced Seas, Net Gain, and the Irish Sea Marine Conservation Zones project and their remits.
I.2.2 The National Project Board
The roles of Defra, Natural England and the JNCC over the course of the project
I.2.3 Science Advisory Panel
The role and membership of the SAP
I.2.4 The multiple roles of SNCBs in the national and regional context
Statutory Nature Conservation Bodies (SNCBs – Natural England and the JNCC) participated in the national and regional projects in multiple roles – these are briefly described here.

I.3 Finding Sanctuary 2009 - 2011: Regional Project Participants & Roles

I.3.1 The Project Partnership (Regional Project Board)
The role of the regional project partners in managing the project, and membership of the board.
I.3.2 The Steering Group
The role, membership and evolution of the Steering Group between 2007 and 2011.
I.3.3 Subgroups of the Steering Group: The Working Groups
Role and membership of the Inshore, Offshore and Joint Working Groups
I.3.4 Named Consultative Stakeholders
Role and membership of the Named Consultative Stakeholders.
I.3.5 Process Group
Role and membership of the Process Group.
I.3.6 Local Groups
Details on the Devon, Dorset, Somerset, Cornwall and Isles of Scilly Local Groups, and their role in the planning process

I.3.7 Project Team
Role of the project team.
I.3.8 Facilitators
Role of the facilitators.

I.4 Finding Sanctuary's remit, deliverables and key milestones

I.4.1 The Project Remit
Description of the project's task and remit.
I.4.2 The Finding Sanctuary planning region
Very brief ecological description of the planning region, and the way in which its boundaries were defined.
I.4.3 Key Milestones: Planning Iterations
Description of the planning iterations and progress reports.
I.4.4 Format of deliverables
Description of the format of the final outputs, focussing on the site report structure in particular.

I.5 Information Underpinning MCZ Planning

I.5.1 Accessing, using and presenting best available information
Brief overview of the information available and how it was accessed.
I.5.2 Ecological and Environmental Data
A brief description of regional and national data gathering, and information available (more technical details are included in appendix 8).
I.5.3 Existing socio-economic spatial data
A brief description of the socio-economic data available, and efforts to collate it nationally and regionally.
I.5.4 Gathering human activity data from stakeholders: FisherMap and StakMap
A description of Finding Sanctuary's efforts to map the distribution and intensity of commercial fishing activities and recreational activities from interviews with regional stakeholders.

I.6 Summary of planning meetings

I.6.1 Introduction to section I.6
This is a long section, so a brief introduction is given.
I.6.2 Chronological list of all regional stakeholder meetings from September 2009
A table listing planning meetings of the regional Steering Group, Process Group and Working Groups.
I.6.3 Regional stakeholder meeting summaries from September 2009
A very brief summary of the issues covered and tasks carried out at each meeting.
I.6.4 Chronological list of all Local Group meetings
A table listing Local Group meetings.
I.6.5 Summary of Local Group meetings from September 2009
A very brief summary of the issues covered and tasks carried out at each meeting.
1.6.6 Named Consultative Stakeholder feedback
Summary of key issues raised by NCS.

I.7 Discussion of key emerging themes in MCZ planning

I.7.1 Introduction to section I.7
This is a long section, so a brief introduction is given. The section discusses some key emerging themes in some detail, but is not an exhaustive analysis of all discussions that took place.

I.7.2 Guidance documents and datasets: impacts of delivery timing on planning
Description of the way in which the timing of key guidance documents impacted on the timing and sequencing of tasks in the planning process, and how that affected the outcome.
I.7.3 SAP feedback
A very brief discussion of some of the issues raised in SAP feedback, and a description of how the SAP feedback was integrated into the planning process.
I.7.4 Integrating estuaries into the developing network
A description of the effort that focussed on estuaries, including several extra meetings in addition to the formal planning meetings.
I.7.5 Reference Areas
A description of how and when the integration of recommended reference areas in the final project recommendations was carried out.

I.8 Addressing uncertainty: the stakeholder narrative

I.8.1 Uncertainty over human activity restrictions in MCZs
An outline of the key uncertainty faced by stakeholders participating in the planning process.
I.8.2 The stakeholder narrative
A description of the stakeholder narrative and the reasons why a lot of effort focussed on developing it.
I.8.3 Compatibility and sensitivity matrices
Finding Sanctuary's interim compatibility matrix, and the development of national sensitivity matrices.

I.9 Conservation objectives and management discussions

I.9.1 Developing conservation objectives
A brief discussion of the process implications of the guidance provided in the COG.
I.9.2 The vulnerability assessment meetings
A description of the vulnerability assessment meetings and a list of participants.
I.9.3 Impact Assessment and future work on management
A brief overview of work still to be carried out following the delivery of the project's recommendations.

I.10 Stakeholder commitment in the process

A description of the effort and the time committed by stakeholder representatives to the Finding Sanctuary project.

I.11 Evaluating Success

I.11.1 Process
Feedback from stakeholder representatives on the process.
I.11.2 Stakeholder Support for Recommendations
Project team reflection on levels of stakeholder support for the recommendations.

I.12 Beyond the Regional Project Recommendations

I.12.1 Public Consultation and Designation
A brief description of what is known at the time of writing on what happens next, in terms of public consultation and site designation.
I.12.2 Management and Enforcement
A brief description of what is known at the time of writing on MCZ management and enforcement.

I.12.3 Monitoring
A brief description of what is known at the time of writing on site monitoring.
I.12.4 Review Process
A brief description of what is known at the time of writing on future reviews of MCZs.
I.12.5 Future Role of Stakeholders / Regional Stakeholder Groups
A brief description of what is known at the time of writing on future roles for stakeholders.

Part II – Finding Sanctuary's Network Recommendations

II.1 Introduction to Part II

II.1.1 The fundamental importance of the network concept
Why it is important to treat the recommendations as a network, not single sites.
II.1.2 The stakeholder narrative
The importance and structure of the stakeholder narrative.
II.1.3 Structure of the network report
Overview of how part II.2 is structured.
II.1.4 Structure of the rMCZ site reports
Description of how rMCZ site reports (part II.3) are structured.
II.1.5 Structure of site reports for recommended reference areas
Description of how reference area site reports (part II.4) are structured.

II.2 Network report

II.2.1 Steering Group commentary on its work
A statement made by the Steering Group at its final meetin.g
II.2.2 Stakeholder narrative for rMCZs
Working assumptions, implications, uncertainties and additional comments, summarised for the network as a whole.
II.2.3 Stakeholder narrative for recommended reference areas
Summary narrative for reference areas.
II.2.4 Project team reflection on levels of support for the network as a whole
A project team perspective on stakeholder support for the recommendations.
II.2.5 The network configuration (overview)
List of sites in the network, and network maps.
II.2.6 Draft conservation objective summary
Summary list of all draft conservation objectives.
II.2.7 Summary of the contribution of existing protected areas
Brief overview and map of existing MPAs in the planning region.
II.2.8 ENG-related statistics for the network configuration
An analysis of the performance of the network configuration against key ENG principles.
II.2.9 Recommended reference areas summary
An analysis of the performance of the set of 13 recommended reference areas against relevant ENG requirements.

II.3 Site reports for recommended MCZs

II.4 Site reports for recommended reference areas
Sections II.3 and II.4 are the longest sections of the final report. Each rMCZ and each recommended reference area has a site report, following the structure shown below.

The final report includes the following appendices:

Appendix 1: Acknowledgements
Appendix 2: Steering Group membership
Appendix 3: Local Group membership
Appendix 4: Named Consultative Stakeholders
Appendix 5: Finding Sanctuary Project Team
Appendix 6: List of abbreviations
Appendix 7: Map legend (the maps in the report often have so many different symbols that it was not possible to embed full legends within each map, so a comprehensive map legend applicable to all maps in the final report is included in this appendix)
Appendix 8: GIS data and planning tools (This is an extensive appendix that includes technical details on the bio-physical GIS datatsets used by the project, as well as a list of sources of socio-economic GIS data).
Appendix 9: References and bibliography
Appendix 10: Draft reference area guidance table
Appendix 11: Gap Analysis table
Appendix 12: Management measures terminology
Appendix 13: Management maps (A visual representation of the VA snapshot)
Appendix 14: Overview of all materials supplied with this report
Appendix 15: Full text of draft conservation objectives

Structure of rMCZ and recommended reference area site reports

Site name: title of the site report

Basic site information:
- site centre location,
- site surface area,
- biogeographic region the site is located within,
- a detailed description of the site boundary, and
- a description of other protected areas that are close to or overlap with the site

Features proposed for designation within the site: A summary list of draft conservation objectives, and statistics calculated from GIS data on how much of ENG-listed features have been recorded within the site

Site summary: A brief description of ecological and topographic characteristics of the site, the main reason for the inclusion of the site in the network, and a description of its additional ecological importance (where relevant).

Detailed site description: A more detailed description of the ecological characteristics of the site, based on a quick review of scientific literature. The length and detail of this section varies a lot between sites, in general, information was harder to find for offshore sites.

Stakeholder narrative: Assumptions and Implications: This provides a comprehensive overview of the working assumptions and implications recorded over the course of the process, in a table format. The assumptions / implications table is followed by a short table showing the site-specific management outcome of the VA discussions (the VA snapshot).

Stakeholder narrative: Uncertainties and Additional Comments: Site-specific uncertainties and additional comments, some of which relate to the VA snapshot.

Levels of support: A project team perspective on levels of support for the site, based on discussions at stakeholder meetings (this includes a description of the nature of specific concerns, and in some cases this overlaps to a degree with the content of the stakeholder narrative sections)

Supporting documentation: Description of the sources of ecological information used in the site report, reference should also be made to Appendix 8.

Site map series: A main site map with boundary coordinates, followed by additional maps (usually 2 or 3) with ecological and socio-economic information.

Project Partnership


FINDING
SANCTUARY