



**PROGRESS TOWARDS COMPLETING THE UK NETWORK OF MARINE
SPECIAL AREAS OF CONSERVATION (SACs) FOR ANNEX I HABITATS AND
SITE PROPOSALS FOR HATTON BANK AND BASSURELLE BANK
December 2008 (updated February 2009)**

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JOINT NATURE CONSERVATION COMMITTEE

PROGRESS TOWARDS COMPLETING THE UK NETWORK OF MARINE SPECIAL AREAS OF CONSERVATION (SACs) FOR ANNEX I HABITATS AND SITE PROPOSALS FOR HATTON BANK AND BASSURELLE BANK

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1. Introduction

- 1.1 This first part of this paper sets out the approach being taken to complete the UK contribution to the Natura network of marine Special Areas of Conservation (SACs) for Annex I habitats. Information is provided about the principles and criteria taken into account when identifying marine SACs, both individually, and as part of the UK network of marine SACs for Annex I habitats. Possible sites for completing the network in relation to four habitat types which are subject to a scientific reserve by the European Commission are presented.
- 1.2 The second part of the paper describes progress in relation to individual sites and puts forward two sites for approval.

2. The approach to completion of the UK network of marine SACs

- 2.1 The Habitats Directive provides the following principles and criteria for selection of SACs:
 - i. Article 3 introduces principles for the selection of a coherent European ecological network of special areas of conservation. These principles are:
 - a. natural range (Article 3.1) – described below in paragraph 3.2;
 - b. sufficiency (the site series must enable favourable conservation status) (Article 3.1) – described below in paragraph 3.3; and
 - c. proportionality (Article 3.2) – described below in paragraph 3.4.
 - ii. Article 4 introduces criteria, set out in Annex III (described below in paragraph 3.5), for the selection of individual sites as a contribution to this network.
- 2.2 The assessment of Member States' contributions towards the network is carried out at a biogeographic level by the European Commission.

- 2.3 However, in order to effectively advise UK Government on a suitable number and range of sites to propose to the Commission, JNCC has considered the development of a network in a whole UK context, and, to a more limited extent, in a wider European context.

3. Application of the principles and criteria in developing the network

- 3.1 Further detail about how the principles and criteria set out in paragraph 2.1 have been applied in developing, and assessing, the UK network and its contribution to the network for the Atlantic biogeographic region is set out below.

The principle of natural range

- 3.2 Article 3.1 states that the network of sites must be sufficient to enable the natural habitat types to be maintained (and/or restored) at a favourable conservation status within their natural range.
- 3.3 The natural ranges for the Annex I habitat types within UK waters have been mapped approximately using seabed sediment data for the UK produced by the British Geological Survey along with additional survey information from academia, industry and contracts let by JNCC and the UK conservation agencies.
- 3.4 In 2003, the Joint Committee agreed that in relation to offshore site selection, at least one example of each habitat sub-type (that meets the Annex III criteria) in each Regional Sea within the site series should be sufficient to ensure minimum representation for the habitat within its natural range in the UK. However, more than one site for a particular habitat sub-type may be needed within the network in certain Regional Seas for those habitat sub-types which have a high proportion of their UK distribution within one or two Regional Seas (e.g. shallow sandbanks and *Sabellaria spinulosa* biogenic reef which are concentrated in the Southern North Sea and Irish Sea).

The principle of sufficiency

- 3.5 The European Commission provided guidance to inform the first biogeographical seminars on what proportion of the national representation for each habitat type might be considered sufficient according to the principle of *sufficiency*. The indication was that less than 20% of the national resource of a particular habitat represented within the site series would be likely to be considered insufficient, and that more than 60% of the national resource would be likely to be considered sufficient.

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- 3.6 Although these percentages were not derived specifically with the marine environment in mind, and the figures are not specific targets for national contribution to the network (CEC, 2007), they provide broad guidance as to how much of the UK resource for each of the habitat types should be included within the UK contribution to the Natura network.
- 3.7 Proportionality (paragraph 3.4) is also likely to be an important factor to inform judgements on sufficiency, but the European Commission cannot judge this fully until a complete submission of site proposals by all Member States within the Atlantic biogeographic region has been made. This parameter is also influenced by the consideration of structure and function issues.

The principle of proportionality

- 3.8 Article 3.2 requires each Member State to contribute to the Natura network in proportion to the representation within its territory of the Annex I natural habitat types.
- 3.9 The only data available to assess the proportion of habitat within UK waters in relation to that for the rest of the Atlantic biogeographic region are those included in the Article 17 reports provided by Member States in 2007 (European Topic Centre on Biological Diversity, 2008). For the Article 17 reports, some Member States did not report habitat area, and others reported in different ways, so the figures are very approximate. According to these data, the UK holds 39% of the resource of sandbanks slightly covered by seawater all the time and 98% of the resource of reefs within the Atlantic biogeographic region. The figure for the UK proportion of reefs in particular is likely to be a considerable overestimate. There are no figures for submarine structures made by leaking gases.
- 3.10 Therefore based on the Article 17 reports, according to the principle of *proportionality* it could be expected that the UK would contribute to approximately 40% of all SACs designated for sandbank habitat within the Atlantic biogeographic region, and possibly more than 50% of all SACs designated for reefs habitat.
- 3.11 As set out in paragraph 3.3.3, proportionality is also likely to be an important factor to inform judgements on sufficiency.

Criteria for the selection of individual sites under Article 4

- 3.12 Sites are proposed on the basis of selection criteria as listed in Annex III of the Habitats Directive. These criteria are:
- i. degree of representativity of the natural habitat type on the site;
 - ii. area of the site covered by the natural habitat type in relation to the total area covered by that natural habitat type within the national territory;

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- iii. degree of conservation of the structure and functions of the natural habitat type concerned and restoration possibilities;
 - iv. global assessment.
- 3.13 These criteria have been applied to each area which has been considered for selection as a site suitable for recommendation to Defra as an SAC.

4. Habitat types subject to a scientific reserve

- 4.1 Four marine habitats have been subject to a scientific reserve in the EU Atlantic biogeographic region by the European Commission with the understanding that additional SACs may be required for their adequate protection in waters away from the coast. These are:
- i. 1110 Sandbanks which are slightly covered by sea water all the time;
 - ii. 1170 Reefs;
 - iii. 1180 Submarine structures made by leaking gases; and
 - iv. 8330 Submerged or partially submerged sea caves.
- 4.2 Of these four habitats, significant areas of sandbank and reef occur around the UK. This presents the JNCC and UK conservation agencies with greater choice of where sites should be selected and necessitates consideration of network principles as well as the application of site selection criteria.
- 4.3 The UK network has been assessed in relation to these habitat types by JNCC, in conjunction with the UK conservation agencies, and their conclusions on sites required to complete the network are set out below.

Assessment of the UK network of SACs for sandbanks slightly covered by seawater all the time

- 4.4 All designated SACs, possible SACs, draft SACs and Areas of Search (AoS) for SACs which have been considered to fully or partially fulfil the selection criteria for Annex I sandbank habitat for UK waters have been considered for their contribution to the UK network of SACs for this habitat.
- 4.5 Those listed in Table 1 are being progressed for recommendation as SACs to Government, or considered further for their possible contribution to the Natura network. The fourth and fifth columns of Table 1 show the estimated percentage of the UK resource of the habitat included within the site or area. Estimation of the total UK resource of Annex I sandbank habitat is problematic as comprehensive maps of sandbanks identified according to the definition used in the Habitats Directive interpretation manual do not exist.
- 4.6 These sites are shown in Figures 1 and 2 (at the end of section 4) against the background of the estimated total UK resource of Annex I sandbank habitat.

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Table 1. Possible SACs, Draft SACs and Areas of Search being considered for the completion of the network for Annex I sandbank habitat (Habitat 1110)

Possible SAC, Draft SAC or Area of Search	Habitat sub-type	Justification	% of estimated UK resource of sandbank habitat (using <20m only) within the site/area	% of estimated UK resource of sandbank habitat (using <20m+20-50m) within the site/area
Southern North Sea Regional Sea				
Margate & Longsands Inshore AoS	Headland associated and estuary mouth sandbanks and sandy mounds in full salinity.	Representation of sandbank sub-type in the regional sea.	3%	0.6%
Haisborough, Hammond and Winterton Inshore & Offshore AoS	Headland associated sandbanks in full salinity.	Representation of sandbank sub-type in the regional sea.	1.8%	2%
Inner Dowsing, Race Bank and North Ridge Inshore & Offshore AoS	Headland associated sandbanks in full salinity.	Additional representation of sandbank sub-type in the regional sea. Multiple interest (Reefs).	1.4%	0.4%
North Norfolk Sandbanks & Saturn Reef Offshore pSAC	Open shelf ridge sandbanks in full salinity.	Representation of sandbank sub-type in regional sea. Size.	3%	4%
Dogger Bank Offshore dSAC	Sandy mound in full salinity.	Representation of sandbank sub-type in regional sea. Size. Multiple Interest.	10%	16%
Eastern English Channel Regional Sea				
Bassurelle Offshore AoS	Open shelf ridge sandbank in full salinity.	Representation of sandbank sub-type in regional sea. Adjoins French pSAC.	0.12%	0.08%
Irish Sea Regional Sea				
Outer Morecambe Bay, Shell Flat & Lune Deep Inshore AoS	Open shelf ridge sandbank in full salinity.	Representation of sandbank sub-type in regional sea. Multiple interest (Reefs).	0.8%	0.2%
Red Bay Inshore dSAC	Maerl bank in full salinity.	Representation of sandbank sub-type in regional sea.	0.3%	-
Minches & West Scotland Regional Sea				
The Skerries Inshore AoS	Sandbank in full salinity.	Representation of sandbank sub-type in regional sea. Multiple interest (Reefs).	0.2%	-
Sound of Barra AoS	Sandbank in full salinity, maerl, seagrass	Representation of sandbank sub-type in regional sea. Multiple interest (Reefs & harbour (common) seals).	0.4%	-

Note to Table 1: There are two estimates for the total UK resource of the Annex I habitat ‘sandy sediments slightly covered by seawater all the time’, one is an underestimate, the other more complete, but possibly an overestimate. The fourth column above includes percentage figures calculated using only sandy sediments in less than 20 m water depth as a proxy for the total UK resource of sandbank. This figure of 17,200 km² is a considerable under-estimate of the total UK resource, as although it includes some shallow inshore sandy areas which may not be sandbank, the extent of a number of larger sandbanks extends into waters deeper than 20m.

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The fifth column includes percentage figures calculated using sandy sediments in less than 20 m water depth plus areas of sandy sediments down to 50m water depth where they adjoin areas of sandy sediment in less than 20 m, as a proxy for the total UK resource of sandbank. This figure of 80,100 km² is a more realistic estimate of the total UK sandbank resource, but could be a slight over-estimate. These figures for total UK resource of the habitat have been updated since those used to report on conservation status under Article 17 of the Habitats Directive, which were the best available at the time, but represented a greater underestimate of the total UK resource of sandbanks than the two figures given here. Percentage calculations are based on estimated areas for sandbanks in Areas of Search as their extent has not yet been determined.

- 4.7 Existing SACs and candidate SACS (ie those already submitted to the European Commission) already include either 25% or 8% of the total UK resource of Annex I sandbank habitat within the site network (the first figure represents the percentage based on the total UK resource of sandbank being only that in less than 20m water depth, the second is the figure if adjoining sandy sediments down to 50m are also included as part of the total UK resource for sandbank). Whichever figure is used, this proportion of the UK resource within the existing SAC network is either below, or at the very lower end of what might be considered sufficient by the European Commission. With the inclusion of all the designated SACs, pSACs, dSACs and Areas of Search for SACs which are proposed to be included within the network for Annex I Sandbank habitat, the proportion of the total UK resource of sandbank habitat within the recommended site network increases to either 46% or 33%. All of these possible future sites are therefore likely to be necessary to include within the network to meet the criteria and guidelines set out in section 3.
- 4.8 Taking into account gradings for the different criteria (paragraph 3.5), consideration of the principles of natural range (paragraph 3.2), sufficiency (paragraph 3.3) and proportionality (paragraph 3.4), four offshore Areas of Search are proposed not to be progressed for recommendation as SACs to Government. These are listed in Table 2 and shown in Figures 1 and 2 (at the end of section 4) against the background of the estimated total UK resource of Annex I sandbank habitat.

Table 2. Areas for Annex I sandbank habitat not being considered further in the SAC selection process.

Area	Reason for not progressing
Southern North Sea	
Outer Gabbard, Inner Gabbard, Galloper, North and South Falls Inshore AoS	Better representation in other areas in the Southern North Sea
Haddock Bank Offshore AoS	Better representation in other areas in the Southern North Sea
North Sea Sandy Mounds Offshore AoS	Better representation in other areas in the Southern North Sea. Part of area is included in the Inner Dowsing Area of Search which is being considered further.
Irish Sea	
Sandy mound east of Isle of Man Offshore AoS	Offshore area small and habitat is represented in sites in other areas of the Irish Sea.

These are in addition to the areas already advised to the Committee (JNCC, 2006).

Assessment of the UK network of SACs for reefs

- 4.9 All designated SACs, possible SACs, draft SACs and Areas of Search for

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SACs which have been considered to fully or partially fulfil the selection criteria for Annex I reef habitat for UK waters have been considered for their contribution to the UK network of SACs for this habitat.

- 4.10 Those listed in Table 3 are being progressed for recommendation as SACs to Government or considered further for their possible contribution to the Natura network. The fourth column of Table 3 shows the estimated percentage of the UK resource of the habitat included within the site or area.
- 4.11 These sites are shown in Figures 3 and 4 (at the end of section 4) against the background of the estimated total UK resource of Annex I reef habitat.

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Table 3. Possible SACs, Draft SACs and Areas of Search being considered for the completion of the network for Annex I reef habitat (Habitat 1170)

Possible SAC, Draft SAC or Area of Search	Habitat sub-type	Justification	% of estimated UK resource of reef habitat within the site/area ¹
Northern North Sea Regional Sea			
Reef East of Shetland Isles Offshore AoS	Bedrock and stony reef in deep water.	Representation of reef sub-type in regional sea.	2%
Southern North Sea Regional Sea			
Inner Dowsing, Race Bank and North Ridge Inshore and Offshore AoS	<i>Sabellaria spinulosa</i> biogenic reef.	Representation of reef sub-type in regional sea. Weighting given to <i>S. spinulosa</i> reefs due to rarity.	0.01%
North Norfolk Sandbanks and Saturn Reef Offshore pSAC	<i>Sabellaria spinulosa</i> biogenic reef.	Representation of reef sub-type in regional sea. Weighting given to <i>S. spinulosa</i> reefs due to rarity.	0.002%
Eastern English Channel Regional Sea			
Wight-Barfleur Reef Offshore AoS	Bedrock and stony reef in deep waters	Representation of reef sub-type in regional sea.	2%
Western English Channel & Celtic Sea Regional Sea			
Lyme Bay to Poole Bay Inshore AoS	Bedrock, stony and biogenic (<i>S. spinulosa</i> , <i>S. alveolata</i> and <i>Mytilus edulis</i>) reef	Representation of reef sub-type in regional sea. Weighting given to biogenic reefs due to rarity.	0.9%
Prawle Point to Plymouth Sound & Eddystone Inshore AoS	Bedrock (hard and soft rock types) and stony reef in shallow and moderately deep water.	Representation of reef sub-type in regional sea.	0.5%
Lizard Point Inshore AoS	Bedrock reef in shallow and deep water.	Additional representation of reef sub-type in regional sea.	0.2%
Lands End and Cape Bank Inshore AoS	Bedrock and stony reef in shallow and moderately deep water with minimal coastal influence	Representation of reef sub-type in regional sea.	0.4%
Irish Sea Regional Sea			
The Maidens Inshore AoS	Bedrock and stony reef in deep water.	Representation of reef sub-type in regional sea.	0.1%
Outer Morecambe Bay, Shell Flat and Lune Deep Inshore AoS	Bedrock and stony reef in deep water.	Representation of reef sub-type in regional sea.	0.2%
Pisces Reef complex Offshore AoS	Bedrock and stony reef in deep water.	Representation of reef sub-type in regional sea.	0.004%
North west Irish Sea mounds inshore and offshore AoS	Bedrock and stony reef in deep water.	Representation of reef sub-type in regional sea.	0.04%
Copeland Islands inshore AoS	<i>Modiolus modiolus</i> biogenic reefs	Additional representation of reef sub-type in regional sea. Weighting given to biogenic reefs due to rarity.	0.01%
North West Anglesey inshore and offshore AoS	<i>Modiolus modiolus</i> biogenic reefs	Representation of reef sub-type in regional sea. Weighting given to biogenic reefs due to rarity.	0.01%

¹ Percentage calculations are based on estimated values for reefs in Areas of Search.

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Possible SAC, Draft SAC or Area of Search	Habitat sub-type	Justification	% of estimated UK resource of reef habitat within the site/area ¹
Minches and West Scotland Regional Sea			
The Skerries inshore AoS	Bedrock and stony reef in shallow and moderately deep water.	Representation of reef sub-type in regional sea.	0.02%
Shamrock Pinnacle reef complex inshore AoS	Bedrock and stony reef in deep water.	Representation of reef sub-type in regional sea.	0.1%
East Mingulay inshore AoS	Bedrock and biogenic (<i>Lophelia pertusa</i>) reef.	Representation of reef sub-type in regional sea.	0.04%
Sound of Barra inshore AoS	Bedrock reef in shallow and moderately deep water.	Additional representation of reef sub-type in regional sea, multiple interest (sandbanks & harbour (common) seals).	0.06%
Scottish Continental Shelf Regional Sea			
Solan Bank offshore AoS	Bedrock and stony reef in moderately deep and deep water	Representation of reef sub-type in regional sea.	0.8%
Wyville Thomson Ridge pSAC	Stony and bedrock reef in deep water. Subject to oceanic water masses.	Representation of reef sub-type in regional sea.	2%
Rockall Trough and Bank Regional Sea			
Anton Dohrn offshore AoS	Bedrock reef on seamount in very deep water. Subject to oceanic water masses.	Representation of reef sub-type in regional sea.	4%
George Bligh offshore AoS	Bedrock reef in very deep water. Subject to oceanic water masses.	Representation of reef sub-type in regional sea.	1%
North West Rockall Bank dSAC	Stony reef and biogenic (<i>Lophelia pertusa</i>) reef	Representation of reef sub-type in regional sea. Weighting given to biogenic reefs due restricted distribution.	6%
East Rockall Bank offshore AoS	Bedrock and stony reef	Considered to be continuation of NW Rockall Bank area but data not sufficient to progress at same time.	4%
Atlantic North West Approaches Regional Sea			
Hatton Bank and Lyonesse offshore AoS	Bedrock and biogenic (<i>Lophelia pertusa</i> and <i>Madrepora oculata</i>) reefs	Representation of reef sub-type in regional sea. Weighting given to biogenic reefs due to restricted distribution.	22%

4.12 Existing SACs, cSACS and pSACs already include approximately 6% of the total UK resource of Annex I reef habitat in the site network. With the inclusion of all the designated SACs, pSACs, dSACs and Areas of Search for SACs which are proposed to be included, or may be considered for inclusion, within the network for Annex I Reefs habitat, the proportion of the total UK resource of Annex I reef habitat within the recommended site network would be approximately 36%. All of these sites are therefore likely to be necessary to include within the network to meet the criteria and guidelines set out in section 3.

4.13 Taking into account gradings for the different criteria (paragraph 3.5),

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consideration of the principles of natural range (paragraph 3.2), sufficiency (paragraph 3.3) and proportionality (paragraph 3.4), a number of the Areas of Search in UK offshore waters will not be progressed for recommendation as SACs to Government based on the information which is currently available (Table 4). These are shown in Figures 3 and 4 (at the end of section 4) against the background of the estimated total UK resource of Annex I reef habitat.

- 4.14 The areas not being considered further are in addition to the areas already advised to the Joint Committee in 2006. UK conservation agencies may also determine, after consideration of data and the site selection criteria, that additional Areas of Search in territorial waters should not be progressed for recommendation as SACs to Government and will advise these separately if necessary.

Table 4. Areas for Annex I reef habitat not being considered further in the SAC selection process.

Area	Reason for not progressing
Atlantic South–West Approaches Regional Sea	
SW Canyons reef Offshore AoS	Very small area of reef habitat in UK waters (disputed), much better Irish and French areas of similar habitat selected or being considered for selection as SACs.
Irish Sea Regional Sea	
Mid Irish Sea Reef Offshore AoS	Adequate survey data, fulfils site selection criteria, better examples already included in network for this Regional Sea, so currently not required for representation or sufficiency
Minches and W Scotland Regional Sea	
Blackstones Bank Offshore AoS	Adequate survey data, fulfils site selection criteria, bedrock & stony reef in deep water already represented nearby (Stanton Banks & Firth of Lorn) so currently not required for representation or sufficiency
Scottish Continental Shelf Regional Sea	
West Hebrides Reef Offshore AoS	Habitat sub-type already represented in this regional sea (Stanton Banks, Wyville Thomson Ridge), very limited site specific data provisionally indicates poor representation of habitat type; no funds available for additional survey.
Flannan Ridge Offshore AoS	
Turbot, Otter and Papa Banks Offshore AoS	
Iceberg ploughmarks on northern shelf breaks Offshore AoS	
Hebrides Terrace Seamount Offshore AoS	
Rockall Trough and Bank Regional Sea	
Rosemary Bank Offshore AoS	Would only achieve representation requirements for one sub-type (bedrock), in comparison to Rockall that would achieve representation for two (bedrock and stony). Habitat sub-type already represented in this regional sea (East Rockall Bank AoS, George Bligh Bank AoS and Anton Dohrn AoS). Limited site specific data indicates poor representation of habitat type, no funds available for additional survey.
Atlantic NW Approaches Regional Sea	
Sandastre Offshore AoS	Habitat sub-type (bedrock & biogenic) already represented in this regional sea (Hatton Bank & Lyonesse AoS). Some survey data available.
Mammal Offshore AoS	Habitat sub-type (bedrock & biogenic) already represented in this regional sea (Hatton Bank & Lyonesse AoS). Limited site specific data; no funds available for additional survey.

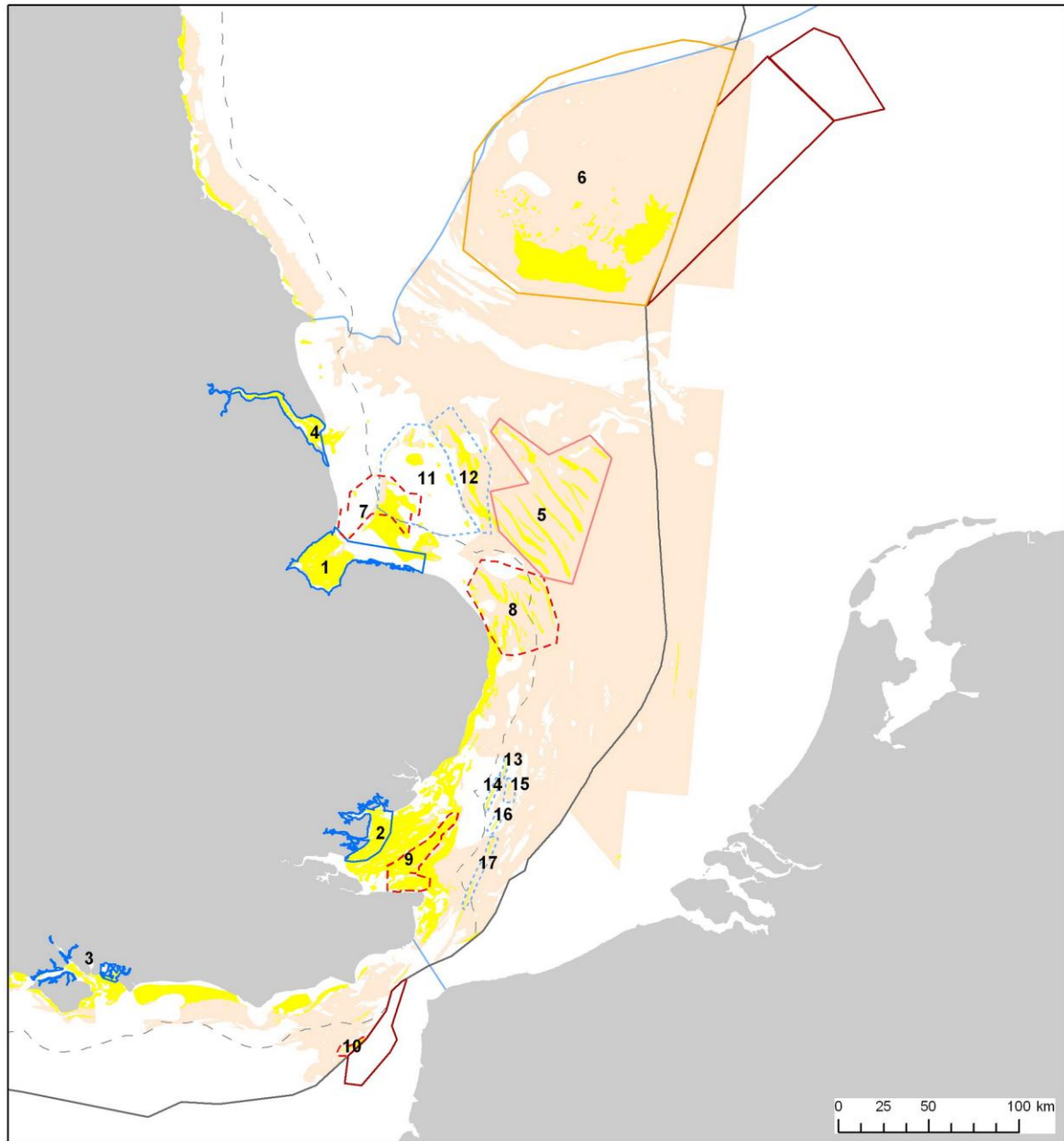
Assessment of the UK network of SACs for submarine structures made by leaking gases

- 4.15 One further area containing substantial quantities of submarine structures made by leaking gases Annex I habitat requires consideration against the selection criteria. This is located in offshore waters of the mid-Irish sea, has been referred to in literature as Texel 10 and 11 (Judd, 2005), and is referred to as Submarine structures in mid-Irish Sea AoS.

Assessment of the UK network of SACs for seacaves

- 4.16 A few further areas of search in inshore waters are known or suspected to contain submerged or partially submerged sea caves habitat and the habitat will be considered against the selection criteria as the area of search is considered by the relevant UK conservation agencies.

Figure 1: Distribution of SACs, pSACs, dSACs and Areas of Search for Annex I sandbank habitat (1110) in the Southern North Sea and Eastern English Channel, against backdrop of sandy sediment in less than 20 m water depth and in less than 50 m water depth.



Key to SACs, cSACs, pSACs, dSACs and Areas of Search (AoS)

1. The Wash and North Norfolk Coast SAC
2. Essex Estuaries SAC
3. Solent Maritime SAC
4. Humber Estuary cSAC
5. North Norfolk Sandbanks pSAC
6. Dogger Bank dSAC
7. Inner Dowsing, Race Bank and North Ridge AoS
8. Haisborough, Hammond and Winterton AoS
9. Margate and Longsands AoS
10. Bassurelle AoS
11. North Sea Sandy Mounds AoS
12. Haddock Bank AoS
13. Sandbank north of Inner Gabbard AoS
14. Inner Gabbard AoS
15. Outer Gabbard AoS
16. Galloper AoS
17. North and South Falls AoS

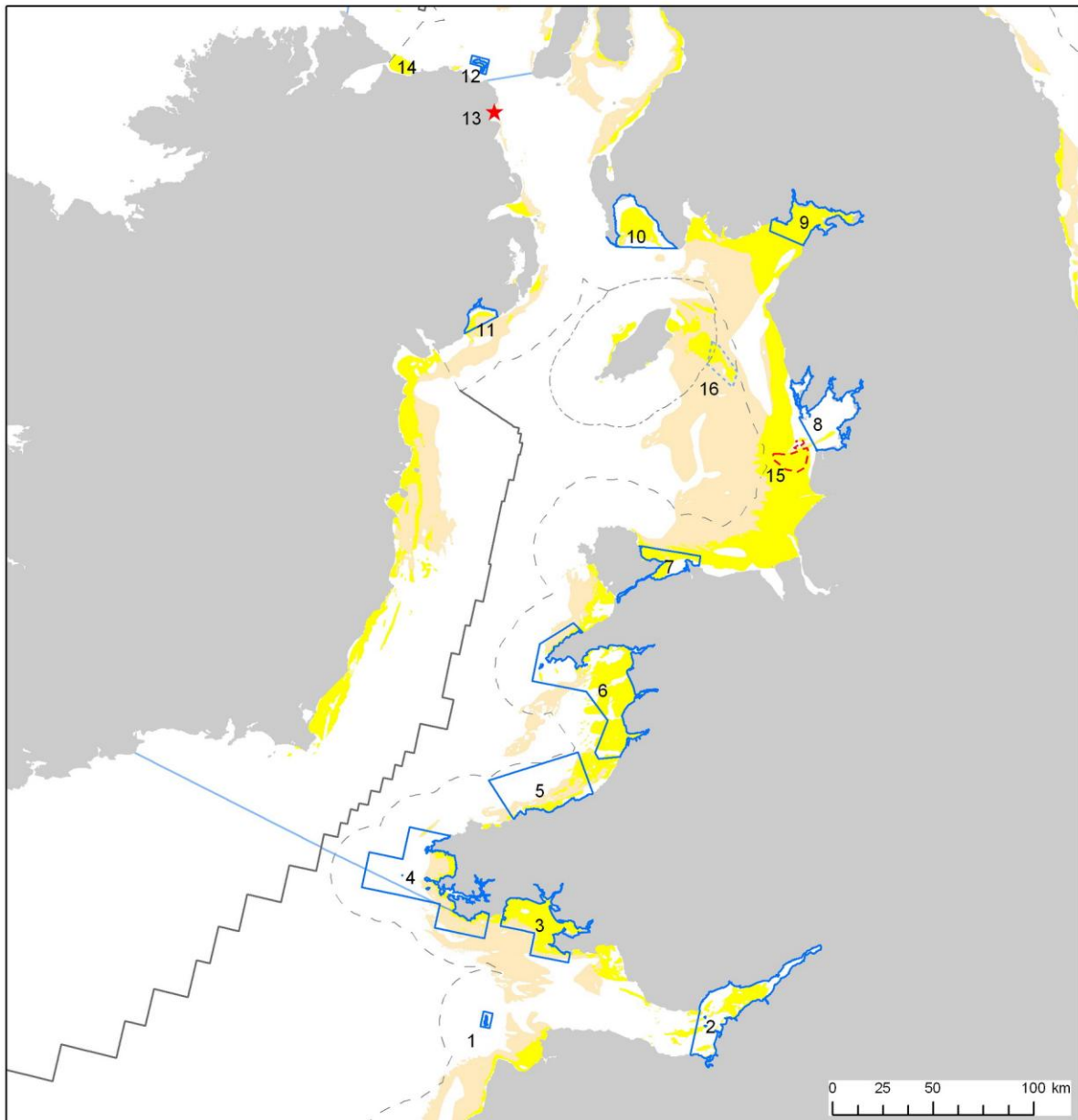
Legend

- pSAC
- dSAC
- SAC/cSAC with Annex I sandbank as a feature
- Area of Search under consideration
- Area of Search no longer being progressed
- Adjoining sites proposed by other Member States
- Sandy Sediment < 20m water depth
- Sandy Sediment < 50m water depth
- Land

- UK Continental Shelf limit
- UK Territorial seas limit
- Regional Sea Boundaries (Defra, 2004)

Seabed habitat derived from BGS 1:250,000 seabed sediment maps © NERC and SeaZone bathymetry © British Crown and SeaZone Solutions Limited. All rights reserved. Products Licence No. PGA042006.003. The exact limits of the UK Continental Shelf are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown Copyright). World Vector Shoreline © US Defense Mapping Agency. Map copyright JNCC 2008. IS 12/01/2009. Map version 1.1

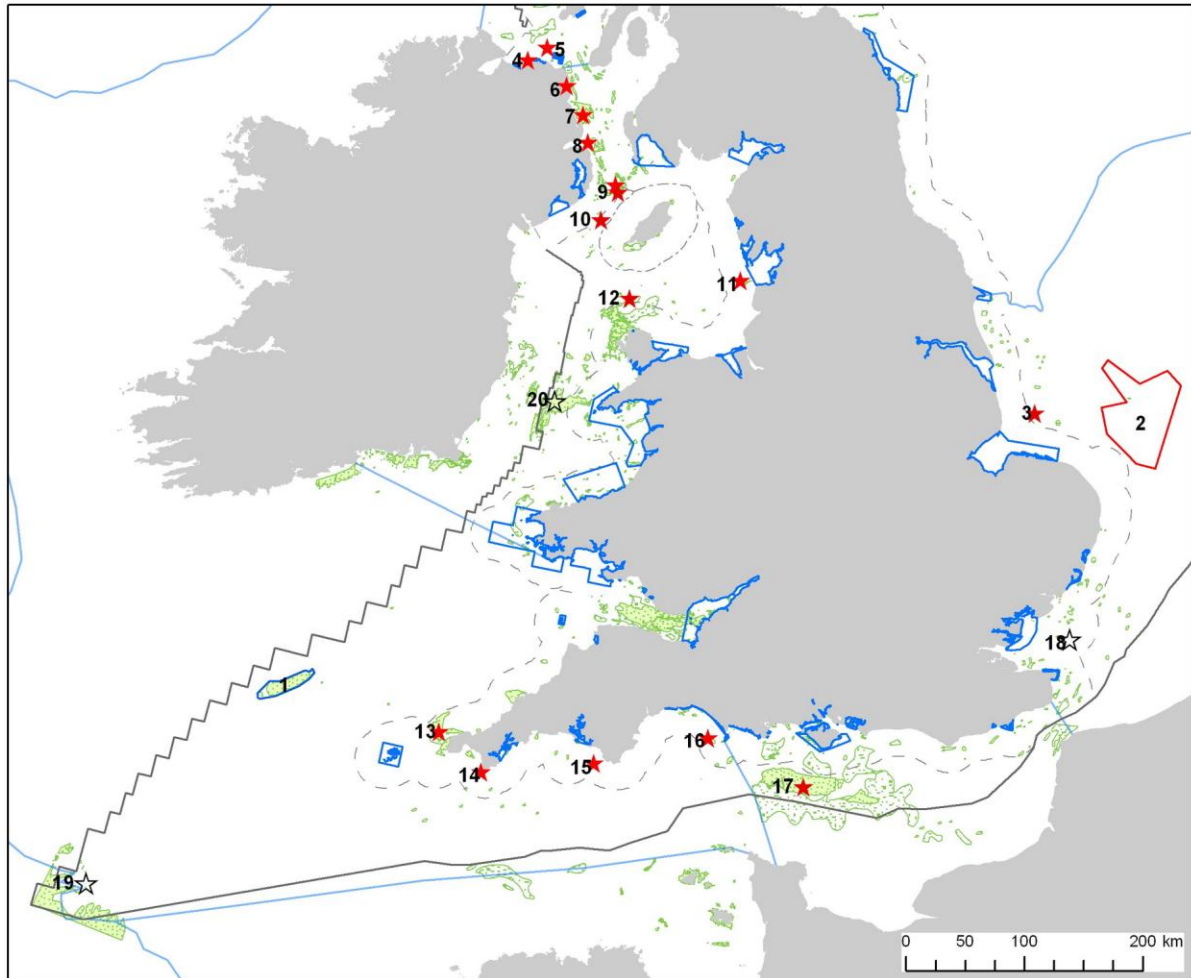
Figure 2: Distribution of SACs, pSACs, dSACs and Areas of Search for Annex I sandbank habitat (1110) in western UK waters, against a backdrop of sandy sediment in less than 20 m water depth and in less than 50 m water depth.



- | | | |
|---|---|--|
| <p>Key to SACs, cSACs, dSACs and Areas of Search (AoS)</p> <ol style="list-style-type: none"> 1. Lundy SAC 2. Severn Estuary cSAC/Môr Hafren SAC 3. Carmarthen Bay and Estuaries SAC/
Bae Cererfyrddin ac Aberoedd SAC 4. Pembrokeshire Marine SAC/
Sir Benfro Forol SAC 5. Cardigan Bay SAC/Bae Ceredigion SAC 6. Pen Llyn a'r Sarnau/
Lleyn Peninsula and the Sarnau SAC 7. Y Fenai a Bae Conwy/
Menai Strait and Conwy Bay SAC 8. Morecambe Bay SAC 9. Solway Firth SAC 10. Luce Bay and Sands SAC 11. Murlough SAC 12. Rathlin Island SAC 13. Red Bay AoS 14. The Skerries AoS 15. Outer Morecambe Bay, Shell Flat and Lune Deep AoS 16. Sandy Mound East of Isle of Man AoS | <p>Legend</p> <ul style="list-style-type: none"> dSAC Red Bay AoS (no GIS boundary available) SAC/cSAC with Annex I sandbanks as a feature Area of Search under consideration Area of Search no longer being progressed Land | <ul style="list-style-type: none"> UK Continental Shelf limit Isle of Man Territorial seas limit UK Territorial seas limit Regional Sea Boundaries, Defra 2004 Sandy Sediment < 20m water depth Sandy Sediment < 50m water depth |
|---|---|--|

Seabed habitat derived from BGS 1:250,000 seabed sediment maps © NERC and SeaZone bathymetry © British Crown and SeaZone Solutions Limited. All rights reserved. Products Licence No. PGA042006.003. The exact limits of the UK Continental Shelf are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown Copyright). World Vector Shoreline © US Defense Mapping Agency. Map copyright JNCC 2008. IS 12/01/2009. Map version 1.1

Figure 3: Distribution of SACs, pSACs, dSACs and Areas of Search for Annex I reef habitat (1170) in the Southern North Sea, English Channel, South West Approaches and Irish Sea, against a backdrop of potential and known reef habitat.



Key to cSACs, pSACs and Areas of Search (AoS) with Annex I reef as a feature

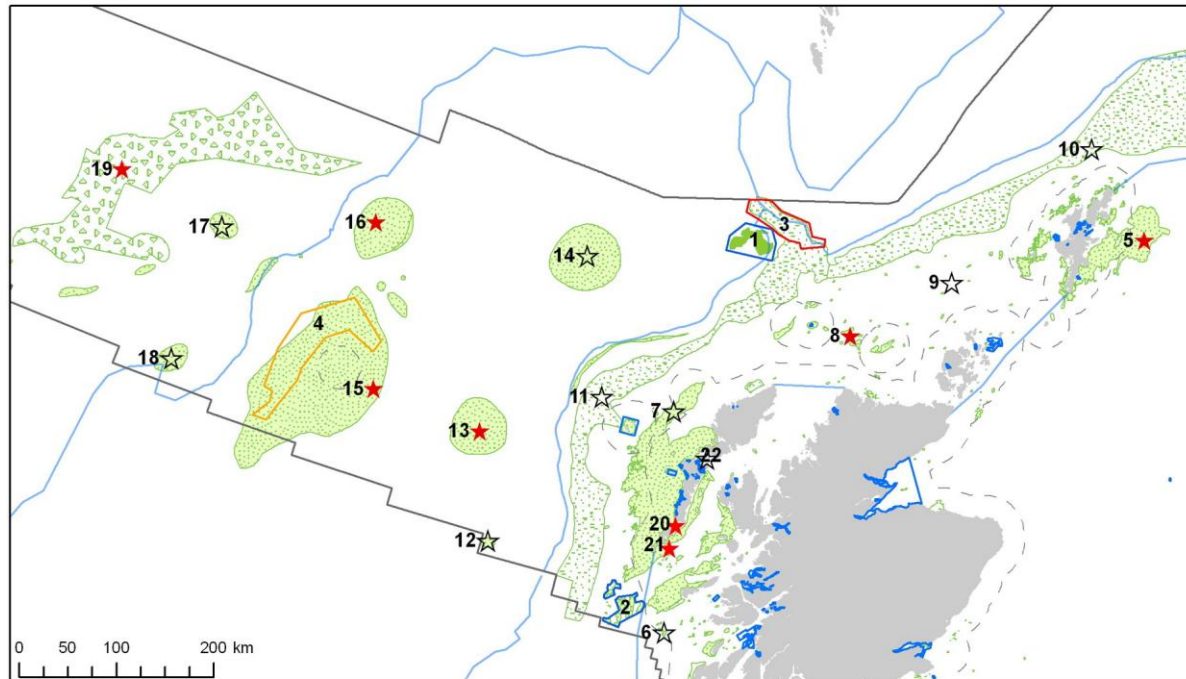
1. Haig Fras cSAC
 2. North Norfolk Sandbanks & Saturn Reef pSAC
 3. Inner Dowsing, Race Bank and North Ridge AoS
 4. Skerries AoS
 5. Shamrock Pinnacles Reef Complex AoS
 6. Red Bay AoS
 7. Maidens Rocks AoS
 8. Copeland Islands AoS
 9. North West Irish Sea Mounds AoS
 10. Pisces Reef AoS
 11. Outer Morecambe Bay AoS
 12. North Anglesey Reef AoS
 13. Cape Bank AoS
 14. Lizard to Lands End AoS
 15. Salcombe to Yealm AoS
 16. Poole to Lyme AoS
 17. Wight-Barfleur AoS
 18. Outer Thames Estuary AoS
 19. South West Approaches Reef (Canyons) AoS
 20. Mid Irish Sea Reefs AoS
- (Stars indicate centre point of Area of Search)

Legend

- | | |
|---|---|
| <ul style="list-style-type: none"> ★ Areas of Search under consideration ☆ Area of Search no longer under consideration □ SAC/cSAC □ pSAC ■ Land --- Isle of Man Territorial seas limit — UK Continental Shelf limit - - - UK Territorial seas limit — Regional Sea Boundaries (Defra, 2004) | <p>Potential Reef type</p> <ul style="list-style-type: none"> □ Bedrock, Stony and Biogenic □ Bedrock □ Stony □ Biogenic |
|---|---|

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Figure 4: Distribution SACs, pSACs, dSACs and Areas of Search for Annex I reef habitat (1170) in the west coast Scotland and the Minches, Scottish Continental Shelf, Rockall Bank and Trough, Atlantic North West approaches and northern North Sea, against a backdrop of potential and known reef habitat.



Key to cSACs, pSACs, dSACs and Areas of Search (AoS)

1. Darwin Mounds cSAC
 2. Stanton Banks cSAC
 3. Wyville Thomson Ridge pSAC
 4. North West Rockall dSAC
 5. Reef East of Shetland Isles AoS
 6. Blackstones Bank AoS
 7. Flannan Ridge AoS
 8. Solan Bank AoS
 9. Turbot, Otter and Papa Bank AoS
 10. Iceberg Ploughmarks (Shetland Slope section) AoS
 11. Iceberg Ploughmarks (Hebrides Slope section) AoS
 12. Hebrides Terrace Seamount AoS
 13. Anton Dohrn AoS
 14. Rosemary Bank AoS
 15. East Rockall AoS
 16. George Bligh Bank AoS
 17. Mammal AoS
 18. Sandastre AoS
 19. Hatton Bank & Lyonesse AoS
 20. Sound of Barra AoS
 21. Mingulay AoS
 22. Sound of Harris AoS
- (Stars indicate centre point of Area of Search)

Legend

- ★ Areas of Search under consideration
- ☆ Areas of Search no longer under consideration
- SAC/cSAC
- pSAC
- dSAC
- UK Continental Shelf limit
- - - UK Territorial seas limit
- Regional Sea Boundaries (Defra, 2004)
- Land

Potential Reef type

- Bedrock, Stony and Biogenic
- Bedrock
- Stony
- Biogenic

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5. Recent progress in submission of candidate SACs, development of advice to competent authorities and revision of boundary guidance

- 5.1 On 28th August 2008, five offshore SACs were submitted to the European Commission by UK Government based upon the advice approved by the Joint Nature Conservation Committee at its June meeting (JNCC, 2008). These five sites were:
- i. Braemar Pockmarks cSAC (submarine structures made by leaking gases);
 - ii. Scanner Pockmark cSAC (submarine structures made by leaking gases);
 - iii. Haig Fras cSAC (reefs);
 - iv. Stanton Banks cSAC (reefs); and
 - vi. Darwin Mounds cSAC (reefs).
- 5.2 JNCC staff are now working to update the draft *Conservation Objectives and Advice on Operations* documents for these sites, and will formally notify competent authorities of the conservation objectives for the sites, and advise on operations which may affect the integrity of the sites, in line with requirements under Regulation 18 of the Offshore Marine Conservation Regulations 2007.
- 5.3 Two of the offshore SACs consulted upon from December 2007 to March 2008 (Wyville Thomson Ridge and North Norfolk Sandbanks and Saturn reef) were not submitted to the European Commission by the 1st September deadline, pending resolution of issues raised during the consultation. It is hoped to submit these two sites to the European Commission by 1st September 2009 once these matters have been resolved.
- 5.4 The *UK Guidance on defining boundaries for marine SACs for Annex I habitat sites fully detached from the coast* has been updated in response to recommendations made in the light of the 2007-08 public consultation on seven offshore SACs. These recommendations were approved by Committee in June 2008 (JNCC P07 08). The principal change is to allow more complex site boundaries that more tightly follow the extent of the feature for which the site is selected, and therefore include less area which is not Annex I habitat within the site boundary. The updated guidance will be publicly available on the JNCC website.

6. Future plans for selecting additional SACs for Annex I habitat in UK offshore waters

Consultation on draft SACs

- 6.1 Subject to approval by Government, formal consultation on Dogger Bank and North West Rockall Bank offshore SACs is due to commence in late December 2008 and conclude in March 2009. Meetings with key stakeholders and competent authorities are being held ahead of this period to discuss the sites and collate data for preparation of the required socio-economic impact assessments. It is anticipated that the post-consultation report will be provided to the Joint Committee for comment in June 2009.

Assessment of additional areas

- 6.2 Hatton Bank and Lyonesse has been considered against the selection criteria and is presented at paragraph 7.3 for the Joint Committee's consideration as an offshore SAC for its reef habitats.
- 6.3 Also presented for JNCC's consideration, at paragraph 7.4, is the proposal for Bassurelle sandbank as an offshore SAC. Bassurelle sandbank is partly in UK waters and partly in French waters and the French Government is proposing a site adjoining the UK portion of the sandbank.
- 6.4 Site proposals for two joint inshore and offshore SACs for sandbanks (Haisborough, Hammond and Winterton and Inner Dowsing, Race Bank and North Ridge) are currently in preparation by Natural England and JNCC, and are likely to be submitted to the Joint Committee for endorsement intersessionally in early 2009.
- 6.5 A proposal for an offshore SAC within the Wight-Barfleur Reef Area of Search is likely to be submitted to the Joint Committee at its June 2009 meeting.
- 6.6 Data from the survey of Solan Bank Area of Search, Submarine structures in mid-Irish Sea (at Texel 10 and Texel 11 locations), Pisces Reef complex AoS, North West Irish Sea Mounds AoS and Reef East of Shetland Isles AoS will be examined in 2009 with a view to enable assessment against the selection criteria for these sites towards the end of 2009 if sufficient data are available. The possibility of collaborative survey of potential *Modiolus modiolus* beds off the north-west coast of Anglesey is being pursued for the summer of 2009. Plans are in place to survey Anton Dohrn seamount AoS, George Bligh Bank AoS (subject to available funds) and East Rockall Bank AoS in summer 2009. The assessment of these areas against the selection criteria would then be undertaken in 2010.

7. Sites to be approved at this meeting

- 7.1 Two sites are submitted for approval to this meeting of the Joint Committee. A description of the sites and the reasons for their selection are set out in paragraphs 7.3 and 7.4.
- 7.2 The full site proposal documentation for these sites is available for review by Committee members upon request and will be made available on the JNCC website if the site is approved for recommendation to Defra. The documentation follow the format developed by JNCC (JNCC, 2004), as subsequently improved to incorporate comments made by Committee, and to align with requirements of JNCC under the Offshore Marine Conservation Regulations. It contains all the information required by the Secretary of State under Reg 7 of the Offshore Marine Conservation Regulations 2007, in order for him to recommend that the sites be subject to public consultation under Reg 8.

Proposal of Special Area of Conservation for Hatton Bank

- 7.3 Hatton Bank is a large volcanic bank, situated in the Atlantic North-West Approaches, towards the western extent of the UK Continental Shelf. It is an elongate, arc-shaped bank, stretching nearly 500km in length, and forming a topographic high arising from the surrounding deep water. The depth across the bank ranges from less than 500m on the northern part of the bank, to around 1500m at the base (Durán Muñoz *et al.*, 2008). At the south-eastern tip of the bank, an igneous complex called Lyonesse forms a topographic high, arising to 520m, some 350m shallower than the surrounding bank (Hitchen *et al.*, 2001; Howell *et al.*, 2007).
- 7.4 Hatton Bank is an extremely large offshore feature and as such supports a wide diversity of habitats and species associated with various seafloor features and seabed types (Howell *et al.*, 2007). Much of the seabed on Hatton Bank is comprised of coarse sandy sediment; however Hatton Bank also supports extensive areas of Annex I bedrock reef, as well as many areas of Annex I stony reef (including iceberg ploughmarks, a variant of stony reef, shaped by the movement of icebergs during the last ice age). Biogenic reefs have also been found, primarily in the southern region (including Lyonesse) and across the north west Hatton Bank outcrops (Durán Muñoz *et al.*, 2008). The surface of the bank is topographically complex, with abundant pinnacles, mounds and ridges. Mounds and pinnacles, tens of metres in height and hundreds of metres in width, are frequently associated with biogenic reef (Howell *et al.*, 2007). Ridges occur along the top of the bank, and support bedrock reef, and many occurrences of cold water corals.
- 7.5 The hard substrata provided by the boulders, cobbles and bedrock reef at the Hatton Bank site support a rich diversity of epifauna, including scleractinian corals, stylasterids ('lace' corals), antipatharians ('black' corals), soft corals, cup corals and gorgonian sea fans; a range of sponges, including glass sponges; sessile sea cucumbers; anemones and brachiopods.

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- 7.6 The biogenic cold water coral reefs are composed of a mixture of *Lophelia pertusa* and *Madrepora oculata*, and in association with the surrounding dead coral framework, support a range of associated fauna, including soft corals, scleractinian corals, antipatharians, and bamboo corals; encrusting sponges; ascidians (sea squirts); bryozoans; and a range of feather stars; basket stars and sea stars (Narayanawamy *et al.*, 2006; Howell *et al.*, 2007).
- 7.7 The Hatton Bank SAC boundary is based on best available information as at September 2008. Due to the size of the Hatton Bank formations and the limited number of scientific surveys undertaken in this area, survey data are not comprehensive across the entire Hatton Bank area; however, there is sufficient, up to date information on the basis of which a robust site boundary can be drawn. The proposed SAC boundary incorporates all known Annex I cold water coral reefs on Hatton Bank, as well as significant areas of Annex I stony reef and bedrock reef¹. The proposed SAC boundary also follows the area recommended for closure to demersal fishing by the International Council for the Exploration of the Sea (ICES) Working Group on Deep Water Ecology (ICES, 2008) in order to protect Hatton Bank's vulnerable marine ecosystems (particularly cold water corals) from disturbance. The area recommended for protection by ICES WGDEC has been enlarged each year since 2005, as new geomorphological and biological data indicating presence of vulnerable ecosystems became available. The most recently recommended extension (ICES, 2008) is included within the proposed SAC boundary.
- 7.8 Committee is asked to note that the Hatton Bank draft SAC proposed area lies entirely outside the 200 nautical mile British Fisheries limits, and entirely on the current UK Continental Shelf claimed area. However, this area of continental shelf is also subject to Continental Shelf claims by other countries (Ireland, France, Faroes, Iceland) under the UN Convention on the Law of the Sea (UNCLOS), which are the subject of current international negotiations.

Proposal of Special Area of Conservation for Bassurelle sandbank

- 7.9 The Bassurelle Bank is a linear sandbank in the Dover Strait which straddles the boundary between UK and French waters. It is an example of an open shelf ridge sandbank, which is formed by tidal currents (Graham *et al.*, 2001). The part of the sandbank within UK waters is approximately 2.5km at its widest point, and has a maximum height of around 15m. It extends for about 15km in a NE-SW direction to the UK-France median line, and then continues for some distance into French waters.
- 7.10 The sandbank is mainly composed of very well sorted sand with some gravelly sand, with occasional shells. The surface tidal currents along the bank are weak to moderately strong (peak spring surface current velocity of 0.7 m/s), and run along the direction of the sandbank (James *et al.*, 2007). Sand

¹ British Geological Survey seabed map data (shown as 'potential bedrock reef' in the maps within this document) have a coarse resolution at this distance from the coast, and therefore cannot be accurately relied on to provide the full extent of reef features. They therefore have not been used to define the boundary for the site in this case.

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waves and megaripples are abundant on parts of the bank and are up to 2.5m in height (James *et al.*, 2007). Biological communities present include those typical of sandy sediments, dominated by polychaete worms such as the tube-worm *Lagis koreni* and the bristleworm *Spiophanes bombyx*.

- 7.11 This site is located within the Eastern English Channel Regional Sea. The only Special Area of Conservation in the Eastern English Channel for which ‘Sandbanks which are slightly covered by sea water all the time’ is a qualifying feature, is Solent Maritime SAC; however, this habitat type is graded at C and was not a primary reason for site designation.

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