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## JOINT NATURE CONSERVATION COMMITTEE

### MARINE NATURA 2000

#### Paper by Charlotte Johnston, Caroline Turnbull and Jim Reid

#### 1. Introduction

- 1.1 This paper follows on from the paper on Marine Natura 2000 considered by the Joint Committee at its September 2002 meeting (JNCC 00 P17).
- 1.2 At the September 2002 meeting, the Joint Committee:
  - i. reconfirmed Carmarthen Bay as a site to be recommended to Ministers as a Special Protection Area, noting that it would be for CCW to draft a site boundary for consultation purposes;
  - ii. commented on the draft guidance on defining the seaward boundaries of seabird breeding colonies in relation to four species of seabird;
  - iii. commented on draft guidance on the definition of the boundaries of habitat SACs away from the coast.

Committee expressed the view that there was a need to establish a wider consultation process to engage the expertise and views of stakeholders in the preparation of guidelines for selection of sites and site boundaries, as well as on the site lists.

- 1.3 This paper updates the Joint Committee on the work carried out under the marine Natura 2000 programme since September 2002 and invites the Joint Committee:
  - i. to **agree** guidance for defining the seaward boundaries of seabird colony SPAs and habitat SACs away from the coast;
  - ii. **agree** the methodology described here for the selection of offshore habitat SACs and that this methodology, together with the group 1 sites, be the subject as a basis for wider consultation with stakeholders;
  - iii. **discuss** the issue of the level of biological information needed to select offshore habitat SACs, and **agree** that JNCC initiates a wider discussion on this issue with stakeholders, including Government during 2003.

## 2. Stakeholder consultation

- 2.1 Following the Joint Committee's September meeting, a stakeholder consultation list was developed covering UK Government Departments, Devolved Administrations, Government Agencies, Sea Fisheries Committees, Scientific Organisations, Conservation NGOs, User Group Associations and the country conservation agencies. The total number of consultees on the address list is currently 187.
- 2.2 Consultation was carried out with the above stakeholders, by email and post, on the proposals relating to the seaward boundaries of seabird colony SPAs and those for the definition of habitat SACs away from the coast. The consultation was carried out during December 2002 and January 2003. Consultees were given six weeks in which to respond to the proposals, though late responses have also been considered.
- 2.3 Responses received before 7 February were considered at the Marine Natura 2000 Project Group chaired by Professor Pentreath, which met in February 2003. Responses to the proposals are summarised below, together with the Project Group's recommendation.

## 3. Guidance on defining the seaward boundaries of seabird colony SPAs

- 3.1 Relative to the number of consultees on the address list, there were few responses to guidance on identifying the seaward boundaries of seabird colony SPAs; most of the responses were either very positive or minor.
- 3.2 Several consultees endorsed the recommendation that boundaries be defined as simply as possible using straight lines.
- 3.3 Many consultees raised issues of a minor nature that betrayed a misunderstanding of the work carried out so far. For example, it was questioned why feeding areas/birds had been excluded from the analyses, the definition of "resting" birds had been queried, and the recommended extensions to existing boundaries were deemed inadequate for birds to carry out all their activities. The Marine Natura 2000 Project Group agreed that these issues had been addressed and were adequately explained in existing papers and reports that have been consulted on through the SPA Scientific Working Group.
- 3.4 Two responses to the consultation raised the point that the draft guidance on colony extensions of 1 or 2 km could apply only to those four species for which sufficient data had been analysed (namely Atlantic puffin *Fratercula arctica*, common guillemot *Uria aalge*, razorbill *Alca torda*, and northern gannet *Morus bassanus*). The (small) possibility that these extensions would not be adequate to include other species (notably gulls) should demand a cautious approach at this stage and identification of boundaries for other species should be contingent on further consideration or survey.

- 3.5 The Marine Natura 2000 Project Group agreed that an assessment be made of the necessity or otherwise for future consideration or survey for all other seabird species with regard to the issue of extension of existing SPAs for non site-specific use.
- 3.6 The Marine Natura 2000 Project Group recognised that while the guidance for the four species above could be finalised, that for other species depends on further work.
- 3.7 One consultee suggested that future management of sites need to be considered when identifying the boundary extensions. However, the Marine Natura 2000 Project Group reaffirmed that identification of site extensions should be based on the best available science.
- 3.8 One consultee recommended that extensions to sites should be greater than needed in order to accord protection immediately outside sites. The Marine Natura 2000 Project Group noted that such protection is already accorded within the terms of the Regulations implementing the Birds and Habitat Directives in territorial waters.
- 3.9 RSPB queried again why their generic radius approach had not been applied to the issue; the Marine Natura 2000 Project Group considered that this had been addressed previously; insufficient or low resolution information only was available on distances from the colony at which seabirds were to be found during the breeding season and in any case this suggestion pertained for the most part to foraging birds.
- 3.10 Fieldwork in support of SPA boundary extensions will continue in spring/summer with at-sea surveys around the Northern Isles and a radio-tracking study of Manx shearwaters around Skomer.
- 3.11 Committee is invited to re-affirm its general guidance that existing SPAs at which Atlantic puffin *Fratercula arctica*, common guillemot *Uria aalge* and razorbill *Alca torda* are designated features for SPAs be extended into the marine environment by 1 km and that guidance for the seaward boundaries of SPAs for which northern gannets *Morus bassanus* are a designated feature be extended into the marine environment by 2 km.

#### 4. Other SPAs in marine areas

- 4.1 Following the successful recommendation on the boundary of the Carmarthen Bay potential SPA, similar analyses in support of identifying a boundary for a possible SPA in the Firth of Tay area are due for completion in March 2003. Dependent on the results of these, it is hoped to develop generic guidelines for the boundary identification of SPAs for concentrations of seabirds in similar sites in the non-breeding season.
- 4.2 A list of such similar sites that should be assessed for further consideration as possible SPAs is currently being compiled in association with the country conservation agencies.

- 4.3 In association with the RSPB and the Wildfowl and Wetlands Trust, aerial surveys are being conducted in three areas that are the subject of a DTI Strategic Environmental Assessment in respect of windfarm development. On completion of the Tay analyses, work will focus on these areas with a view to identifying possible SPAs for non-breeding season concentrations of seabirds, starting with Liverpool Bay.
  - 4.4 In addition to seaduck, divers and grebes, surveys are also being undertaken in these three SEA areas in order to identify possible SPAs for feeding terns.
  - 4.5 A full winter (2003/2004) gull roost survey is scheduled that may identify SPAs for gulls.
5. **Guidance on defining boundaries for marine SACs for Annex I habitat sites fully detached from the coast**
- 5.1 Guidance on defining boundaries for marine SACs for Annex I habitat sites fully detached from the coast was prepared by JNCC staff based on the draft guidance in the paper to Committee's September 2002 meeting (JNCC 02 P17), and comments made on this at the inter-agency Marine Natura 2000 Project Group meeting on 25<sup>th</sup> September 2002.
  - 5.2 The documents were sent out as detailed in sections 2.1 and 2.2. Nineteen substantive responses were received, from the 29 who replied (including a few late responses received up to mid February).
  - 5.3 The general flavour of the responses was positive, indicating support for simple, pragmatic boundaries based on straight lines joining latitude/longitude co-ordinates. Support was also expressed from a number of respondees for the principle of taking into account, during boundary definition, the depth of water at the site and those activities likely to affect seabed habitats. Two respondees indicated that this would be best agreed through consultation on individual site boundaries. A number of comments indicated that this should be made explicit in the guidance, rather than included as an explanation, and that it should consider all activities likely to affect seabed habitats.
  - 5.4 North Western and North Wales Sea Fisheries Committee agreed with the principle of taking account of water depth and activities likely to affect seabed habitats at such sites, but expressed concern that this may be legally flawed, mentioning UK and ECJ court rulings. The European Commission are in favour of practical boundaries and ones which would be least likely to cause confusion for sea users and enforcement problems. The Commission, and also Defra, prefer that we adopt boundaries which take account of water depth and trawl warp lengths, and foresee no legal problems in this regard.
  - 5.5 The Marine Natura 2000 Project Group meeting on 7 February 2003 considered those responses to the guidance which had been received by that time. After discussion, the group concluded that the guidance should be edited to take account of the comments outlined in paragraph 5.3 above.

5.6 The revised guidance is attached as Appendix 1. Committee is invited to **agree** the revised guidance on defining boundaries for marine SACs for Annex I habitat sites fully detached from the coast, and to submit it for discussion at a forthcoming meeting of the EU Habitats Committee Scientific Working Group marine sub-group.

6. **Offshore habitat SACs selection criteria, and guiding principles for selecting sites and site assessment**

Selection criteria and guiding principles for selecting sites

6.1 Site selection criteria for Annex I habitats are prescribed by Annex III of the Habitats Directive, and are listed in Table 1 below along with guiding principles in the Directive's text and agreed at the 1994 Atlantic Biogeographical Region meeting.

**Table 1. Summary of site assessment criteria and additional principles used for site selection in the UK (from McLeod *et al*, 2002)**

<b>Site assessment criteria (Annex I habitats)</b>	<b>Reference</b>
Representativity	Annex III Stage 1A(a); Article 1e; Conclusions of 1994 Atlantic Biogeographical Region Meeting (para.4)
Area of habitat (Relative surface)	Annex III Stage 1A(b); Article 1e; Conclusions of 1994 Atlantic Biogeographical Region Meeting (para.4)
Conservation of structure and functions	Annex III Stage 1A(c); Article 1e
Global assessment	Annex III Stage 1A(d)
<b>Additional principles</b>	
Priority/non-priority status	Article 1d; Annex III Stage 1D; Conclusions of 1994 Atlantic Biogeographical Region Meeting (para. 3)
Geographical range	Article 1e and 3.1
Special UK responsibilities	Article 3.2; Conclusions of 1994 Atlantic Biogeographical Region (para. 6)
Multiple interest	Annex III Stage 2.2(d); Conclusions of 1994 Atlantic Biogeographical Region Meeting (para. 2)
Rarity	Conclusions of 1994 Atlantic Biogeographical Region Meeting (para. 5)

## Assessing areas of Annex I habitat against the selection criteria and principles

### 6.2 *Representativity and geographical range*

- i. A suite of sites for each Annex I habitat should, ideally, cover the geographical and ecological range of variation present in the territory of the Member States. This can be achieved by looking at prospective sites, firstly in terms of the geographic location of areas of habitat in UK waters, and secondly in terms of their physical and ecological characterisations.
- ii. Assessment in terms of geographic location can be achieved utilising the biogeographic regions being developed under Defra's Review of Marine Nature Conservation (RMNC) in their work on 'Regional Seas'. The most recent version of these 'Regional Seas' (which have regard to English Nature's Natural Areas) is shown in Figure 1 as Sea Areas.
- iii. Assessment in terms of physical and ecological characteristics can utilise topographic form, structural character and substratum type, as is most appropriate to the habitat under consideration.

### 6.3 *Area of habitat, conservation of structure and function, and global assessment*

These selection criteria are currently much harder to apply in the offshore marine environment due to uncertainty about the extent of the habitat across prospective sites and the relationships between the habitat and adjacent areas of seabed. In Sections 7 to 9 below, the methodology used to apply the selection criteria and guiding principles is summarised for the three Annex I habitat types occurring in the offshore environment.

### 6.4 *Priority/non-priority status, UK responsibility and rarity*

None of the Annex I habitats occurring in the offshore environment is a priority habitat, and neither the special UK responsibilities nor the rarity principles apply to the *Sandbanks which are slightly covered by seawater all the time* or to *Reefs* habitats. It is possible that the UK has special responsibility for the *Submarine structures made by leaking gases* habitat, and also that this habitat may be considered rare.

### Availability of data for habitat identification and assessment

- 6.5 Potential Annex I habitat has been identified using the British Geological Survey (BGS) seabed sediment dataset which has been modelled from point surveys, bringing an inherent level of uncertainty to the areas identified. In some areas, further survey has been conducted which can 'ground truth' the BGS data and confirm the presence of Annex I habitat.

- 6.6 In some cases, survey has also provided biological information about the areas of Annex I habitat, although such biological information is patchy. JNCC has spent considerable effort collating biological information about these areas from the range of available sources. The European Seminar on offshore Natura 2000 sites hosted by Defra in June 2002 concluded that “the need for biological data for SAC identification was widely recognised”, but did not reach a conclusion on the level of biological data needed to select a site.
- 6.7 In this paper, the test for whether there is sufficient biological information to make an assessment against the selection criteria has been set at whether biological data is sufficient to provide a picture of the community present on the Annex I feature, while information which is confined to a few easily-observed species is deemed insufficient to make an evaluation. This issue is discussed further in Section 10.
- 6.8 Applying the foregoing process to the areas of Annex 1 habitat identified in the 12-200 n mile zone, it is currently possible to allocate areas to one of two groups as follows:

*Group 1*

Areas of habitat can be allocated to Group 1 where:

- i. presence of Annex I habitat has been confirmed;
- ii. sufficient biological information is available to satisfy the test described in paragraph 6.7; and
- iii. sites of this character do not occur in territorial waters (0-12nm).

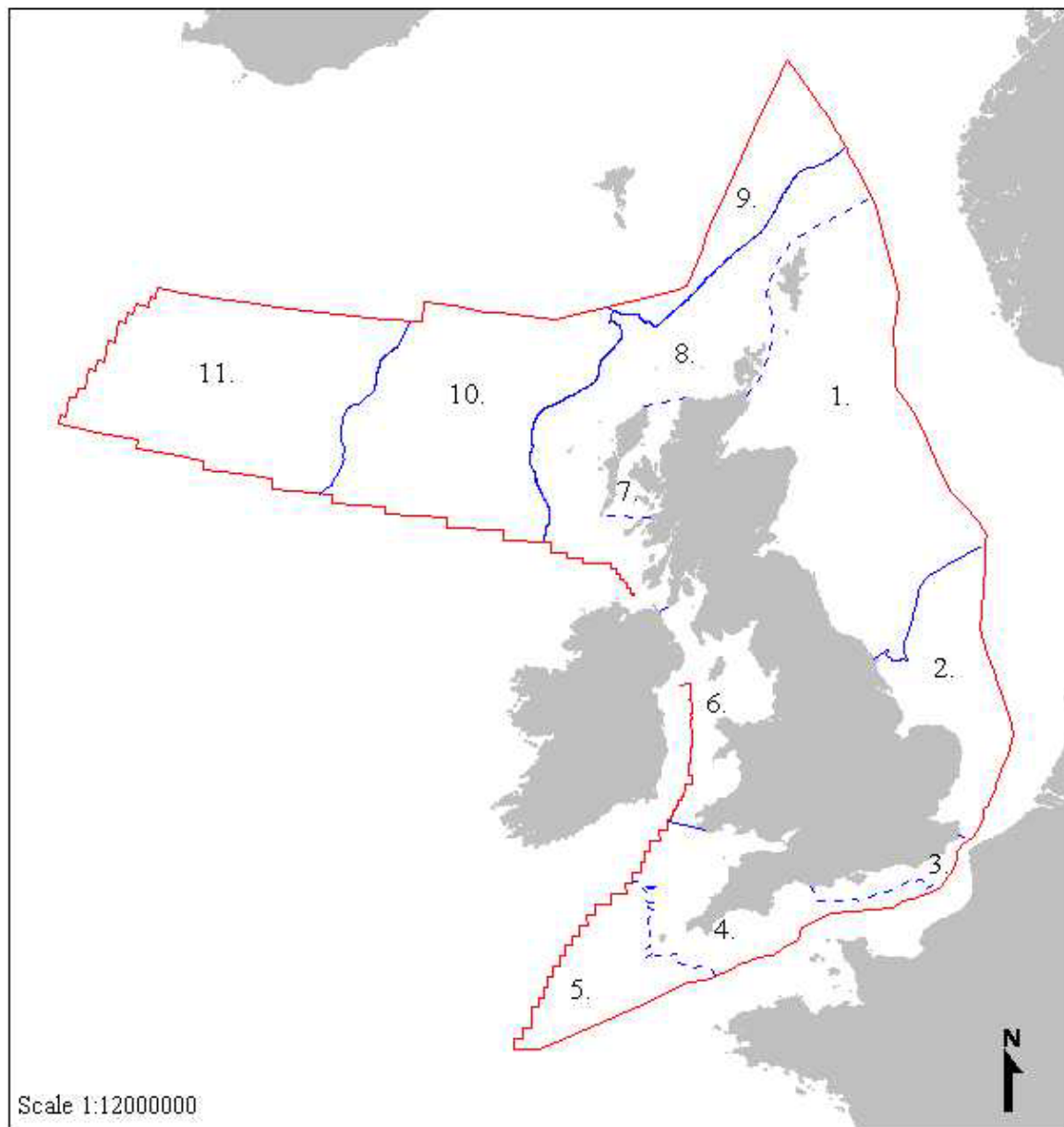
*Group 2*

Areas of habitat are allocated to Group 2 where either:

- i. conditions in i. and ii. above are fulfilled, but areas of similar habitat character may occur within territorial waters, and therefore assessment will need to be carried out jointly with country conservation agencies; or
- ii. the condition in i. above is satisfied, but insufficient biological information exists; or
- iii. survey is required to confirm the presence of Annex I habitat.

Sites will need to be selected from Group 2 as well as areas of habitat in Group 1 to fully represent the range of marine habitat types under Annex I of the Directive in UK waters.

**Figure 1** Sea areas used to determine a representative suite of sites for Annex I habitat interest features (numbers correspond to the list below.



**Key**

- Land
- UK Continental Shelf Designated Areas
- Sea area limit
- Sea area limit (location under discussion)

World Vector Shoreline © US Defense Mapping Agency.

The exact limits of the UKCS are set out in orders made under section 1(7) of the Continental Shelf Act 1964 (© Crown).

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>1. Northern North Sea</li> <li>2. Southern North Sea</li> <li>3. Mid and eastern English channel</li> <li>4. Mid and western English Channel &amp; Celtic sea</li> <li>5. South west approaches</li> <li>6. Irish Sea</li> <li>7. The Minches</li> </ul> | <ul style="list-style-type: none"> <li>8. Continental shelf and shelf break north and west of Scotland</li> <li>9. Faroe-Shetland Channel</li> <li>10. Rockall Trough and bank</li> <li>11. North west approaches west of Rockall</li> </ul> |
|---|--|

## 7. Sandbanks which are slightly covered by sea water all the time

7.1 This habitat is defined in the Interpretation manual (EC, 1999) and is clearly orientated towards inshore waters. In offshore waters, the habitat type has been taken to include areas of sandy sediment (according to the Folk classification used by BGS) in less than 20 metres of water which are elevated from the surrounding seabed, together with the seabed around these areas necessary to preserve structure and function of the unit.

### 7.2 Representativity and geographical range

i. The first step in achieving a representative suite of sandbank sites in UK waters is to identify where Annex I sandbank habitat is present within each sea area. This has been done using the areas of sandy sediment identified from BGS seabed sediment maps (Johnston *et al*, 2002).

ii. The second step is to identify, within each sea area, sandbanks of different topographic types. The following topographic types have been identified as being present in UK waters:

- sandy mounds; and
- the following tidal current sandbank types (from Dyer & Huntley, 1999):
 

Type 1	open shelf ridge sandbanks
Type 2	estuary mouth sandbanks
Type 3	headland associated banks

Of these topographic forms, only sandy mounds and Type 1 tidal current sandbanks are found in UK offshore waters (the outer banks in the Thames estuary were Type 2 but have been sufficiently modified by open shelf currents to be considered as Type 1, Dyer & Huntley, 1999).

iii. The third step is to sub-divide the sandbanks by gross sediment type of the bank. Sediment composition (according to the modified Folk classification used by BGS) is known for each bank using the 1:250,000 BGS seabed sediment data (Graham *et al*, 2001a). Sediments in Annex I sandbank habitat can range from gravelly sand to muddy sand (Johnston *et al*, 2002).

7.3 Areas identified as being within the scope of this Annex I habitat have been assigned to sea area, topographic type and gross sediment type. This information is shown in Table 2.

7.4 To present an overview of the knowledge held and overall quality of the areas under consideration (including factors such as area, structure and function and global assessment), a summary paragraph for each of the areas listed on Table 2 is given in Appendix 2.

**Table 2 Sandbank groups in UK offshore waters and their character**

Sea area	Sandbank group	Topographic type		Sediment		
		Sandy mound	Open shelf ridge	Gravelly sand	Sand	Muddy sand
Southern North Sea	Norfolk sandy mounds	✓		✓		
	Haddock Bank		✓	✓	✓	
	Dogger Bank	✓		✓	✓	
	North Norfolk sandbanks (Indefatigable, Swarte, Broken, Well, Inner, Ower and Leman banks)		✓		✓	
	Haisborough Tail, Hewett Ridges, Hammond Knoll & Smiths Knoll		✓		✓	
	North and South Falls		✓		✓	
	Galloper		✓		✓	
	Inner Gabbard		✓		✓	
	Outer Gabbard		✓	✓		
Mid and eastern English channel	Bassurelle		✓		✓	
Irish Sea	King William Bank		✓	✓	✓	
	Isle of Man sandy mound	✓			✓	✓

### Developing a site series for sandbanks

- 7.5 Taking into account the information summarised above in Table 2 and Appendix 2, it is possible to determine which areas wholly in UK offshore waters can be considered against Annex III selection criteria immediately (group 1) and those which require new survey or consideration in collaboration with country conservation agencies before an assessment against the selection criteria can be made (group 2). Group 1 includes those areas wholly in UK offshore waters for which sufficient data are held (confirmed presence of habitat with knowledge of sub-type and information on faunal communities present) to assess the area against selection criteria, and also where there is no comparative area of habitat within territorial waters.
- 7.6 The full list of group 1 and group 2 sandbank areas is given in Table 3. Haddock Bank is discarded at this stage due to the level of infrastructure on the bank affecting the naturalness of the site.
- 7.7 Two areas of habitat have sufficient data to qualify as group 1 for this habitat. These are Dogger Bank and the North Norfolk Sandbanks.
- i. *Dogger Bank*  
The Dogger Bank is the most extensive sandy mound in UK waters and, depending on how the extent of the bank is judged, extends into Dutch, Danish and German waters. It is representative of moderately mobile clean sand habitat with a community characterised by amphipods *Bathyporeia* spp., bivalve *Fabulina fabula* and a variety of polychaete species (DTI, 2001). Despite partial degradation due to bottom trawling activity and some permanent oil and gas infrastructure the prospect of maintaining the structure is good and restoration of some communities may be possible. Fishing pressure is moderate to low (CEFAS, pers. comm).
  - ii. *North Norfolk sandbanks*  
These banks are the most extensive examples of linear sandbanks with sand sediment in UK waters and are confined to offshore waters. Large sandwaves are present on the inner banks, with size dissipating with increased distance from shore (Graham *et al*, 2001a). Preliminary data from the oil and gas industry's Strategic Environmental Assessment 2 (SEA2) survey show that the community is characterised by heart urchin *Echinocardium cordatum*, bivalve *Fabulina fabula* and sandeels (DTI, 2001); further detail from the SEA2 survey should become available shortly. Despite large amounts of oil and gas industry activity around the banks, the actual slopes and ridges of the banks are not largely built upon with the seabed around Leman, Ower and Inner banks, in particular, less heavily built upon. Broken and Swarte banks and the inner two Indefatigable banks are more heavily built around with the outer Indefatigable banks again having less infrastructure around them. Fishing pressure is moderate to low (CEFAS pers. comm).

**Table 3 Development of a site series for Annex I sandbank habitat (sea areas are restricted to those with water depths of less than 20m present). \* Denotes group 2 area of habitat needing consideration in collaboration with country conservation agency only.**

Sea area	Topographic type	Sediment type	Sandbank area	Sufficient data held to assess against selection criteria?	Comparative area in territorial waters?	Group
Northern North sea	Sandy mound	All sediment types	No representation in offshore	-	-	-
	Open shelf ridge	All sediment types	No representation in offshore	-	-	-
Southern North sea	Sandy mound	Gravelly sand and sand	Dogger Bank	Yes	No	1
		Gravelly sand	Norfolk sandy mounds	No	Yes	2
		Muddy sand	No representation in offshore	-	-	-
	Open shelf ridge	Sand	North Norfolk Sandbanks (Indefatigable, Swarte, Broken, Well, Inner, Ower and Leman banks)	Yes	No	1
			Haisborough Tail, Hewett Ridges, Hammond Knoll & Smiths Knoll	Yes	Yes	2*
Open shelf ridge	Gravelly sand and sand	Inner Gabbard, Galloper, North and South Falls	No	Yes	2	
		Haddock Bank	Yes, poor representative	No	Discard	
Mid and eastern English channel	Sandy mound	All sediment types	No representation in offshore	-	-	-
	Open shelf ridge	Sand	Bassurelle	No	Yes	2
		Gravelly sand	No representation in offshore	-	-	-
Mid and western English Channel & Celtic sea	Sandy mound	All sediment types	No representation in offshore	-	-	-
	Open shelf ridge	All sediment types	No representation in offshore	-	-	-
Irish Sea	Sandy mound	Sand and muddy sand	Isle of Man sandy mound	No	Possibly	2
		Gravelly sand	No representation in offshore	-	-	-
	Open shelf ridge	Gravelly sand and sand	King William Bank	No	Possibly	2
Continental shelf & break N & W of Scot.	Sandy mound	All sediment types	No representation in offshore	-	-	-
	Open shelf ridge	All sediment types	No representation in offshore	-	-	-

