

**Natura 2000 in UK Offshore Waters:
Advice to support the implementation of the EC Habitats
and Birds Directives in UK offshore waters**

JNCC Report 325

by

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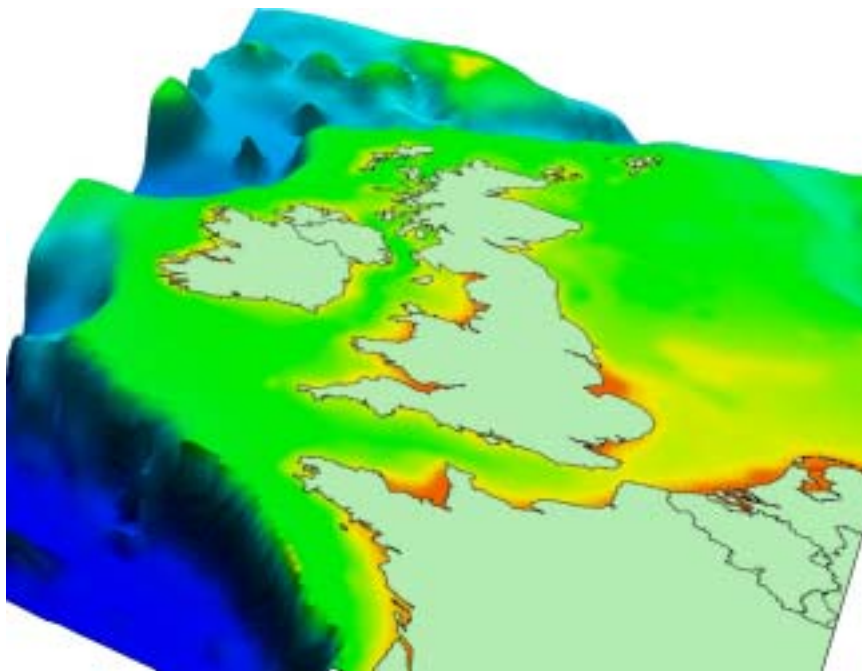


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This report represents the outcome of the research project ‘Advice to support the identification of offshore marine Special Areas for Conservation and Special Protection Areas’ undertaken by the Joint Nature Conservation Committee for the UK Department for Environment, Food and Rural Affairs (formerly DETR) and the UK Department of Trade and Industry. The report has been prepared by officers of the JNCC in accordance with the requirements of the Agreement and guidance provided by the Steering Group, and with the assistance of the Technical Operational Group, but has not been formally considered or endorsed by the Joint Committee.

Preface

This report is the conclusion of nearly two years of assessment necessary to inform the selection of Natura 2000 sites in UK sovereign waters beyond territorial seas. The work has been undertaken as part of UK action to implement both the Wild Birds Directive (79/409/EC) and the Habitats Directive (92/43/EC).

The two Directives are already applied on land and to the limit of territorial waters. The UK Government has committed itself to implementing both Directives beyond territorial waters where it exercises sovereign rights. To achieve this the following steps are expected:

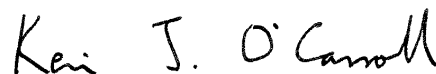
- a. UK legislation introduced to extend the implementation of the Habitats and Birds Directives to UK offshore waters (in progress, due late 2002).
- b. The Joint Nature Conservation Committee (JNCC) will advise the UK Government of proposed list(s) of possible Natura 2000 sites.
- c. Department for Environment, Food and Rural Affairs (DEFRA) will consult on proposed sites.
- d. DEFRA will submit proposed Special Areas of Conservation and Special Protection Areas to the EC.

The work undertaken to prepare this report was commissioned in June 2000 jointly by, the then, Department of the Environment, Transport and the Regions (now DEFRA) and the Department of Trade and Industry to inform the first two steps identified above. The timescale for completion of step b) and steps c) and d) above will depend on progress following issue of this report.

The report and the conclusions that it contains are the first step in the process of site identification and further work will be required within the UK and with other Member States to enable the identification of Natura 2000 sites across European Union waters. This report is being made widely available to stimulate this process and to assist those with an interest in participating in an open and transparent site selection process. It is anticipated that its conclusions will be discussed in the European area at a seminar to be held in June 2002.



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List of Abbreviations

AFEN	Atlantic Frontier Environmental Network
BGS	British Geological Survey
BTO	British Trust for Ornithology
BIOMOR	Benthic Biodiversity in the Southern Irish Sea Project (bioleg - biology and môr - sea)
CCW	Countryside Council for Wales
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CPUE	Catch per unit effort
cSAC	candidate Special Area of Conservation (i.e. submitted to European Commission)
DEFRA	Department for Environment, Food and Rural Affairs
DETR	Department for the Environment, Transport and the Regions (dissolved 7.6.01 and succeeded by DEFRA and DTLR).
DOE(NI)	Department of the Environment (Northern Ireland)
DTI	Department of Trade and Industry
DTLR	Department of Transport, Local government and the Regions
EC	European Commission
EN	English Nature
ESAS	European Seabirds at Sea
ENAW	Eastern North Atlantic Water
EUNIS	European Nature Information System
GIS	Geographical Information System
IBA	Important Bird Area
ISSIA	Irish Sea Seabed Image Archive
JNCC	Joint Nature Conservation Committee
LOIS	Land-Ocean Interaction Study
MCC	Marine Classification Criterion (Skov <i>et al.</i> 1995)
MNCR	Marine Nature Conservation Review
MOD	Ministry of Defence
NAW	National Assembly for Wales
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SE	Scottish Executive
SEA2	Strategic Environmental Assessment 2 (2001)

SMRU	Sea Mammal Research Unit
SNH	Scottish Natural Heritage
SOC	Southampton Oceanography Centre
SPA	Special Protection Area
SWISS	South West Irish Sea Survey
UKCS	United Kingdom Continental Shelf
WASP	Wide Angle Seabed Photography
WeBS	Wetland Bird Survey
WWT	Wildfowl and Wetlands Trust

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Summary

Selection of SACs and SPAs in the UK has so far been confined to terrestrial sites and within UK territorial seas. As a result of a UK court judgement in 1999, the UK Government is taking steps to implement the Habitats Directive in offshore waters and has also agreed to take parallel steps to apply the requirements of the Birds Directive to all relevant marine waters. The UK offshore area in the context of this report refers to the area from the 12 nautical mile territorial seas limit out to the UK Continental Shelf designated areas limits.

This report represents the outcome of work carried out by JNCC, on behalf of UK Government, to provide information necessary to identify those areas in UK offshore waters that may contain species or habitats for which sites are required to be considered as possible SACs or SPAs. This work has not been directed at consideration of inshore marine sites, and it is not intended that it should directly result in any amendments to existing inshore candidate SACs. However, the report presents some information relevant to the selection of inshore SACs and SPAs.

Habitats Directive Annex I habitats in the UK offshore area

Four habitat types listed on Annex I to the Habitats Directive are known to or potentially occur in UK offshore waters:

- Sandbanks which are slightly covered by sea water all the time
- Reefs
- Submarine structure made by leaking gases
- Submerged or partially submerged sea caves

The habitat definitions used for inshore marine SAC selection are applicable, with minor clarification of national interpretation, to habitats found in UK offshore waters. Submarine structures made by leaking gases are not found in UK inshore waters, and further work will be required to determine if some UK examples of 'pockmarks' in offshore waters fit within the definition of this habitat type. The criteria and principles used for inshore and terrestrial SAC selection in the UK have been reviewed in relation to the possible occurrence of Annex I habitats in UK offshore waters and the identification of possible sites. These have been found to be applicable to habitats in UK offshore waters, and will be used during the site selection process.

The location and extent of areas of possible Annex I habitat in offshore waters have been mapped using existing BGS geological seabed map interpretations. Biological and other data available for potential Annex I habitat in UK offshore waters have been collated. Limited biological data are available for a number of areas of potential Annex I habitat. For a number of areas of potential Annex I habitat there are no biological data available.

Shallow sandbanks are found in UK offshore waters off north and north-east Norfolk, in the outer Thames Estuary, off the south-east coast of Kent and off the north-east coast of the Isle of Man. Reef habitat occurs in the English Channel, Celtic Sea, Irish Sea and west and north of Scotland extending far out into the North Atlantic; reef is scarce in the North Sea. In the northern North Sea, 'pockmarks' containing carbonate structures deposited by methane-oxidising bacteria occur, these structures may fit within the definition of the

Annex I habitat of ‘submarine structures made by leaking gases’. No sea caves have yet been identified in UK offshore waters. Several areas of potential Annex I sandbank and reef habitat in the UK offshore area extend into the offshore areas of other EU Member States, and inshore into UK territorial waters.

Habitats Directive Annex II species

There are four species listed on Annex II of the Habitats Directive known to occur in UK offshore waters for which selection of SACs will be considered:

- Grey seal (*Halichoerus grypus*)
- Common seal (*Phoca vitulina*)
- Bottlenose dolphin (*Tursiops truncatus*)
- Harbour porpoise (*Phocoena phocoena*)

For the two seal species, coastal SACs have already been proposed in the UK to protect their selected breeding colonies and moulting and haul-out sites, and three SACs have been proposed for bottlenose dolphin within UK territorial waters. The UK currently has no proposed SACs for harbour porpoise.

The criteria and principles used for SAC selection for Annex II species in UK inshore waters are reviewed, and issues which may be encountered during consideration of areas as possible SACs are identified. The above four species are typically wide ranging, thus making it difficult to identify specific areas which may be deemed essential to their life and reproduction, and which may, therefore, be considered for proposal as SACs.

Relevant information on the distribution of Annex II species in UK offshore waters is limited. Further analysis of data, and further survey in some cases, will be required to identify any areas in UK waters away from the coast which may qualify as SACs for these species.

Birds Directive Annex I and migratory species

The consideration of marine SPAs in this report is set within the wider context of the JNCC’s current work to identify marine SPAs from the coast to the limit of UK offshore waters. Three types of marine SPAs are being developed in the UK (for both inshore and offshore waters):

- Extensions to SPA breeding colonies;
- inshore areas used by birds in the non-breeding seasons (divers, grebes & seaduck);
- marine feeding areas.

Marine SPAs are being considered for 56 bird species which are either on Annex I of the Birds Directive or are migratory species which regularly occur in UK waters. This report primarily offers recommendations concerned with the identification of SPAs as marine feeding areas.

The Birds Directive does not specify criteria for the selection of SPAs. Guidelines on selection of SPAs previously issued by the JNCC are aimed at the selection of terrestrial and coastal sites. These guidelines will act as a good starting point for development or may need modification to be relevant for selection of SPAs in the marine environment.

Possible methods for selection of Natura 2000 sites for wide ranging mobile marine species

A number of the scientific difficulties encountered when attempting to identify areas suitable for consideration as SACs for wide ranging marine mammals are very similar to those encountered when attempting to identify areas for consideration as SPAs for wide ranging birds in the marine environment. The main difficulty in identifying potentially important areas which may qualify as SACs or SPAs for both groups, is in applying existing site selection criteria in an environment with no or few obvious natural boundaries, and to species which are widely dispersed, highly mobile and may be difficult to observe.

A brief review of three published methods that could be used to identify marine areas for both birds and Annex II species is presented. These involve identification of specific areas by: defining generic radii around existing land-based breeding colonies based on predicted foraging ranges; spatial analysis of data on distribution of the species at sea to identify areas of greater density of records for each species; and identification of particular habitat important to the species (e.g. sand areas used by sandeels, shelf break, ocean fronts).

‘Special measures’, to manage particular activities for particular species, could be applied either in addition to site identification, or where sites cannot be identified. Examples of special measures already in place are given and their applicability to Annex II species and Annex I and migratory bird species is discussed. Different groups of species will need to be addressed in different ways due to differences in data availability and differences in their distribution and behaviour at sea.

Conclusions

Annex I habitats in UK offshore waters

Before a list of possible offshore SACs can be proposed to the UK Government, decisions on the level of information necessary for an offshore area to be proposed as a SAC need to be made, including whether interpolated geological seabed data will provide sufficient information for SAC proposal. A number of habitat-specific site identification problems also require resolution:

- Distinction between areas of boulders and cobbles (i.e. stony reef) and of other gravel.
- Determination of site boundaries around suitable areas of widely distributed reef (e.g. iceberg ploughmark areas) in the absence of suitable data on their distribution.
- Determination of the location and extent of biogenic reefs.
- Determination of the full extent of shallow sandbanks and their associated sandy habitats (as opposed to the extent of sandy sediments in less than 20 m water depth) in UK offshore waters.
- Decision as to whether some UK examples of ‘pockmarks’ containing carbonate accretions fit the Annex I habitat definition of ‘submarine structures made by leaking gases’.

A number of these decisions would benefit from further consultation with other EU Member States, especially because some areas of potential Annex I sandbank and reef habitat extend across Member State boundaries. Any list of SACs proposed for UK offshore waters needs to complement the existing inshore site series. SAC site selection ought to follow a similar process to that used previously for inshore, coastal and terrestrial sites.

Habitats Directive Annex II species

Data on distribution of seals (particularly common seals *Phoca vitulina*) at sea in UK waters are very sparse. From examination of the limited data currently available, it may be possible to identify preferred feeding areas for seals in UK inshore and offshore waters. If such areas can be identified, it remains to be established whether they would be considered areas 'essential to the life and reproduction' of the species, and consequently whether they should be considered as possible SACs. Where sites cannot be identified, or in addition to site identification, further special measures may be required to ensure the conservation of the species.

A recent map showing distribution of bottlenose dolphin in NW European waters indicates that this species is not widely distributed in UK waters. However, spatial analysis of distribution data for bottlenose dolphin in UK offshore waters may indicate areas of elevated population density in addition to those already identified as SACs in UK inshore waters. If such areas can be identified, they may then be considered against the criteria for SAC selection. Where sites in UK offshore waters cannot be identified, or in addition to site identification, further special measures may be required to ensure the conservation of the species.

UK is currently examining data for all UK waters to try to identify specific areas where harbour porpoise may have:

- Continuous or regular presence;
- elevated population density; or
- areas with good adult to young ratio.

If such specific areas can be identified, and where they are deemed essential to the life and reproduction of the species, they should be considered as SACs. Where sites cannot be identified, or in addition to site identification, further special measures may be required to ensure the conservation of the species.

Birds Directive Annex I and migratory species

The list of Birds Directive Annex I and regularly occurring migratory species which occur in UK marine waters consists of groups of birds with very different dispersion patterns, some of which breed in the UK, and some of which are only found in UK waters at certain times of year. Therefore, in order to identify areas that may qualify as SPAs, the bird species must be sub-divided into groups that follow similar distribution patterns. Work is already in progress to identify seaward extensions to existing breeding colony SPAs for those species that breed at coastal sites in the UK. Progress is also being made on identification of important inshore marine areas in the UK for aggregations of birds in the non-breeding seasons, including for divers, grebes and seaduck.

Consideration of possible methods of identification of the most suitable areas for feeding seabird species in UK waters has been initiated, including a preliminary analysis of data from the European Seabirds at Sea database. The preliminary analysis indicates that the list of Annex I and migratory birds splits logically into four groups, according firstly to the data available for each species, and secondly, to their distribution at sea. The first group consists of those species that are adequately represented in the European Seabirds at Sea database, and for which spatial analyses could be performed to identify areas of high density. The second consists of those species with few records in the database, for which spatial analyses of these data would not be appropriate. These two groups then naturally each split into those species which occur primarily inshore (from the coast to 15 km or approximately 8 nautical miles), and those species which occur primarily offshore (greater than 15 km from the coast).

Further data analysis and consideration is required to determine whether SPAs for feeding areas for these four groups of species can be identified. If this is possible, such areas should be considered against the JNCC SPA selection guidelines. Modification of JNCC SPA selection guidelines or development of marine SPA guidelines will proceed in parallel to the work on identifying areas as possible marine SPAs.