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JOINT NATURE CONSERVATION COMMITTEE

MARINE NATURA 2000 – RECOMMENDATIONS FOR THE EXTENSION OF EXISTING SEABIRD (COLONY) SPECIAL PROTECTION AREAS INTO THE MARINE ENVIRONMENT

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1. Introduction and background

1.1 The identification of marine Special Protection Areas (SPAs) for Birds Directive Annex I and migratory species is being taken forward by JNCC in three ways:

i. extensions to existing marine bird breeding colony/site SPAs;

ii. identification of important inshore areas used by waterbirds usually outside the breeding season; and

iii. identification of important offshore areas used by marine birds.

This paper addresses the first of these and develops the approach first discussed by Committee at the March 2000 meeting (JNCC 00 P04), further commented upon at the September 2002 meeting (JNCC 02 P17), and initial recommendations from which were agreed by Committee at the March 2003 meeting (JNCC 03 P01).

1.2 Certain seabird species make extensive use of the waters around their breeding colonies for a variety of purposes, including feeding, courtship, and the performance of maintenance activities such as washing and preening. All individuals of these species, already protected in breeding colony SPAs, are expected to use these waters. It is important therefore that the limits of these SPAs be extended to include those adjacent sea areas used extensively by the birds.

1.3 Recommendations made to date for SPA colony extensions were based on the results of at-sea surveys of seabird dispersion made around a sample of colonies. Generic guidance was developed from analyses of the dispersion of those birds engaged in non-site specific behaviours, for example maintenance activities. Guidance based on the dispersion of birds engaged in site-specific behaviour, for example feeding, was deemed unsuitable for generic application to all SPAs at which the relevant species are protected.

1.4 These recommendations, agreed by Committee (JNCC 03 P01), are that existing SPAs for which Atlantic puffin *Fratercula arctica,* common guillemot *Uria aalge,* and razorbill *Alca torda* are designated features be extended into the marine environment by 1 km, and that existing SPAs for which northern gannet *Morus bassanus* is a designated feature be extended into the marine environment by 2 km.

1.5 All work in support of these recommendations and the recommendations themselves have been discussed and endorsed by the inter-agency/Government Marine Natura Project Group. Also, the approach, results and recommendations have been considered by and further developed in the light of feedback from the SPA Ramsar Scientific Working Group, which includes NGO representation.

2 Further work on possible SPA extensions for seabirds

2.1 In addition to the above four species there are several other seabird species for which extensions to existing SPAs might be appropriate. A comprehensive assessment and review of the future requirements for possible SPA extensions for these, generically determined or otherwise, has been made, and recommendations follow herein. These assessments have been made variously by further fieldwork, analysis, and/or literature review.

2.2 The seabird species that were deemed appropriate for further analyses and/or consideration for possible SPA extensions are: northern fulmar *Fulmarus glacialis*, Manx shearwater *Puffinus puffinus*, European storm-petrel *Hydrobates pelagicus*, Leach's storm-petrel *Oceanodroma leucorhoa*, great cormorant *Phalacrocorax carbo*, European shag *Phalacrocorax aristotelis*, Arctic skua *Stercorarius parasiticus*, great skua *Catharacta skua*, Mediterranean gull *Larus melanocephalus,* black-headed gull *Larus ridibundus*, common gull *Larus canus*, lesser black-backed gull *Larus fuscus*, herring gull *Larus argentatus*, great black-backed gull *Larus marinus*, black-legged kittiwake *Rissa tridactyla*, Sandwich tern *Sterna sandvicensis*, roseate tern *Sterna dougallii*, common tern *Sterna hirundo*, Arctic tern *Sterna paradisaea*, and little tern *Sterna albifrons*.

2.3 Each of these species has a coastal breeding distribution in the United Kingdom (although some also have significant inland breeding populations), and are regularly occurring migrants in terms of the Birds Directive; the storm-petrels, terns, and the Mediterranean gull are Annex I species. They will each be considered individually or as groups:

i. ***Northern fulmar*** Fulmars forage at considerable distances from their colonies during the breeding season. They were recorded performing maintenance behaviours around colonies studied in 2001, but in smaller numbers than gannets, guillemots, razorbills and puffins. Such relatively small numbers suggested initially that the species might not be ecologically dependent on waters adjacent to their colonies. This tentative conclusion was based on few data, however, so additional fieldwork was undertaken around and within Rathlin Island SPA in

2002, and around Fetlar SPA in 2003. Modelling and other analyses of the data, similar to previous work on the auks and the gannet, indicated highest densities of fulmars performing non-site-specific behaviours, out to 2 km from the colony (McSorley *et al*. 2005). We recommend, therefore, that the boundaries of all breeding colony SPAs for which northern fulmar is a designated feature be extended by 2 km into the marine environment.

ii. ***Manx shearwater*** Towards dusk and prior to visiting their breeding sites, individuals of this species form large "rafts" on the waters around the breeding colonies. Boat-based or aerial surveys are impractical for assessing the extent of these flocks so we studied this by radio-tracking a sample of individuals at three of the four UK SPAs for which the species is a designated feature. We studied birds around Skomer in 2003, around Rum in 2004, and around Bardsey in 2005; fieldwork at St Kilda was deemed impractical. Using kernel analysis, we determined the distances from the colonies at which areas of greatest use made by the birds occurred. These were 4 km (Skomer), 6 km (Rum), and 9 km (Bardsey). There seems, therefore, to be relatively consistent ecological dependence on the waters around SPA breeding colonies, between years and between colonies, of at least 4 km (McSorley *et al*. in press). We recommend, therefore, that the boundaries of all colony SPAs for which breeding Manx shearwater is a designated feature (including St Kilda) be extended by at least 4 km into the marine environment. If future investigation suggests it, then existing SPA boundaries for this species may be extended even further.

iii. ***Storm-petrels*** There is no evidence that either of the storm-petrel species that breed in the United Kingdom, Leach's storm-petrel and European storm-petrel, uses the waters adjacent to their colonies to any significant extent. Storm-petrels have never been recorded forming "rafts" off the colonies in the way that shearwaters do (Warham 1990). Guidance, generic or otherwise, for colony extensions is therefore inappropriate. However, the possible use made by Madeiran storm-petrels *Oceanodroma castro* of waters around their colonies is the subject of a current study by partners in Portugal and Spain, the results of which will be used to inform a future re-assessment of the two species that occur in the United Kingdom. Meantime, we recommend that no extensions be made to boundaries of breeding colony SPAs at which either Leach's or European storm-petrel is an interest feature.

iv. ***Great cormorant*** At-sea surveys in 2001 around the Farne Islands SPA, and around the Firth of Forth Islands SPA, both of which include this species as an interest feature, indicated that very few individuals used the waters adjacent to the colonies, and certainly not in numbers sufficient to merit extension of existing colony SPAs (McSorley *et al.* 2003). We recommend that no extensions be made to boundaries of breeding colony SPAs for which the great cormorant is an interest feature.

v. ***European shag*** Surveys around three important shag colonies (two of which are SPAs) in 2001 indicated that the great majority of shag activity in the waters adjacent to the colonies were site-specific, i.e. foraging behaviour. Generic guidance for SPA colony extensions would therefore be inappropriate. However, for future work we have determined a method based on energetic/habitat modelling that might allow the identification of colony extensions (including possibly disjunct extensions) that would capture feeding concentrations of this species (Wanless *et al.* 1997). Meantime, we recommend that no generic extensions be made to boundaries of breeding colony SPAs at which the shag is an interest feature.

vi. ***Arctic and Great Skua*** Survey work around Fetlar in June 2003 indicated that skuas do not use inshore waters for maintenance activities to any great extent. Generic extensions to existing SPAs are therefore inappropriate for these species. Great skuas feed far from their breeding sites and although some foraging-related (site-specific) activity by Arctic skuas may take place near the breeding sites, extensions to SPAs for feeding concentrations of this species is not merited. We recommend that no extensions be made to boundaries of breeding colony SPAs for which either the great or the Arctic skua is an interest feature.

vii ***Mediterranean, black-headed and common gulls*** Mediterranean gulls and black-headed gulls may use waters adjacent to their colonies for maintenance and/or feeding. However, little or no research has been carried out on this (O'Brien, 2003), and use of marine waters adjacent to nest sites by Mediterranean gulls is unlikely to extend beyond the limits of existing SPAs for this species. No common gulls were recorded on the sea during surveys in 2002 around Rathlin Island, the only coastal SPA for the species in the UK. We recommend that no extensions be made to boundaries of breeding colony SPAs for which any of these gull species is an interest feature.

viii ***Lesser black-backed, herring and great black-backed gulls*** Surveys in 2001 around two lesser black-backed gull colony SPAs revealed that the species rarely performed maintenance activities in the waters off the colonies (McSorley *et al.* 2003). A literature review (O'Brien 2003) also suggested only infrequent and sporadic use of inshore waters by herring gulls for maintenance activity. Other survey work has revealed no evidence for the use of inshore waters by lesser and great black-backed gulls. We have concluded that any use of waters adjacent to breeding colonies by these species does not arise through ecological dependence of the species on these waters. We recommend that no extensions be made to boundaries of breeding colony SPAs for which any of these gull species is an interest feature.

ix ***Black-legged kittiwake*** At-sea surveys off four kittiwake SPA colonies in 2001 indicated that the species rarely engaged in maintenance activity. There was some evidence that kittiwakes performed maintenance activities in inshore waters to a greater degree in the pre-breeding season than later in the breeding season (McSorley *et al.* 2003) but a literature review (O'Brien, 2003) and further pre-breeding season survey work off one colony suggested that this was infrequent. Neither generic nor site-specific guidance for colony extensions for this species is inappropriate, and we recommend that no extensions be made to boundaries of breeding colony SPAs for which the kittiwake is an interest feature.

x ***Sandwich, Roseate, Common, Arctic and Little Tern*** No evidence has been found that these species make significant use of waters around their colony for maintenance activity (McSorley *et al.* 2003). Consequently, generic guidance for extension of colony SPAs for this purpose is not appropriate. We have proposed to conduct extensive surveys of the feeding distribution of terns in areas where there are breeding tern SPAs in order to identify possible hotspots; meantime, we recommend that no generic extensions be made to boundaries of breeding colony SPAs at which terns are an interest feature (though extensions may be made on a site-specific basis using available data on feeding usage for that site).

2.4 If at any time in the future information or data emerges that might suggest a re-assessment of the above recommendations in respect of seabird then such a re-assessment will be made.

3 Further work on possible SPA extensions for inshore breeding waterbirds

3.1 In addition to seabirds, several waterbird species were deemed appropriate for further analyses and/or consideration for possible SPA extensions. These were red-throated diver *Gavia stellata*, black-throated diver *Gavia arctica*, great crested grebe *Podiceps cristatus*, Slavonian grebe *Podiceps auritus*, and common scoter *Melanitta nigra*.

3.2 Red-necked phalarope *Phalaropus lobatus* was also considered given its Birds Directive Annex I status, although its reliance on the marine environment for feeding is largely restricted to outside the breeding season.

3.3 These species are migratory in the context of the Birds Directive, and the divers and the Slavonian grebe as well as the red-necked phalarope are on Annex I of the Directive. They will each be considered individually or as groups:

i. ***Red-throated diver*** Rather inconclusive fieldwork was carried out from 2003-2005 in Shetland in order to determine whether SPAs for foraging red-throated divers in the breeding season might best be identified using generic guidance on extensions to existing SPAs, or by identifying hotspots from boat-based surveys. Whether to continue

with the work is currently under discussion with SNH. At this time, we have no recommendations to make regarding possible extensions to breeding site SPAs for this species.

ii. ***Black-throated diver*** Black-throated divers breed in freshwater wetlands and feed almost entirely in freshwater habitats during the breeding season. Therefore, we recommend no boundary extensions to breeding site SPAs for which this species is an interest feature.

iii. ***Great crested and Slavonian grebe*** Grebes breed in freshwater wetlands and feed almost entirely in freshwater habitats during the breeding season. We recommend no boundary extensions to breeding site SPAs for which these species are interest features.

iv. ***Common scoter*** Common scoter breed in freshwater wetlands and feed entirely in freshwater habitats during the breeding season. We recommend no boundary extensions to breeding site SPAs for which this species is an interest feature.

v. ***Red-necked phalarope*** Red-necked phalaropes breed in wetlands and feed almost entirely in the terrestrial environment during the breeding season. We recommend no boundary extension to the single breeding site SPA for which this species is an interest feature.

3.4 Again, if at any time in the future information or data emerges that might suggest a re-assessment of the above recommendations in respect of waterbirds then such a re-assessment will be made.

4 Consultation on the recommendations

4.1 The recommendations on extensions to existing SPAs into the marine environment derive from extensive survey, analysis and research. A degree of expediency has been applied, of course, through resource and time constraints. All work has been endorsed by the Marine Natura Project Group, the inter-agency project steering group (with government representation) chaired by Professor Pentreath.

4.2 The scientific elements of the Marine SPA project, including those underpinning the colony extension recommendations, are assessed by the SPA and Ramsar Scientific Working Group. This group comprises country agency, government and NGO scientists, and it has endorsed the scientific approach, analytical methods and general ecological veracity applied in the work.

4.3 A Marine Natura Project Group paper (Webb 2005, MN2KPG9_8) addressing the rationale behind our recommendation on extensions to existing seabird and waterbird SPAs was placed on the JNCC website for public consultation in December 2004 over a period of two months.

4.4 The response to this consultation of Defence Estates was of a very general and supportive nature and resulted in no modification of the paper.

4.5 The only other response to the consultation, from the Royal Society for the Protection of Birds, and again very supportive, resulted in little modification of the MN2KPG9_8 paper. Some general observations on SPA policy, funding and timescale were not particularly relevant to the paper. Other comments drawing our attention to the need for further fieldwork, the existence of additional information, and the need for future reconsideration of some species in the light of these have been addressed and included as relevant caveats in the MN2KPG9_8 and the present papers.

5. References

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