



SPA SITE SELECTION DOCUMENT THE SCIENTIFIC CASE SUPPORTING SITE SELECTION Seas off Foula proposed SPA

June 2016

Joint Nature Conservation Committee

Version: 13

Contents

Introduction	1
Summary	1
Location and Habitats	2
Bird Survey Information	2
The European Seabirds at Sea database	2
Seabird Census and Seabird Monitoring Programme (SMP)	3
Tracking data from Foula SPA	3
Assessment against the UK SPA selection guidelines	3
Stage 1	3
Stage 2	6
Boundary delineation	8
Information on qualifying species	11
Great skua	11
Northern fulmar	13
Arctic skua	15
Common guillemot	16
Atlantic puffin	18
References	19
Annex 1: Citation	22
Annex 2: Evidence standards	23
Annex 3: Site Map	24

Introduction

This document forms part of the Joint Nature Conservation Committee's (JNCC's) advice to Marine Scotland on the proposed classification of the Seas off Foula proposed Special Protection Area (pSPA). It describes the scientific case supporting the protection of the qualifying features under the Birds Directive (2009/147/EC), including a description of the data, the methods used to identify the Seas off Foula pSPA as an important area for the qualifying features, a description of how the boundary was established, and an assessment of the available information on the qualifying features against the UK SPA selection guidelines (Stroud *et al.* 2001).

Special Protection Areas (SPAs) are a conservation measure under Article 4 of the Directive 2009/147/EC on the conservation of wild birds (Birds Directive) to protect rare and vulnerable bird species listed in Annex 1 of the Directive and regularly occurring migratory species. Article 4.1 states that "Member States shall classify in particular the most suitable territories in number and size as special protection areas for the conservation of these species in the geographical sea and land area where this Directive applies." At the moment, there is only a limited number of existing SPAs in the marine environment for seabirds, and particularly foraging areas offshore are not well represented in the previously classified SPAs. The Seas off Foula pSPA will therefore provide additional protection for great skua *Stercorarius skua* by safeguarding that key foraging areas remain accessible for this important species. In addition, the individual species comprising the seabird assemblage feature that occur in large numbers in the area will also benefit from the protection of their foraging areas.

A total of 106 bird species use UK waters, 44 occur regularly in sufficient numbers¹ that are eligible for protection in SPAs through the Birds Directive. As a result, UK administrations are required to classify SPAs which provide conservation measures through the protection of supporting marine habitats and prey for these Annex 1 and migratory species where appropriate. Over the last decade or so JNCC and the other statutory nature conservation agencies have jointly collected and collated data to support a UK-wide analysis to identify the most important marine areas for these species. The Seas off Foula pSPA was identified by these analyses and is proposed as part of a suite of marine protected areas for seabirds and waterbirds to fulfil the requirements of the Birds Directive in the marine environment.

Summary

The Seas off Foula pSPA surrounds and extends to the West of Foula in the Shetland Islands.

Seas off Foula qualifies under **Article 4.2** of the Birds Directive (2009/147/EC) by supporting regularly² occurring populations of European importance of the following migratory species, foraging at sea during the breeding season:

• great skua (Stercorarius skua),

¹ Defined as >50 individuals in UK waters each year, assessed based on expert judgement and records of the Birtish Birds Rarities Committee.

² For a definition of regularity see <u>JNCC Report 431</u>.

- northern fulmar (Fulmarus glacialis) as part of an assemblage,
- Arctic skua (Stercorarius parasiticus) as part of an assemblage,
- common guillemot (Uria aalge) as part of an assemblage, and
- Atlantic puffin (*Fratercula arctica*) as part of an assemblage.

Seas off Foula pSPA qualifies under **Article 4.2** of the Birds Directive (2009/147/EC) by supporting regularly³ occurring populations of European importance of the following migratory species, foraging at sea during the non-breeding season:

- great skua (Stercorarius skua) as part of an assemblage,
- northern fulmar (Fulmarus glacialis) as part of an assemblage, and
- common guillemot (*Uria aalge*) as part of an assemblage.

Location and Habitats

Seas off Foula proposed SPA (pSPA) is located in Scottish marine waters, north of the Scottish mainland and Orkney, and about 15 km west of Shetland. It covers 3,412 km² of inshore and offshore waters and encloses the island of Foula.

In the site, water depths range mainly between 50m and 150m; shallow areas with less than 50m depth occur only around Foula and 10km north of it, while depths of more than 150m are only reached in the northwest (see Figure 2). The medium and shallow parts of the area are therefore within a depth range which is favoured by sandeel (30-80m, Wright *et al.* 2000).

Different studies suggest that the site fully (Ellis *et al.* 2012), or at least in its southern extent (Coull *et al.* 1998), overlaps with low intensity spawning and nursery grounds of sandeels *Ammodytidae*. Sandeels form, beside discarded demersal fish and other seabirds, an important part of the diet of great skua (Furness and Hislop 1981; Votier *et al.* 2007).

The combined effect of currents and waves creates moderate-energy seabed environments in the west, and high-energy seabed environments the east of the site (McBreen *et al.* 2011). Seas off Foula comprises a mosaic of subtidal coarse sediments and moderate-energy circalittoral rock, with some sand and muddy sand habitats in the northwest (McBreen *et al.* 2011).

In addition, the Shetland-Orkney thermal front overlaps with Seas off Foula, suggesting that this feature might create relatively predictable foraging areas (Begg and Reid 1997).

Bird Survey Information

The European Seabirds at Sea database

The European Seabirds at Sea (ESAS) database is a collation of surveys of seabirds at sea, made for a wide range of purposes, in northwest European waters. It contains effort related data on seabirds, collected from ships and aircraft, using standardised methods described by Tasker *et al.* (1984), Webb and Durinck (1992) and Camphuysen *et al.* (2004). The data were used to identify the scale and location of hotspots for seabirds across the UK within the

³ For a definition of regularity see <u>JNCC Report 431</u>.

British Fishery Limit, based on data collected between 1980 and 2006. Further information on ESAS and the analytical methods is summarised in <u>marine SPAs for seabirds</u>.

At Seas off Foula, the analysis of the ESAS data determines the overall importance of the location for the qualifying species. It provides in particular the extent of the area under study, an estimate of the number of birds present at the site and information on how regularly they occur.

Seabird Census and Seabird Monitoring Programme (SMP)

Information on the size of the populations of birds at the adjacent Foula Colony SPA is available from periodic censuses of seabird colonies across the UK (undertaken in 1969-70, 1985-88 and 1998-2002). Some counting of colonies occurs between censuses and this is also collated by the Seabird Monitoring Programme (SMP). The information is used to supplement ESAS data to provide evidence of regular occurrence of species at the colonies most likely to be providing birds that forage in Seas off Foula

Tracking data from Foula SPA

In 2011, Wade *et al.* (2012) fitted Global Positioning System (GPS) loggers to seven breeding great skuas from Hoy, Orkney, and to ten breeding great skua from Foula, Shetland. Core foraging areas were identified by determining the 50% utilisation distributions during foraging trips.

Thaxter *et al.* (2011) fitted GPS tags to four great skua breeding on Foula in 2010. Data on the movements of two of these individuals were obtained for the time when they were incubating eggs. A Kernel analysis was conducted to determine core areas of presence and core foraging areas at sea on the pooled data for each individual.

Both studies show that breeding great skua from Foula use Seas off Foula to forage during the breeding season. They highlight the importance of the marine site to the breeding population at this particular colony.

Assessment against the UK SPA selection guidelines

The SPA Selection Guidelines set out a two stage process for SPA identification in the UK. Both stages are applied individually by the relevant statutory advisor, i.e. by the country agencies for site selection in their respective territorial waters and by JNCC for site selection in offshore waters. The selection process, in particularly under Stage 2, therefore differs between the respective responsible advisors.

Stage 1

Stage 1 identifies areas that are likely to qualify for SPA status based mainly on population size and regular usage.

Guidelines under Stage 1:

1.1. An area is used regularly by 1% or more of the Great Britain population (or in Northern Ireland, the all-Ireland population) of a species listed in Annex I to the Birds Directive (2009/147/EC) in any season.

1.2. An area is used regularly by 1% or more of the biogeographical population of a regularly occurring migratory species (other than those listed in Annex I) in any season.

1.3. An area is used regularly by an assemblage of over 20,000 waterbirds (waterbirds as defined by the Ramsar Convention) or 20,000 seabirds in any season.

1.4. An area which meets the requirements of one or more of the Stage 2 guidelines in any season⁴, where the application of Stage 1 guidelines 1, 2 or 3 for a species does not identify an adequate suite of most suitable sites for the conservation of that species.

The analysis of the ESAS data found that 1,594 great skuas⁵ regularly use Seas off Foula during the breeding season. The population of great skua therefore exceeds 400 individuals or 1% of the biogeographic population, the site selection threshold used under guideline 1.2 of the UK SPA selection guidelines (Stroud *et al.* 2001).

The analysis of the ESAS data also showed that a breeding seabird assemblage of 52,122 birds⁵ used Seas off Foula. The population size of the assemblage therefore exceeds 20,000 individuals, the site selection threshold under guideline 1.3 of the UK SPA selection guidelines (Stroud *et al.* 2001). This population estimate was based on ESAS data collected in the region between 1980 and 2003. The latest available data on seabird populations at the Foula SPA, however, based on colony counts between 2007 and 2013, indicate that seabird populations have decreased since the ESAS data were collected. Hence, the scale of the assemblage will be smaller today, but we still expect it to be exceeding 20,000 birds (expert opinion).

Beside the breeding seabird assemblage, the analysis of the ESAS data also showed that a seabird assemblage of 20,175 birds⁵ used Seas off Foula during the non-breeding season. The population size of the assemblage therefore exceeds 20,000 individuals, the site selection threshold under guideline 1.3 of the UK SPA selection guidelines (Stroud *et al.* 2001). As there is no more recent data available which could assess if this population estimate is still valid, it is assumed that it is still in place.

⁴ The UK SPA Selection Guidelines suggest to use the same ecological criteria outlined under Stage 1.4 to identify ecologically important areas and under Stage 2 to select the most suitable areas. Note that even though the same ecological criteria are used, guideline 1.4 and the Stage 2 process are not identical and serve different purposes: e.g. an area could be identified as a possibly important area under 1.4 because it supports an aggregation with high numbers of a particular species. However, when compared with other areas under Stage 2 it might not be rated as most suitable because another area close by, with a comparable number of individuals of the same species, is deemed to be more suitable as it supports in addition also a range of other species in high numbers.

⁵ The population figure is based on spatial interpolation and taken directly from the modelled output; whilst a precise figure is quoted it should only be considered an indication of the scale of the population size rather than an absolute measurement.

Table 1. Assessment of Seas off Foula against Stage 1 of the UK SPA selection guidelines.

Species and season	Status	Population size in Seas off Foula	Relevant population threshold for gualification	Stage 1 quideline met
great skua, breeding	migratory	1,594 birds ^{1, 8}	400 birds ²	1.2
great skua, non-breeding	migratory	319 birds ⁸	288 birds⁴	1.3 ⁷
assemblage of breeding seabirds		>20,000 birds ^{3, 8}	20,000 birds	1.3
assemblage of seabirds, non- breeding		20,175 birds ⁸	20,000 birds	1.3
northern fulmar, breeding	migratory	8,379 birds ^{5, 8}	2,000 birds	1.3 ⁷
northern fulmar, non-breeding	migratory	5,409 birds ⁸	2,000 birds	1.3 ⁷
Arctic skua, breeding	migratory	219 birds ^{5, 8}	63 birds ⁴	1.3 ⁷
common guillemot, breeding	migratory	11,142 birds ^{5, 8}	2,000 birds	1.3 ⁷
common guillemot, non-breeding	migratory	8,340 birds ⁸	2,000 birds	1.3 ⁷
Atlantic puffin, breeding	migratory	14,886 birds ^{6, 8}	2,000 birds	1.3′

¹ the figure differs from Kober et al. (2012) as the boundary around Foula is now adjusted to abut Mean Low Water Springs.

² based on 1% of biogeographic population of 40,800 individuals (CSR5, Delany *et al.* 2011).

³ this figure is an assessment based on latest available count data from Foula. The figure accounts for named and unnamed species as part of the assemblage.

⁴ based on 1% GB population (assuming (pairs x 3)=individuals, Musgrove *et al.* 2011).

⁵ note that the breeding numbers at Foula SPA have declined since the data for the ESAS analysis were collected, but the population size quoted here is still a feasible estimate for the marine Seas off Foula site, i.e. numbers of breeding individuals exceed the population number estimated for Seas off Foula.
 ⁶ note that the breeding numbers at Foula SPA have declined since the data for the ESAS analysis were collected. The

o note that the breeding numbers at Foula SPA have declined since the data for the ESAS analysis were collected. The population size quoted here is presumably too high, however, based on current population numbers at the colony we still would expect it to be exceeding the relevant population threshold.

⁷named species of assemblage

⁸ The population figure is based on spatial interpolation and taken directly from the modelled output; whilst a precise figure is quoted it should only be considered an indication of the scale of the population size rather than an absolute measurement.

Stage 2

Stage 2 re-assesses the areas identified under Stage 1 to select from these the most suitable territories in number and size for SPA classification, based on ecological criteria.

Guidelines under Stage 2:

2.1. Population size. Areas holding or supporting more birds than others and/or holding or supporting birds at higher concentrations are favoured for selection.

2.2. Species range. Areas selected for a given species provide as wide a geographic coverage across the species' range as possible.

2.3. Breeding success. Areas of higher breeding success than others are favoured for selection.

2.4. History of occupancy. Areas known to have a longer history of occupation or use by the relevant species are favoured for selection.

2.5. Multi-species areas. Areas holding or supporting the larger number of qualifying species under Article 4 of the Directive are favoured for selection.

2.6. Naturalness. Areas comprising natural or semi-natural habitat are favoured for selection over those which do not.

2.7. Severe weather refuges. Areas used at least once a decade by significant proportions of the biogeographical population of a species in periods of severe weather in any season, and which are vital to the survival of a viable population, are favoured for selection.

The Stage 2 selection process of the most suitable areas in the offshore environment rests mainly on the Stage 2 criterion of population size, as this provides an easily comparable estimate of the significance of a location for the overall population of a species. For many of the other criteria, i.e. history of occupancy, naturalness and severe weather refuges, there is a lack of information from the offshore environment to enable the use of these criteria in a comparison between potential areas. The criterion of species range is often not applicable as there are usually very few possible locations available from which to select areas.

A total of 21 possible areas, which are fully or partly in offshore waters, is available for JNCC's selection of most suitable areas in offshore waters. The selection under Stage 2 takes place in four steps, which add - one by one - areas to the final selection of most suitable areas. To be included areas did only have to meet the criterion of a single step.

- Select all areas which fully meet the UK SPA selection guidelines under Stage 1.1 1.3. These are the most important areas as these hold the largest numbers of birds on a regular basis.
- 2. Select all areas which were identified under Stage 1.4 as areas which could be ecologically important, but which do not regularly hold the number of birds required for fully meeting the guidelines under Stage 1.1 1.3. However, the selected areas should hold at least half of the population size required to fully meet the guidelines under Stage 1.1 1.3.

The selection of areas in this step is a precautionary measure. This measure was taken as the ESAS analysis provides only approximate estimates of population sizes based on modelled data ("best estimates", in contrast to precise population estimates), which makes the strict application of the original population thresholds inadvisable.

- 3. Select those additional areas which are contained within or which substantially overlap already selected areas under step 1 or 2. This step aims to increase the conservation value of the selected areas by adding features without incurring an extra 'cost' in terms of extending the area protected.
- 4. Select areas where expert knowledge indicates in light of all available evidence that further investigation is likely to provide a strong case for classification as a UK-wide important area. Expert knowledge could also remove areas from the selection if it suggested that the area may not be very important or regularly used by high numbers of birds, however, this did not apply in practice.

Following these steps, Seas off Foula is a most suitable area as it fully meets the Stage 1.2 guideline for great skua (Step 1). For more details of the Stage 2 selection process see this <u>document</u>. A further brief assessment of Seas off Foula against all Stage 2 ecological criteria is provided in Table 2.

Sta	ige 2 guideline	Qualification	Assessment
1.	Population size and density	\checkmark	Seas off Foula holds the largest marine aggregation of breeding great skua in UK waters; it is the only area where great skua exceeds the 1% biogeographic population threshold on a regular basis (Kober <i>et al.</i> 2012).
			The site is used as a foraging area by great skua from Foula, the most important colony in the Britain.
			Foula SPA is also one of the largest colonies for northern fulmar in Britain, a named component of the seabird assemblage during both breeding and non-breeding seasons. It is likely that breeding fulmars from Foula SPA use the marine Seas off Foula site as a foraging area.
2.	Species range	\checkmark	Seas off Foula is the only site identified for great skua in UK waters from a UK wide analysis and so constitutes the known range of marine suitable territories for breeding season in UK waters.
3.	History of occupancy	~	Great skua bred at Foula for at least 200 years; the first breeding record stems from 1774 (Furness 1987). All named components of the seabird assemblage (both breeding and non-breeding) are known to have bred on Foula since at least 1948, most of them since for at least 130–230 years. It can be assumed that these individuals also used the marine Seas off Foula site as a foraging area at their time, similar to the present-day Foula skuas.
			More recently, regular usage of the marine site could be demonstrated as great skua used the site during 13 out of 14 years of data collection, between 1981 and 1998.
4.	Multi-species area	\checkmark	Seas off Foula is used by a significant assemblage of seabirds during breeding and during non-breeding, the named components of which are northern fulmar, Arctic skua, great skua, common guillemot and Atlantic puffin.

Table 2. Assessment of Seas off Foula against Stage 2 of the UK SPA selection guidelines.

5.	Naturalness	-	Discards from fisheries activity are likely to affect population levels of great skua at Foula, however, the species is also dependant on naturally occurring food resources, such as sandeel <i>Ammodytidae</i> .
			Northern fulmar, a named component of the breeding seabird assemblage , is also likely to be similarly affected by the availability of discards, particularly at Foula.
6.	Severe weather refuge	-	No information available.

Boundary delineation

The seaward boundary of the site has been proposed based on the extent of the important aggregation for great skua (Figure 2). The other qualifying species, which form part of the breeding or non-breeding assemblage, are quantified within the area used by great skua. The analysis, with the aim to determine the extent and the limits of the great skua aggregation, is illustrated in Figure 1 and is described by the following steps:

- (1) The raw observations of great skua from all relevant surveys are extracted from the ESAS database (Figure 1a).
- (2) A geostatistical interpolation technique⁶ used the raw observations to predict great skua densities in un-surveyed areas between the existing data, producing an estimate of great skua densities in every 6x6 km grid cell (Figure 1b). The size of the grid cells was chosen to make the best use of the data, given the spatial precision of the original observations (Kober *et al.* 2010).
- (3) A scoring system was applied to all grid cells on the map to pick out cells with high great skua densities, particularly when these cells were also next to other high density cells. The cells with the top 1% highest ranking scores were chosen, they identify where great skuas aggregate most and are the most important areas. Selected cells neighbouring each other were merged into bigger areas (Figure 1c).
- (4) To identify areas that in theory meet the UK SPA selection guideline, each area was assessed if it holds a great skua population in excess of 1% of their population on a regular basis. Only one area - Seas off Foula - met this criterion and a boundary was drawn around its outer limits (Figure 1d).

For a more detailed description of the methods see <u>marine SPAs for seabirds</u>. For the technical reports on the methods, see Kober *et al.* (2010; 2012).

The landward boundary is proposed to abut the existing Foula SPA (Figure 2). Great skua and the assemblages of seabirds are features of interest in both the Seas off Foula pSPA and the existing Foula SPA. During the breeding season, when seabirds have to return regularly to their breeding colony to provide for their young, a continuous protection of these species throughout the entire marine area, i.e. from the colony to the outer limits of Seas off Foula, is therefore ensured.

⁶ The technique used was Poisson kriging, as this is the most suitable technique for zero-inflated data with varying sampling effort, such as the seabird data in ESAS (Kober *et al.* 2010).

The existing Foula SPA was classified for three Annex 1 species (Arctic tern *Sterna paradisaea*, Leach's storm-petrel *Oceanodroma leucorhoa*, and red-throated diver *Gavia stellata*), for four migratory species (great skua *Stercorarius skua*, common guillemot *Uria aalge*, Atlantic puffin *Fratercula arctica*, and European shag *Phalacrocorax aristotelis*) and for a seabird aggregation in excess of 20,000 individuals (see Citation Foula SPA).

There are a number of existing SPAs and SACs close to Seas off Foula (Figure 2). In addition to the existing sites, the Seas off Foula is also just north of the North-west Orkney Nature Conservation Marine Protected Area (NCMPA), an area put forward as an important location for the life history of sandeels. Newly emergent sandeel larvae from the North-west Orkney NCMPA are important for populating important sandeel grounds around Shetland and south of the Moray Firth (North-west Orkney MPA).



NOT FOR NAVIGATION. Created by Scottish Government (Marine Scotland), 2016. gi0977. © Crown Copyright, All rights reserved. Ordnance Survey License No. 100024655. Contains data from JNCC, SNH. Projection: Mercator. Datum: WGS 1984. Standard Parallel: 60°120.00°N Scale 1:1,800,000



NOT FOR NAVIGATION. Created by Scottish Government (Marine Scotland), 2016. gj0977. © Crown Copyright,All rights reserved. Ordnance Survey License No. 100024655. Contains data from JNCC, SNH. Projection: Mercator. Datum: WGS 1984. Standard Parallel: 60°12'0.00"N Scale 1:1,800,000

NOT FOR NAVIGATION. Created by Scottish Government (Marine Scotland), 2016. gj0977. © Crown Copyright,All rights reserved. Ordnance Survey License No. 100024655. Contains data from JNCC, SNH. Projection: Mercator. Datum:WGS 1984. Standard Parallel: 60°12'0.00"N Scale 1:1,800,000

Figure 1. Analytical steps to identify the most important area for great skua west of Shetland. (a) raw ESAS observations on great skua, (b) predicted densities of great skua, (c) important areas for great skua, and (d) boundary of Seas off Foula, the only area holding >1% of the biogeographic population on a regular basis.





NOT FOR NAVIGATION. Created by Scottish Government (Marine Scotland), 2016. gi0977.© Crown Copyright, All rights reserved. Ordnance Survey License No. 100024655. Contains data from JNCC, SNH. Projection: Mercator. Datum: WGS 1984. Standard Parallel: 60°12'0.00"N Scale 1:1,800,000





Existing Special Protection Areas

NOT FOR NAVIGATION. Created by Scottish Government (Marine Scotland), 2016. gj0977. © Crown Copyright, All rights reserved. Ordnance Survey License No. 100024655. Contains data from JNCC, SNH. Projection: Mercator. Datum: WGS 1984. Standard Parallel: 60°12'0.00"N Scale 1:800,000

Figure 2. Seas off Foula pSPA.

Information on qualifying species

Great skua

Population size and density

The analysis of the ESAS data (Kober et al 2012) indicated that, after application of Stage 1 of the UK SPA Site Selection Guidelines, two hotspots were to be considered under Stage 2

for the protection of great skua during the breeding season (Table 3). Of these, hotspot 16 was selected under Stage 2 as the most suitable area for great skua during the breeding season. Of all available hotspots, this is the hotspot with the largest population estimate of great skua. The Seas off Foula pSPA is based on this hotspot.

Hotspot number	Estimated population	Rank according to population size	Fate
Hotspot 16	1,620 individuals	1	Selected under Step 1 of Stage 2 selection, Seas off Foula dSPA
Hotspot 17	88 individuals	2	Dismissed in Stage 2 selection

Table 3. Hotspots considered for classification for great skua during the breeding season.

Based on great skua observations at sea during the breeding season, obtained from the ESAS database, the population of great skua at Seas off Foula is estimated as 1,594 individuals. Densities range between 0.34 individuals/km² at the edges of the area and 1.1 individuals/km² in the vicinity of the Foula colony (Figure 1b).

Although great skua often travel long distances to reach areas where food is abundant (mean maximum distance: 86.4km, Thaxter *et al.* 2012), a recent tracking study on individuals from Foula and Hoy showed that these individuals used marine areas close by their breeding colonies with no overlap between them (Wade *et al.* (2012)). It also showed, in agreement with another recent tracking study, that these great skuas from Foula used primarily an area to the west of Shetland to forage (Thaxter *et al.* 2011; Wade *et al.* 2012). Hence, there is a strong link between great skuas breeding at Foula and the marine Seas off Foula pSPA.

Given the large foraging range of great skua (mean maximum 86.4km, Thaxter *et al.* 2012), individuals from many other breeding colonies, including the large colonies at Hoy and Unst (1,973 and 1,385 apparently occupied territories, Mitchell *et al.* 2004), could also utilise the site, although evidence of this is lacking at present.

Distribution within the site

Great skua are found throughout the entire extent of Seas off Foula (Figure 1a).

Species range

The biogeographic population of great skua is fairly small with 40,800 individuals worldwide (Delany *et al.* 2011), of which 16,000 pairs breed in Scotland (Mitchell *et al.* 2004). The population has been increasing since 1900, probably due to protection from human persecution and changes in food availability caused by fisheries (Lloyd *et al.* 1991).

In British waters, Seas off Foula holds not only the largest at-sea aggregation of great skua during the breeding season, it is also the only marine area defined for great skua which

meets the UK SPA selection guidelines under Stage 1.2. It strongly relates to Foula, the largest great skua colony in the UK, protected by the existing Foula SPA.

A distribution map of great skua during the non-breeding season, based on ESAS data, indicates that aggregations appear to be sporadic. None of these could be shown to be present on a regular basis for this species alone. However, Seas off Foula is within an area of higher densities (Kober *et al.* 2010).

History of occupancy

Great skua are likely to have been using the Seas off Foula for at least 240 years. In 1774, George Low presented the first record of great skuas breeding in Scotland, when he reported a colony of three pairs breeding at Saxavord, Unst, and one colony of six or seven pairs breeding on Foula (Furness 1987). It can be assumed that these historical individuals used the marine Seas off Foula site as a foraging area at their time, similar to the present-day great skuas breeding on Foula.

To determine if important aggregations of great skuas were present on a regular basis, the raw ESAS data on great skuas during the breeding season were consulted to see during how many years the observed densities within the site were significantly higher than densities usually observed in British waters (for details of the analysis see <u>marine SPAs for seabirds</u>). Great skua was observed in the site during all years of data collection. Furthermore, they use Seas off Foula in significantly higher densities than in densities observed elsewhere in 13 out of 14 years with sufficient data for the test (1981, 1984, 1986-1988, 1990–1992 and 1994–1998). After 1998, data were not sufficient to show presence or absence of the hotspot.

Over the past 28 years, however, the existing Foula SPA, the colony where probably most great skua breed that use Seas off Foula, showed consistently high numbers of breeding great skua. Although there was a decline in the most recent colony counts (Table 4), the size of the population estimated as being present at the marine Seas off Foula site appear to be feasible for the populations being present at the colony at all times, and with high likelihood exceeded the SPA selection threshold of 400 individuals at sea. The latest count in 2007 showed that still 10% of the world's population of great skua breed at Foula

Date of count	Number of breeding pairs
1986	2,495
1987	2,500
1990	2,340
1991	2,300
1992	2,174
2000	2,293
2007	1,657

|--|

Northern fulmar

Population size and density

Based on observations of northern fulmar at sea, obtained from the ESAS database, the population of northern fulmar at Seas off Foula is estimated as 8,379 birds during the

breeding season. Densities range between 0.25 birds/km² and 48.55 birds/km². Within most parts of the site, densities are low, but in the very west and southeast of Foula.

The foraging range of northern fulmar is rather large, with a mean maximum of 400 ± 246 km (Thaxter *et al.* 2011). However, an estimate based on absences during incubation and chick rearing of Foula fulmars suggests a potential foraging range of 122 km at this colony (Hamer *et al.* 1997). If similar foraging ranges are assumed for the other Shetland colonies of northern fulmar, Seas off Foula is – in theory – a potential foraging area for all of them.

Distribution within the site

Northern fulmar are found throughout the entire extent of Seas off Foula.

Species range

Breeding northern fulmar can be found around the North Atlantic and North Pacific, with strongholds in Iceland, Russia and the USA (Mitchell *et al.* 2004). In Scotland, the subspecies *glacialis* is present, which has a population of 2.7–4.1 million breeding pairs in the North Atlantic (Stroud *et al.* 2001). The British breeding population consists of 500,000 pairs (Mitchell *et al.* 2004).

Distribution maps of breeding northern fulmar in UK waters, based on ESAS data, suggest that this species uses most intensively the shelf edge to the north and west of Scotland during the breeding season, however they also show that the Seas off Foula is used (Pollock *et al.* 2000; Kober *et al.* 2010).

A distribution map of northern fulmar during the non-breeding season, based on the same data and analysis, indicates that aggregations appear to be scattered but do show northern fulmar within the Seas off Foula (Kober *et al.* 2010).

Seas off Foula supports birds foraging from Foula SPA, one of the biggest colonies of northern fulmar in Britain. During the Seabird Colony Register (SCR) Census (1985-88) Foula was the second largest colony after St. Kilda; since then the colony underwent one of the strongest declines observed in British colonies, but was nevertheless still the third largest colony during the Seabird 2000 census (1998–2002) (Mitchell *et al.* 2004).

History of occupancy

Coming from the high Arctic and spreading south via Iceland and the Faeroe Islands, northern fulmars have colonised northwest Europe – including Britain – only during the last 250 years. Fulmar has been using Seas off Foula for at least 130 years; the first breeding record from Foula is from 1878, making the island the second recorded Scottish breeding location after St. Kilda (Forrester *et al.* 2007). It can be assumed that these individuals also used to some extend the marine Seas off Foula site, just as the present-day Foula fulmars do.

While the population of northern fulmar has been rapidly increasing during the past 150 years, the last census showed a decline in numbers from 1990 onwards (Mitchell *et al.* 2004), which was also reflected by the population breeding on Foula (Table 5). For Seas off Foula, the original at-sea population estimate was based on ESAS data mainly collected before or at the onset of the decline. The decline in breeding pairs will also have affected the numbers using the marine Seas off Foula site. However, even with a reduced population of

19,758 pairs breeding at Foula colony in 2007, the original ESAS at-sea population estimate of 8,379 birds still appears to be feasible figure.

To determine if the marine aggregation of northern fulmar were present on a regular basis, the raw ESAS data on northern fulmar were consulted to see during how many years the observed densities at the site were significantly higher than densities usually observed in British waters (for details of the analysis see <u>marine SPAs for seabirds</u>). During all 14 years of data collection at Seas off Foula, fulmars were observed in the site. Moreover, they were present with significantly higher densities in 7 out of 13 years with sufficient data for the test (1981, 1988, 1990-1992, 1997 and 1998).

The northern fulmar in Seas off Foula are likely to come mainly from the Foula colony and the data from the colony show substantial numbers of fulmar from the first census in 1987 onwards.

Table 5. Population of northern fulmar at Foula SPA (SMP database).

Year of count	Number of occupied sites
1987	46,800
2000	21,106
2007	19,758

Arctic skua

Population size and density

Based on observations of Arctic skua at sea, obtained from the ESAS database, the population of this species at Seas off Foula is estimated at 219 birds during the breeding season. Densities range between <0.01 birds/km² at the edges of the area and 1.37 birds/km² within 20 km to the northeast of Foula and towards Shetland.

The foraging range of Arctic skua has a mean max of 63 ± 18 km (Thaxter *et al.* 2012). In theory, Arctic skua from all breeding areas of at least the southern part of Shetland could therefore forage at the Seas off Foula site.

Distribution within the site

Arctic skua are found throughout the entire extent of Seas off Foula.

Species range

The breeding population of Arctic skua is confined to high latitudes throughout the Arctic, with largest populations in Russia, Alaska and Canada (Mitchell *et al.* 2004). Numbers are not well known and the best estimate for the biogeographic population in the NE Atlantic ranges between 15,000 and 35,000 breeding pairs. In Britain, Arctic skua breed only in the North and West of Scotland with a population consisting of 2,100 pairs. Shetland and Orkney are the strongholds of the breeding distribution (Mitchell *et al.* 2004).

A distribution map of breeding Arctic skua in British waters, based on ESAS data, suggest that Arctic skua aggregations do not tend to be very pronounced and consistent. Nevertheless, highest densities can be found at the north and east coast of Britain, in particular around Shetland and Orkney (including parts of Seas off Foula) and the outer Firth of Forth area (Kober *et al.* 2010).

Arctic skuas observed at Seas off Foula most likely come from the breeding area located at Foula. Compared to other breeding areas in Britain, Foula holds only a medium sized Arctic skua population. However, together with the other breeding locations on Shetland, it contributes to this being one of the most important breeding region for Arctic skua in Britain.

History of occupancy

The first description of Arctic skua in Scotland goes back to Pennant in 1771. For Foula, breeding birds were first recorded by Turdor in 1883 (Furness 1987). It can be assumed that these historical individuals foraged at the marine Seas off Foula site at their time, similar to the present-day Arctic skuas breeding on Foula.

While the breeding range in Scotland remained remarkably stable over the last 150 years, numbers at many breeding locations changed dramatically (Mitchell *et al.* 2004). The number of occupied territories at Foula decreased between 1986 and 2013 (Table 6). This is likely to have affected the numbers of Arctic skua foraging at Seas off Foula as well. However, even with a reduced population of 35 pairs breeding at Foula colony in 2013, it is feasible that a population of 63 individuals is still using Seas off Foula, the population threshold needed to include Arctic skua as a named component of the assemblage.

Year of count	Number of occupied territories
1986	164
1987	168
1988	130
1989	124
1990	98
1991	141
1992	159
1993	144
1994	134
1995	126
1996	125
1997	118
1998	114
2000	107
2005	68
2006	79
2007	71
2008	41
2009	63
2010	50
2011	41
2012	37
2013	35

Table 6. Population of Arctic skua at Foula SPA (SMP database).

Common guillemot

Population size and density

Based on observations of breeding common guillemot at sea, obtained from the ESAS database, the population at Seas off Foula is estimated as 11,142 birds during the breeding season. Densities range between 0 birds/km² and 39.5 birds/km² at the site. Lowest densities

(below 3 birds/km²) are mainly found in the northern half of the site and in its southeast extend, highest densities (above 8 birds/km²) occur predominantly southwest of Foula.

The foraging range of common guillemot has a mean maximum of 84 ± 50 km (Thaxter *et al.* 2012). Nearly all colonies at Shetland could therefore – in theory – use Seas off Foula as a foraging area.

Distribution within the site

Common guillemot are found throughout the entire extent of Seas off Foula.

Species range

In Scotland, breeding common guillemot belong to the subsp. *aalge*, which has a biogeographic breeding population of 4.8 million individuals distributed throughout the North Atlantic region and the Baltic Sea (AEWA 2012). With 1.56 million individuals, common guillemot is one of the most common breeding species in Britain and Ireland (Mitchell *et al.* 2004). About 75% of these breed in Scotland; largest concentrations are found at Caithness, Orkney, Shetland, Sutherland and the Western Isles.

A distribution map of breeding common guillemots in British waters, based on ESAS data, showed that large guillemot aggregations are found mostly in the outer Firth of Forth, the Moray Firth and around Orkney, but also (at a smaller scale) in the Seas off Foula site (Kober *et al.* 2010).

A distribution map of common guillemot during the non-breeding season, based on the same data and analysis, indicates that aggregations appear to be concentrated on the north coast and east coast of Britain, in particular east of Shetland (including in the Seas off Foula site), in the Moray Firth, the Inner and Outer Firth of Forth and further offshore in the North Sea (Kober *et al.* 2010).

Common guillemots observed at Seas off Foula are most likely to come from the colony at Foula. The Foula colony is among the larger colonies, with 41,435 individuals counted during the last national census in 2000 (Mitchell *et al.* 2004). Over the course of the three national censuses, conducted in 1969–1970, in the mid-1980s and in 2000, numbers of breeding common guillemots have strongly increased, although the rate of increase has slowed down considerably in the later years. At Foula, numbers were still increasing in 2000, however, a colony count in 2007 showed they declined considerably since then but with 25,799 birds present at that time it remains feasible, that foraging birds reach the population estimated for the marine site, or at least exceed the threshold for being a named species as part of the seabird assemblage using Seas off Foula under 1.3 of the SPA guidelines.

History of occupancy

Common guillemots have bred on Foula for more than 130 years. The first records of common guillemots occurring in Scotland date back to 1684, when James Kay described *'lomwia'* as being present at Fair Isle. On Foula, common guillemot were first recorded as inhabiting the west cliffs of the island by Low in 1879.

To determine if important aggregations of guillemots were present on a regular basis, the raw ESAS data on common guillemots were consulted to see during how many years common guillemot densities at the site were significantly higher than densities usually observed in British waters (for details of the analysis see <u>marine SPAs for seabirds</u>.

Common guillemots were observed in the site during four years of the five years of data collection. Moreover, guillemot densities were significantly higher during two out of the five years (1986 and 1997).

Table 7. Population of common guillemot at Foula SPA (SMP database).

Year of count	Number of individuals on land
2000	41,500
2007	24,799

Atlantic puffin

Population size and density

Based on observations of Atlantic puffin at sea, obtained from the ESAS database, the population of Atlantic puffins at Seas off Foula is estimated as 14,886 birds during the breeding season. Densities are ranging between 0.39 birds/km² and 52.92 birds/km². Lowest densities of below 2 birds/km² are found almost exclusively in the northwest of the site. Densities increase towards the southeast, reaching their highest just south of Foula.

The foraging range of Atlantic puffin has a mean maximum of 105 ± 46 km (Thaxter *et al.* 2012). Therefore, puffins from all breeding areas on Shetland and Fair Isle can - in theory - use the Sea off Foula site to forage.

Distribution within the site

Atlantic puffin are found throughout the entire extent of Seas off Foula.

Species range

Atlantic puffin are distributed throughout the North Atlantic and the adjacent Atlantic Ocean. Their breeding range stretches from the high Arctic to the South of Brittany, the strongholds being the low Arctic coasts of Iceland and north Norway.

The British population consists of 579,500 breeding pairs, the majority of these (493,042 pairs) breed in Scotland (Mitchell *et al.* 2004). The most recent assessment of breeding Atlantic puffin at Foula took place in 2007 when 5,000 individuals were counted (Harris and Wanless 2011), suggesting that the colony is relatively small. To determine if important aggregations of puffins were present on a regular basis, the raw ESAS data on Atlantic puffin were consulted to see during how many years the observed densities within the site were significantly higher than the densities usually observed in British (for details of the analysis see <u>marine SPAs for seabirds</u>). During all years of data collection, puffin were observed at Seas off Foula. Within the site, puffin occured in significantly higher densities in 11 out of 13 years with sufficient data for the test (1981–1982, 1986–1988, 1990–1992, 1996–1998) (Table 8).

In the past, the Atlantic puffin colony at Foula was much larger than today: as quoted in Harris and Wanless (2011), Pennie (1948) describes how puffins bred on Foula in "...almost astronomical numbers and issued like smoke from the honeycomb of burrows...". Between 1976 and 2000, the population decreased from 70,000 pairs to 20,000 pairs, and the most recent count from 2007 (5,000 individuals) indicates that the steep decline in numbers is ongoing (Harris and Wanless 2011). Because it is likely that most individuals foraging at Seas of Foula come from the Foula colony, the decreasing numbers will have had an impact

on the population found at the marine site; the population estimate obtained from ESAS data is therefore outdated. However, in spite of the long-time decline, it is still feasible that qualifying numbers (>2,000 individuals for a named component of an assemblage) forage at Seas of Foula, based on a colony size of 5,000 breeding pairs in 2007.

A marine distribution map of breeding Atlantic puffin in British waters, based on ESAS data, showed that large puffin aggregations are found mostly in the outer Firth of Forth, around Shetland (particularly west of it, including Seas off Foula), around Sule Skerry in the North, and around the Outer Hebrides and St Kilda in the West (Kober *et al.* 2010).

History of occupancy

Atlantic puffin must have bred on Foula for at least 60 years, and have used Seas off Foula to forage, as Pennie describes very large numbers of them in 1948 (Harris and Wanless 2011).

To determine if important aggregations of puffins were present on a regular basis, the raw ESAS data on Atlantic puffin were consulted to see during how many years the observed densities within the site were significantly higher than the densities usually observed in British (for details of the analysis see <u>marine SPAs for seabirds</u>). During all years of data collection, puffin were observed at Seas off Foula. Within the site, puffin occurred in significantly higher densities in 11 out of 13 years with sufficient data for the test (1981–1982, 1986–1988, 1990–1992, 1996–1998).

Table 8. Population of Atlantic puffin at Foula SPA (SMP database).

Year of count	Number of occupied borrows
2000	22,500

References

AEWA 2012. Report on the conservation status of migratory waterbirds in the agreement area. Agreement on the conservation of African-Euresian migratory waterbirds. <u>link</u>

BEGG,G.S. & REID,J.B. 1997. Spatial variation in seabird density at a shallow sea tidal mixing front in the Irish Sea. *ICES Journal of Marine Science: Journal du Conseil* **54**: 552-565.

CAMPHUYSEN,C.J., FOX,A.D., LEOPOLD,M.F., & PETERSEN,I.K. 2004. Towards standardised seabirds at sea census techniques in connection with environmental impact assessments for offshore wind farms in the uk. A comparison of ship and aerial sampling methods for marine birds and their applicability to offshore wind farm assessments. *Report to COWRIE*.

COULL,K.A., JOHNSTONE,R., and ROGERS,S.I. 1998. Fisheries sensitivity maps in British waters. Pp. 1-58 (Anonymous,). UK Offshore Operators Association Ltd, Aberdeen.

DELANY,S., FLINK,S., LANGENDOEN,T., VAN WINDEN,R., SUNDBERG,J., SZABOLCS,N., WANLESS,R., VAN ROOMEN,E., DODMAN,T., & SCOTT,D. 2011. Report on th conservation status of migratory waterbirds in the agreement area, Fifth edition. *Wetlands International Report*. Wetlands International, Wageningen, The Netherlands.

ELLIS,H.I., MILLIGAN,S.P., READDY,L., TAYLOR,N., & BROWN,M.J. 2012. Spawning and nursery grounds of selected fish species in UK waters. *Science Series Technical Report* No. 147. CEFAS, Lowestoft, UK.

FORRESTER, R.W., ANDREWS, I.J., MCINERNY, C.J., MURRAY, R.D., MCGOWAN, R.Y., ZONFRILLO, B., BETTS, M.W., JARDINE, D.C., & GRUNDY, D.S. 2007. *Birds of Scotland*. Scottish Ornithologists Club, Aberlady, Scotland.

FURNESS, R.W. 1987. The Skuas. T.Calton and A.D.Poyser, Cambridge, UK.

FURNESS, R.W. & HISLOP, J.R.G. 1981. Diets and feeding ecology of the great skua *Catharacta skua* during the breeding season in Shetland. *Journal of Zoology London series A* **195**: 1-23.

HAMER,K.C., THOMPSON,D.R., & GRAY,C.M. 1997. Spatial variation in the feeding ecology, foraging ranges, and breeding energetics of northern fulmars in the north-east Atlantic Ocean. *ICES Journal of Marine Science* **54**: 645-653.

HARRIS, M.P. & WANLESS, S. 2011. The Puffin. T & AD Poyser, London, UK.

KOBER,K., WEBB,A., WIN,I., O'BRIEN,S., WILSON,L.J., & REID,J.B. 2010. An analyis of the numbers and distribution of seabids within the British Fishery Limit aimed at identifying ares that qualify as possible marine SPAs. *JNCC Report* No. **431**.

KOBER,K., WILSON,L.J., BLACK,J., O'BRIEN,S., ALLEN,S., BINGHAM,C., & REID,J.B. 2012. The identification of possible marine SPAs for seabirds n the UK: The application of Stage 1.1-1.4 of the SPA selection guidelines. *JNCC Report* No. **461**.

LLOYD,C.S., TASKER,M.L., & PARTRIDGE,K. 1991. *The status of seabirds in Britain and Ireland*. T. & A.D.Poyser, Carlton, UK.

MCBREEN, F., ASKEW, N., CAMERON, A., CONNOR, D., ELLWOOD, H., & CARTER, A. 2011. UKSeaMap 2010: Predictive mapping of seabed habitats in UK waters. *JNCC Report* No. **446**.

MITCHELL, P.I., NEWTON, S.F., RATCLIFFE, N., & DUNN, T.E. 2004. Seabird populations of *Britain and Ireland. Results of the Seabird 2000 census (1998 - 2002).* Christopher Helm, London, UK.

MUSGROVE,A.J., AUSTIN,H.M., HEARN,R.D., HOLT,C.A., STROUD,D.A., & WOTTON,S.R. 2011. Overwinter population estimates of British waterbirds. *British Birds* **104**: 364-397.

POLLOCK, C., MAVOR, R., WEIR, C.R., REID, A., WHITE, R.W., TASKER, M.L., WEBB, A., & REID, J.B. 2000. The distribution of seabirds and marine mammals in the Atlantic Frontier, North and West of Scotland. 3-92.

STROUD,D.A., CHAMBERS,D., COOK,S., BUXTON,N., FRASER,B., CLEMENT,P., LEWIS,I., MCLEAN,E., BAKER,H., & WHITEHEAD,S. 2001. *The UK SPA network: its scope and content*, 1-3 ed. JNCC, Peterborough, UK.

TASKER,M.L., JONES,P.H., DIXON,T.J., & BLAKE,B.F. 1984. Counting seabirds at sea from ships: a review of methods employed and a suggestion for a standardized approach. *Auk* **101**: 567-577.

THAXTER,C.B., LASCELLES,B., SUGAR,K., COOK,A.S.C.P., ROOS,S., BOLTON,M., LANGSTON,R.H.W., & BURTON,N.H.K. 2012. Seabird foraging ranges as a preliminary tool for identifying candidate Marine Protected Areas. *Biological Conservation* **156**: 53-61.

THAXTER,C.B., ROSS-SMITH,V.H., CLARK,N.A., CONWAY,G.J., REHFISCH,M.M., BOUTEN,W., & BURTON,N.H.K. 2011. Measuring the interaction between marine features of Special Protection Areas with offshore wind farm development zones through telemetry: first breeding season. Report to the Department of Energy and Climate Change. No. **590**.

VOTIER,S.C., BEARHOP,S., CRANE,J.E., ARCOS,J.M., & FURNESS,R.W. 2007. Seabird predation by great skuas Sterkorarius skua - intra-specific competition for food? *Journal of Avian Biology* **38**: 234-246.

WADE,H.M., MASDEN,E.A., JACKSON,A.L., THAXTER,C.B., BURTON,N.H.K., BOWMAN,J., & FURNESS,R.W. GPS tracking of great skuas *Stercorarius skua* to investigate interactions with fisheries and marine renewable energy developments. http://77.68.107.10/MREP/10/Documents/ICES%20selected%20presentations/Wade%20et %20al.pdf . 2012.

WEBB,A. & DURINCK,J. 1992. Counting birds from ship. Pp. 24-37 in *Manual for aeroplance and ship surveys of waterfowl and seabirds* (J. Komdeur, J. Bertelsen, and G. Cracknell, Eds.). IWRB Special Publication, Slimbridge, UK.

WRIGHT, P.J., JENSEN, H., & TUCK, I. 2000. The influence of sediment type on the distribution of the lesser sandeel, Ammodytes marinus. *Journal of Sea Research* **44**: 243-256.

Annex 1: Citation

Citation

Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (this is the codified version of Directive 79/409/EEC as amended)

CITATION FOR PROPOSED SPECIAL PROTECTION AREA (SPA)

Seas off Foula

(UKXXXXXXX)

Site Description:

The Seas off Foula proposed Special Protection Area (SPA) is a marine site to the west of Shetland. It covers $3,412 \text{ km}^2$ of inshore and offshore waters and surrounds the island of Foula. The site overlaps with low intensity spawning and nursery grounds of sandeels Ammodytidae. Water depths range mainly between 50m and 150m, with deepest areas in the northwest of the site.

Qualifying Interest:

The Seas off Foula proposed Special Protection Area (SPA) qualifies under **Article 4.2** by regularly supporting populations of international importance of the migratory species **great skua** *Stercorarius skua* (a breeding population of 1,594 birds (3.3% of the biogeographic population).

It also qualifies under **Article 4.2** by regularly supporting an **assemblage of breeding seabirds** of >20,000 individuals, the named components of which are northern fulmar *Fulmarus glacialis* (8,379 birds), Arctic skua *Stercorarius parasiticus* (219 birds), great skua *Stercorarius skua* (1,594 birds), common guillemot *Uria aalge* (11,142 birds) and Atlantic puffin *Fratercula arctica* (14,886 birds).

Finally, Seas off Foula also qualifies under **Article 4.2** by regularly supporting an **assemblage of seabirds during the non-breeding season** of 20,175 individuals, the named components of which are northern fulmar *Fulmarus glacialis* (5,409 birds), great skua *Stercorarius skua* (319 birds) and common guillemot *Uria aalge* (8,340 birds).

Area: 341,215 ha.

Date: XXXX

Annex 2: Evidence standards

JNCC Evidence standards (Evidence Quality Assurance Policy)

Annex 3: Site Map



Document version control

Version	Amendments made	Issued to and date
V1	First draft	Comments from JNCC and SNH
		February 2014
V2 + V3	Addressing comments	
V4	Finalised draft for sign-off	MPA SubGroup, 29/02/2014
V5	Addressing comments from MPA Sub- Group	
V6	Restructure in accordance with SNH approach	High level internal QA
V7	Addressing comments from high level QA	MPA Sub-Group, 09/05/2014
V8	Addressing comments from MPA Sub- Group. Exclusion of Arctic tern.	High level internal QA, 28/05/2014
V9	Addressing comments from high level QA	
V10	Finalised draft for sign-off	MPA Sub Group, 30/05/2014; Internal high level and Director level QA, 20/06/2014
V11	Refined version addressing high level comments.	Comments from Marine Scotland in general on Site Selection Documents after Stakeholder workshop on 8-9 March 2016
V12	Addressing comments from Marine Scotland	Further comments from Marine Scotland
V12.1 + V12.2	Addressing further comments from Marine Scotland and from the National stakeholder workshop	MPA Sub Group 24/05/2016 –provided further comments
V12.3	Addressing further comments from the MPA Sub-Group, including a boundary change to exclude existing inshore Foula SPA	MPA Sub Group 09/06/2016
V13	Finalised draft for sign-off	