Departmental Brief:

Poole Harbour potential Special Protection Area

Natural England

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Summary

An extension of the seaward boundary of the Poole Harbour (SPA) to harbour mouth is proposed due to existing qualifying interest features of the SPA foraging and roosting in intertidal and subtidal areas currently outside of the boundary of the SPA. These existing qualifying interest features are: shelduck, pied avocet, black-tailed godwit, Mediterranean gull, common tern, and the overwintering water bird assemblage. In addition, an extension to part of the landward boundary is advised. This terrestrial area is an important foraging and roosting area for Shelduck, Black tailed godwit and the over wintering bird assemblage. The area is now subject to tidal inundation which has improved its value as a foraging and roosting area. In the light of recent population increases within the SPA, it is proposed to also add three new qualifying features to the site: breeding Sandwich terns and non-breeding little egrets and Eurasian spoonbills.

This Departmental Brief makes use of the most recent available estimates of the population sizes of these proposed new features i.e. Sandwich tern, little egret and Eurasian spoonbill to derive the populations of these birds supported by the SPA. This Departmental Brief also makes use of the most recent available estimates of the population size of common tern to ensure consistency with the number of this species originating from this SPA and used to derive the size of the common tern population supported by the Solent and Dorset Coast SPA. For the Annex 1 Mediterranean gull in Poole Harbour, this Departmental Brief also makes use of the most recent available estimate of the population size of this existing feature to derive the population of this species now supported by the SPA. This is because there has been a tenfold increase in the breeding population of Mediterranean gull in Poole Harbour. In respect of all other existing features, where not such a difference in numbers has occurred, this Departmental Brief does not make any proposal to amend base-line population figures.

This Departmental Brief sets out the scientific case for the re-classification of the Poole Harbour SPA. This site qualifies under Article 4 of the Birds Directive (2009/147/EC) for the following reasons (summarised in Table 1):

- The site regularly supports more than 1% of the GB populations of six species listed in Annex I of the EC Birds Directive. Therefore, the site qualifies for SPA Classification in accordance with the UK SPA selection guidelines (stage 1.1).
- The site regularly supports more than 1% of the biogeographical population of two regularly occurring migratory species not listed in Annex I of the EC Birds Directive. Therefore the site qualifies for SPA designation in accordance with the UK SPA selection guidelines (stage 1.2).
- The site regularly supports more than 20,000 waterfowl during the non-breeding season. Therefore the site qualifies for SPA designation in accordance with the UK SPA selection guidelines (stage 1.3).

Table 1 Summary of qualifying ornithological interest in Poole Harbour pSPA. Entries in bold indicate changes from the figures used in the original classification of the Poole Harbour SPA in 2000.

Feature	Count (period)	% of subspecies or population	Interest type	New feature? (Y/N)
Common tern *Sterna hirundo*	**178 Pairs[1] (356 breeding adults) 2010-2014**	**1.8 % of GB population[2]**	Annex 1	N
Sandwich tern *Sterna sandvicensis*	**181 Pairs[1] (362 breeding adults) 2010-2014**	**1.6 % of GB population[2]**	Annex 1	Y

Mediterranean gull *Larus melanocephalus*	**64 pairs[3] (128 breeding adults) 2015**	**10% of GB population[2]**	Annex 1	N
Little egret *Egretta garzetta*	**114 Individuals[4] 2009/10-2013/14**	**2.5 % of GB population[5]**	Annex 1	Y
Eurasian spoonbill *Platalea leucorodia*	**20 individuals 2009/10 – 2013/14[4]**	**100% of GB population[5,8]**	Annex 1	Y
Pied Avocet *Recurvirostra avosetta*	459 Individuals[6] 1992/93 – 1996/97	36.1% of GB population[6]	Annex 1	N
Shelduck *Tadorna tadorna*	3,569 individuals[6] 1992/93 – 1996/97	1.2 % of biogeographic population[6]	Regularly occurring migrant	N
Icelandic-race black-tailed godwit *Limosa limosa islandica*	1,576 individuals[6] 1992/93 – 1996/97	2.3 % of biogeographic population[6]	Regularly occurring migrant	N

Feature	**Count (period)**
Overwintering waterbird Assemblage	25,176 individuals[7] 1993/94-1996/7 for all species except new features of little egret and Eurasian spoonbill for which 5 year means from 2009/10 – 2013/14 (114 and 20 respectively) added to original overwintering assemblage total minus little egret 4 year peak mean (48) for 1993/94-1996/7 and spoonbill 4 year peak mean (1) 1993/94-1996/7

[1] Data from: Seabird Monitoring Programme (SMP)
[2] GB breeding populations derived from Musgrove *et al*. (2013)
[3] Data from: Chown *in litt.* (2015)
[4] Data from: Wetlands Bird Survey database Holt *et al.* (2015)
[5] GB non-breeding populations derived from Musgrove *et al.* (2013)
[6] Data from: Poole harbour SPA citation (March 2000)
[7] Derived by addition of the most recent 5 year mean peak count for the new features of Little egret and Eurasian Spoonbill (from WeBS database Holt *et al.* 2015) to the assemblage figure of 25,091 individuals used in the original Poole Harbour SPA citation in 2000 and based on count data collected between 1993/94 and 1996/97 (minus any contribution to that total from these two species at that time).
[8] GB non-breeding population (20 individuals) derived from Musgrove *et al.* (2013) used data calculated over the period 2004/5-2008/9. A 5 year peak mean of 20 spoonbill were recorded in Poole Harbour over the period 2009/10-2013/14 giving an estimate of 100% spoonbill within Poole which is clearly incorrect. Holt *et al* (2015) give a maximum number of individuals counted in GB of 44. The Poole Harbour mean peak count of 20 equates to 45% of that figure.

1. Assessment against SPA selection guidelines

The UK SPA Selection Guidelines requires that SPA identification should be determined in two stages (Stroud *et al*. 2001). The first stage is intended to identify areas that are likely to qualify for SPA status. The second stage further considers these areas using one or more of the judgements in Stage 2 to select the most suitable areas in number and size for SPA classification (Stroud *et al*. 2001).

1.1. Stage 1

Under stage 1 of the SPA selection guidelines (JNCC, 1999), sites eligible for selection as a potential SPA must demonstrate one or more of the following:

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

Stage 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;

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

Stage 1.4 An area which meets the requirements of one or more of the Stage 2 guidelines in any season, 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 Conference of the Contracting Parties to the Ramsar Convention has defined the term 'regularly' as used in the Ramsar site selection criteria, and this definition also applies to the SPA selection guidelines (JNCC, 1999). A wetland regularly supports a population of a given size if:

i) the requisite number of birds is known to have occurred in two-thirds of the seasons for which adequate data are available, the total number of seasons being not less than three; or

ii) the mean of the maxima of those seasons in which the site is internationally important, taken over at least five years, amounts to the required level (means based on three or four years may be based on provisional assessments only).

Poole Harbour pSPA qualifies under stage 1 (1) because it regularly supports greater than 1% of the GB population of six species listed in Annex I of the Birds Directive i.e. common tern (1.78%), Sandwich tern (1.65%), Mediterranean gull (10%), pied avocet (36.1%), little egret (2.53%) and Eurasian spoonbill (100%). In addition, the site qualifies under stage 1 (2) because at the time of original notification it regularly supported over 1% of the biogeographical populations of two regularly occurring migratory birds not listed on Annex 1 of the Birds Directive i.e. shelduck (1.2%) and Icelandic black-tailed godwit (2.3%). Furthermore, the site qualifies under stage 1 (3) by regularly supporting an overwintering assemblage of over 20,000 individuals, including, in addition to those species qualifying under stage 1(1) or stage 1(2) main components which are the nationally important populations of: dunlin, cormorant, dark-bellied brent goose, teal, goldeneye, red-breasted merganser, curlew, spotted redshank, greenshank, redshank, pochard and black-headed gull.

1.2. Stage 2

The Poole Harbour pSPA is assessed against Stage 2 of the SPA selection guidelines in Table 2. It should be noted that in applying the SPA selection guidelines, Stroud *et al.* (2001) note that a site which meets only one of these Stage 2 judgments is not considered any less preferable than a site which meets several of them, as the factors operate independently as indicators of the various different kinds of importance that a site may have. In fact, the pSPA meets most of the Stage 2 criteria indicating the high value of the site.

Table 2 Assessment of the bird interest against stage 2 of the SPA selection guidelines

Feature	Qualification	Assessment
1. Population size & density	✓	20th largest breeding common tern population in the UK [1] 13th largest breeding Sandwich tern population in the UK[1] Largest breeding Mediterranean gull population in the UK[1] 2nd largest over-wintering population of pied avocet in the UK[2] 4th largest over-wintering population of black-tailed godwit in the UK[2] 11th largest over-wintering population of little egret in the UK[3] 2nd largest over-wintering population of Eurasian spoonbill in the UK[7] 12th largest over-wintering population of shelduck in the UK[2]
2. Species range	✓	the most south-westerly site in the UK holding qualifying numbers of common tern, Sandwich tern and Mediterranean gull, and one of the most south-westerly sites in the UK holding qualifying numbers of pied avocet and black-tailed godwit, shelduck, little egret and Eurasian spoonbill.
3. Breeding success	**(✓)**	Sandwich tern productivity is highly variable but has averaged 0.30 fledglings/nest between 2010 and 2014[4]. This is in line with the national average (0.3-0.4) since 2008 which has declined from 0.66 between 1986 and 2008[4]. Common tern productivity is highly variable but has averaged 0.25 fledglings/nest between 2010 and 2014[5]. This is below the national average (range c0.3-0.5) since 2008 which has also declined from a range of 0.35-0.75 between 1986 and 2008[5]. There are no known records of the breeding success of Mediterranean gulls in Poole harbour
4. History of occupancy	✓	The site has been classified as a Special Protection Area since 2000 based on occurrence of its features in qualifying numbers during the period 1992-1997. The Sandwich tern colony on Brownsea island is long established (since 1973) and increasing[6]. The peak annual low water WeBS count of overwintering little egret has increased steadily between 1991 and 2004[6] and appears to have stabilised since then. Wintering Eurasian spoonbills have occurred in Poole Harbour annually since 1989/90 with up to 3 birds per year up to 2002/03[8] and considerably greater numbers since then[9]
5. Multi-species area	✓	Six qualifying Annex 1 species, two qualifying regularly occurring migrants and an over-wintering waterbird assemblage of which a further twelve species occur in nationally important numbers.
6. Naturalness	n/a	No longer applicable, following ruling from the SPA and Ramsar site Working Group
7. Severe	✓	During severe winter weather Poole Harbour assumes even

weather refuge		greater national and international importance as waterfowl are attracted by the mild conditions and the abundant food resource (English Nature, 2000).

[1] Note that this ranking should only be considered indicative of the relative importance of the pSPA as it is based on comparison of the most recent 5 year mean populations of this species in Poole Harbour (or the only count within the last 5 years in the case of Mediterranean gull) with the historical populations of each species at each SPA in the UK as listed in Stroud *et al.* (2001).
[2] ranking based on the population of the species at classification of Poole Harbour in comparison with the historical populations of each species at each SPA in the UK as listed in Stroud *et al.* (2001).
[3] ranking based on comparison of the most recent 5 year peak mean count for Poole Harbour with contemporary count data at other sites as documented by Holt *et al*. 2015.
[4]. Sources: Poole values http://jncc.defra.gov.uk/smp/sitesBrowser.aspx?siteID=81159 ; national values http://jncc.defra.gov.uk/page-2890
[5] Sources: Poole values http://jncc.defra.gov.uk/smp/sitesBrowser.aspx?siteID=81159 ; national values http://jncc.defra.gov.uk/page-2895
[6] Source: Pickess (2007).
[7] Ranking based on 2009/10 - 2013/14 count data at all sites (as documented by Holt *et al* 2015). Stroud et al (2001) provide no figures for this species as no SPAs were selected for it at that time.
[8] Source: Green, G. (2004).
[9] Source: Holt et al (2015).

2. Site Status and Boundary

The Poole Harbour SPA was classified in March 1999, with an area of 2271.99 hectares. The SPA is underpinned by parts of the following Sites of Special Scientific Interest (SSSI):-
Poole Harbour, Arne, The Moors, Wareham Meadows, Holton and Sandford Heaths and Studland & Godlingston Heaths.

Poole Harbour SPA is of European importance because it supports:-

Internationally important populations of regularly occurring Annex 1 species.

Species	Population (5 yr peak mean)*		
Pied avocet (*Recurvirostra avosetta*)	459 birds	36.1 %Great Britain	(1992/93 - 1996/97)
Mediterranean gull (*Larus melanocephalus*)	5 pairs	22.7-38.5%Great Britain	(1993 - 1997)
Common tern (*Sterna hirundo*)	155 pairs	1.3% Great Britain	(1993 - 1997)

Internationally important populations of regularly occurring migratory bird species.[6]

Species	Population (5 yr peak mean for 1992/93 - 1996/97)*	
Shelduck (*Tadorna tadorna*)	3,569 birds	1.2% North West Europe
Black-tailed godwit (*Limosa limosa*)	1,576 birds	2.3% Iceland

An internationally important assemblage of waterfowl.

[6] Poole Harbour is regularly used by 1% or more of the biogeographical population of a regularly occurring species (other than those listed on annex 1) in any season (Cranswick *et al.*, 1995).

Importance	Population (5 yr peak mean for 1993/94 - 1996/97)*
Poole Harbour supports large populations of wintering waterfowl.	25,091 individual birds - (23,498 based on no data for wildfowl in 1992/93)

*SPA citation (March 1999) held on Register of European marine sites for Great Britain.

The original Natura 2000 Standard Data Form submitted to the European Commission (JNCC 2006) cites internationally important breeding populations of two species listed in Annex 1 of the Birds Directive i.e. Mediterranean gull (*Larus melanocephalus*) and common tern (*Sterna hirundo*), an internationally important over-wintering population of one species listed in Annex 1 of the Birds Directive i.e. pied avocet *Recurvirostra avosetta,* internationally important overwintering populations of two regularly occurring migratory species i.e. black-tailed godwit (Icelandic race) *Limosa limosa islandica* and shelduck *Tadorna tadorna* and an internationally important assemblage of over-wintering waterfowl (including shelduck, black-tailed godwit and pied avocet).

The subsequent SPA review (Stroud *et al.* 2001) lists: internationally important breeding populations of little egret *Egretta garzetta*, Mediterranean gull and common tern, internationally important over-wintering populations of shelduck, pied avocet and black-tailed godwit, an internationally important passage population of aquatic warbler *Acrocephalus paludicola* and an over-wintering waterfowl assemblage of European importance of 28,426 birds. Amongst the assemblage the following species occurred in numbers exceeding 1% of the GB population: great cormorant *Phalacracorax carbo,* dark-bellied brent goose *Branta bernicla bernicla,* shoveler *Anas clypeata*, pochard *Aythya ferina*, goldeneye *Bucephala clangula*, red-breasted merganser *Mergus serrator*, dunlin *Calidris alpina alpina,* curlew *Numenius arquata* and redshank *Tringa totanus*.

More recent count data confirm that the site regularly supports qualifying numbers of over-wintering little egret *Egretta garzetta* and Eurasian spoonbill *Platalea leucorodia* and also breeding Sandwich terns *Sterna sandvicensis.* It does not support an internationally important passage population of Aquatic Warbler *Acrocephalus paludicola.*

The seaward boundary of the SPA was drawn to Mean Low Water mark. Consequently areas of marine habitat lying below this shore-level and which are exploited for resting, roosting or feeding by many of the site's qualifying features and by many component species within the over-wintering waterfowl assemblage, lie outside the protected site. Thus, a potential extension to the SPA is now proposed to include within the site boundary all areas below Mean Low Water mark which lie within the harbour entrance (details in section 1.2, map in Annex 1).

Furthermore, it is proposed to extend the landward boundary of the SPA to include an area of land which was formerly freshwater grassland but, as a result of a natural breach to the seawall in summer 2013 has been subjected to tidal inundation. It is currently undergoing a transition to more saline intertidal habitat. This change has resulted in the recent increased use of the area by foraging and roosting by birds from the adjacent SPA. The proposed extension is described in more detail in section 1.3 and illustrated in the maps at Annex 1.

The resulting pSPA site boundary has been drawn to include additional intertidal and subtidal areas required to ensure the long-term sustainability of the designated populations. A detailed description of the boundaries and general principles follows.

2.1. Description of the pSPA boundary

Within the geographical boundaries of Poole Harbour, areas which lie both above and below Mean Low Water (MLW) are used by a large number of seabirds, waders and waterfowl for foraging and roosting throughout the year (including common tern, Sandwich tern, black-tailed godwit and birds that form part of the overwintering waterbird assemblage, such as red-breasted merganser *Mergus serrator* and goldeneye *Bucephala clangula*) (Pickess, 2007). Therefore, in addition to those intertidal areas which lie above Mean Low Water and are included within the existing SPA boundary, areas below MLW also need to be considered for protection within the pSPA.

The total area of the potential Poole Harbour pSPA, including all areas within the harbour entrance which lie below MLW is approximately 4104.83 ha.

2.2. Seaward boundary of the pSPA

The existing Poole Harbour SPA has its seaward boundary set at Mean Low Water (MLW). The proposed new seaward boundary of the pSPA will lie across the harbour mouth and thereby ensure the inclusion of marine areas within the harbour below Mean Low Water (MLW) as well as above the MLW mark. This will result in the extent of the pSPA being 4104.83 ha which is 1832.84 ha larger than the 2271.99 ha of the current SPA. The seaward boundary of the Poole Harbour pSPA will abut the coastal boundary of the proposed Solent and Dorset Coast pSPA (Natural England 2015a) (map in Annex 1).

Poole Harbour supports two species of tern *i.e.* common tern and Sandwich tern in numbers that exceed SPA selection guideline qualifying thresholds. With the proposed modification of the seaward boundary of the SPA to include all marine habitats within the harbour entrance, all areas within the harbour which are used for foraging by breeding terns will be included within the revised site boundary. However, both species of tern are known to forage extensively in the open sea outside the harbour entrance (Aspinall & Tasker 1990). Recent research by JNCC has generated statistical models which predict that the areas of open sea exploited while chick-rearing by terns breeding in Poole Harbour extend up to 25km to the west and east of the harbour entrance (Wilson *et al.* 2014, Win *et al.* 2013). In an easterly direction these areas overlap with the sea areas used by breeding terns originating from the Solent and Southampton Water SPA (Natural England 2015). To deliver protection of these open sea areas which are important to breeding terns at various SPA colonies on the coasts of Dorset and Hampshire, Natural England is proposing a new Solent and Dorset Coast pSPA (Natural England 2015). The landward boundary of this pSPA is proposed to lie along Mean High Water Mark along the mainland coast except where there are existing SPAs with terns as qualifying features, in which case the pSPA boundary will abut that of the existing SPAs at Mean Low Water or, in the case of Poole Harbour pSPA, across the harbour entrance. Accordingly, protection of the important marine habitats supporting breeding terns of Poole Harbour pSPA is to be delivered by a combination of the Poole Harbour pSPA and the adjoining Solent and Dorset Coast pSPA. Full details of the data collection and analysis on the basis of which the open sea areas important to the breeding terns of Poole Harbour and the boundaries of the Solent and Dorset Coast pSPA have been defined, are presented in the Departmental Brief for that site (Natural England 2015).

2.3. Landward boundary of the pSPA

In summer 2013, the embankment bounding Poole Harbour around the shore of Lytchett Bay was naturally breached. Since then, the area of freshwater coastal grazing marsh lying behind this embankment has been subjected to regular tidal inundation. Count data over the winters of 2013/14 and 2014/15 show that the area supports particularly important numbers of black-tailed godwit, a species which is present in Poole Harbour in internationally important numbers (and therefore qualifies for SPA selection independently from the 20,000 waterbird assemblage). The area also supports important numbers (relative to SPA totals) of several other species which are particularly noteworthy components of the waterbird assemblage, including teal, greenshank and redshank. Additionally, it supports smaller numbers of other SPA species, including shelduck, dunlin and curlew, which may increase as intertidal foraging habitats develop. It seems likely that this importance will be maintained if not increased by future habitat changes. In the light of the increasing use of this newly created area of regularly tidally inundated habitat, it is proposed to extend the boundary of the SPA to include the full extent of the area now subjected to tidal inundation.

3. Location and Habitats

Poole Harbour SPA (and also the pSPA) is located on the coast of Dorset and is a large natural harbour comprising; subtidal channels, extensive tidal sandflats, mudflats and saltmarshes,

together with associated reedbeds, freshwater marshes and wet grassland (Humphreys & May 2005). It has a narrow entrance and a small tidal range and as a result, although classified as an estuary (several rivers flow into it) it has many of the qualities of a large lagoon (Humphreys & May 2005). The north side is largely urbanised while the west and south side abut heath, mire or grassland.

Extensive intertidal mudflats above MLW provide an important feeding habitat for overwintering waterbirds while the fringing saltmarshes and reedbeds provide roosting areas and a feeding habitat for a variety of bird species. At low water on Spring tides, intertidal areas below MLW are exploited for feeding by many of the site's qualifying features and component species within its qualifying over-wintering assemblage of waterfowl. Furthermore, many of these same species eg ducks, grebes and cormorant feed, loaf and roost over areas within the harbour where the seabed is subtidal.

The main areas of seagrass (*Zostera spp.)* beds lie below MLW in the north east of the harbour and provide a food source for dark-bellied brent goose as well as a supporting habitat for fish eating species such as red-breasted merganser and goldeneye.

Brownsea Island Lagoon is a particularly important feeding and roosting area for wintering birds. In addition it is a nesting site for common and sandwich terns. Saltmarsh islands in the north west of the harbour are the main nesting sites for Mediterranean gull which nest within the large colony of black-headed gulls *Chroicocephalus ridibundus*.

A large dune slack lake within the Studland dunes (Little Sea) is also included within the SPA (and pSPA) due to its importance as a supporting feeding and roosting habitat to many of the bird species.

Areas outside the SPA and pSPA contain important supporting habitats for the birds that use the site, including coastal grazing marsh and agricultural land.

Names of component Sites of Special Scientific Interest (SSSI):

- Poole Harbour
- Arne
- The Moors
- Wareham Meadows
- Holton and Sandford Heaths
- Studland & Godlingston Heaths

Nearby and overlapping Special Protection Areas and Special Areas of Conservation:

- Poole Harbour Ramsar
- Dorset Heathlands SPA
- Dorset Heaths SAC
- Dorset Heaths (Purbeck & Wareham) & Studland Dunes SAC
- Solent and Dorset Coast pSPA

4. Assessment of Ornithological Interest

4.1. Annex 1 species

4.1.1. Common tern *Sterna hirundo*

The breeding population of common terns in Great Britain is estimated to be 10,000 pairs (Musgrove *et al.* 2013), representing at least 2% of the Northern & Eastern European breeding population (500,000 pairs derived by division by 3 of the upper estimate of 1,500,000 individuals: AEWA 2012). A significant proportion of the British population breeds in Scotland. Coastal colonies in England are concentrated in the north-east, East Anglia, at a few localities along the south

coast, and in the north-west (Mitchell *et al.* 2004). Common terns breed not only around coasts but, unlike the other tern species which breed in the UK, also breed frequently beside inland freshwater bodies.

Brownsea Island lagoon is the site of the principal and probably only nesting colony of common terns within the Poole Harbour SPA. It is possible that occasional pairs have and still do nest elsewhere on islands within the harbour, but there are no confirmed records.

The Poole Harbour SPA citation states 155 pairs, at that time representing 1.3% of the GB breeding population (5-year peak mean, 1993-1997).

At Brownsea Lagoon, the number of pairs of common terns nesting during a recent 5-year period (2010-2014) were - **191** (2010), **222** (2011), **171** (2012), **163** (2013), **145** (2014). This provides a recent 5-year mean of **178** pairs (or 356 breeding adults). This represents **1.78%** of the GB breeding population. This Departmental Brief proposes this new population to be the notified population of this species to ensure consistency with the numbers used in the definition of the population of common terns supported by the Solent and Dorset Coast pSPA (Natural England 2015).

4.1.2. Sandwich tern *Sterna sandvicensis*

The breeding population of Sandwich terns in Great Britain is estimated to be 11,000 pairs (Musgrove *et al*. 2013), representing about 19.3% of the Western Europe/West Africa breeding population (57,000 pairs derived by division by 3 of the upper estimate of 171,000 individuals: AEWA 2012). In the UK, the species is restricted to relatively few large colonies, most of which are on the east coast of Britain with a few smaller ones on the south and north-west coasts of England and in Northern Ireland. Colonies are mostly confined to coastal shingle beaches, sand dunes and offshore islets (Mitchell *et al.* 2004).

Brownsea Island lagoon is the site of the principal and probably only nesting colony of Sandwich terns within the Poole Harbour SPA. It is possible that occasional pairs have and still do nest elsewhere on islands within the Harbour, but there are no confirmed records.

Sandwich tern is not a named feature of the existing Poole Harbour SPA as it did not occur in numbers exceeding qualifying thresholds at the time of classification. However, its numbers have increased in recent years.

At Brownsea Lagoon, the number of pairs of Sandwich terns nesting during a recent 5-year period (2010-2014) were - **232** (2010), **116** (2011), **167** (2012), **180** (2013), **210** (2014). This provides a recent 5-year mean of **181** pairs (or 362 breeding adults). This represents **1.65%** of the GB breeding population and accordingly it is proposed to add the species as a named feature of the Poole Harbour pSPA in its reclassification. This Departmental Brief proposes this new population to be the notified population of this species to ensure consistency with the numbers used in the definition of the population of Sandwich terns supported by the Solent and Dorset Coast pSPA (Natural England 2015).

4.1.3. Mediterranean gull, *Larus melanocephalus*

The breeding population of Mediterranean gulls in Great Britain is estimated to be 600-630 pairs (Musgrove *et al*. 2013), representing about 1.6% of the Western Europe/ Mediterranean and North-west Africa breeding population (40,000 pairs derived by division by 3 of the upper estimate of 120,000 individuals: AEWA 2012). In the UK, the species is restricted to relatively few colonies, most of which are on the south and south-east coast of England and associated with larger numbers of breeding black-headed gulls (Mitchell *et al.* 2004). In the UK, colonies are mostly confined to sparsely vegetated, low-lying islands of coastal lagoons or estuaries (Mitchell *et al.* 2004).

Mediterranean gull is a nationally important species in Poole Harbour. The only confirmed current breeding colony for Mediterranean gulls in Poole Harbour is on the saltmarsh islands off Holton Heath where the species nests in a mixed colony with black-headed gulls.

When classified in 2000 the SPA supported 5 pairs, then representing over 20% of the British population (English Nature, 2000). Since designation, the number of breeding pairs of Mediterranean gull in Poole Harbour has increased. Counts in 2006 and 2008 yielded population estimates of at least 50 pairs (Pickess 2007) and 87 pairs (David Chown, *in litt*.) respectively. The most recent count of 64 pairs in 2015 (David Chown, *in litt*.) indicates a 10 fold increase in numbers since classification, and the historical counts in 2006 and 2008 indicate that there is regularity of use at this much elevated level. The most recent count of 64 pairs represents **10%** of the current (2006-2010) GB breeding population of 600 - 630 pairs (Musgrove *et al.* 2013).

4.1.4. Pied avocet *Recurvirostra avosetta*

The over-wintering population of pied avocet in Great Britain is estimated to be 7,500 individuals (Musgrove *et al*. 2013), representing about 10.3% of the Western Europe and North-west Africa population of 73,000 individuals (AEWA 2012). In the UK the wintering population is widely spread across many estuarine sites, most of which are on the east and south coasts of England.

Within Poole Harbour, wintering pied avocet mainly roost at Brownsea Lagoon, towards the ends of Wytch and Middlebere channels, (Pickess 2007) and on the *Spartina* saltmarsh in north Holes Bay (Hopper, 2008). Pied avocet appear to have a localised distribution with respect to feeding areas which may be associated with their preferred prey items eg amphipods *Corophium spp.* (Herbert, 2010). The main feeding areas between 1998 and 2004 were Wytch and Middlebere channels, Brownsea Lagoon and East Fitzworth. However with the rise in the numbers of pied avocet in the harbour, small numbers have been recorded feeding throughout the harbour (Pickess, 2007).

When classified in 2000 the SPA supported nationally important numbers of pied avocet (459 individuals) then representing 36% of the British population (English Nature, 2000). The over-wintering population of pied avocet in Poole Harbour has significantly increased in the years following designation and the site now supports a 5 year peak mean of 1,417 individuals recorded between 2009/10-2013/14 (Holt *et al*. 2015) making it the third most important over-wintering site for the species in the UK. This represents approximately **18.9%** of the current (2004/05 – 2008/09) GB wintering population of 7,500 individuals (Musgrove *et al.* 2013). This Departmental Brief does not propose any amendment to the notified population of 459 individuals.

4.1.5. Little egret *Egretta garzetta*

The over-wintering population of little egret in Great Britain is estimated to be 4,500 individuals (Musgrove *et al*. 2013), representing about 3.1% of the Western Europe and North-west Africa population of up to 143,000 individuals (AEWA 2012). In the UK the wintering population is widely spread across many estuarine sites, most of which are on the east, west and south coasts of England.

Within Poole Harbour, little egret is a very mobile species which, in addition to feeding within the harbour, is observed beside streams, ditches and fields surrounding the harbour. As well as roosting in *Spartina* saltmarsh, birds are known to roost in trees around Littlesea (the dune slack lake on Studland) and in plantation trees in Arne (Pickess, 2007; Hopper, 2008).

Little egret is not a named feature of the existing Poole Harbour SPA as it did not occur in numbers exceeding qualifying thresholds at the time of classification. The over-wintering population of little egret in Poole Harbour has significantly increased in the years following designation. Stroud *et al*. (2001) record a figure of 83 individuals which at that time equated to 16.6% of the national

population. The site now supports a 5 year peak mean of 114 individuals recorded between 2009/10-2013/14 (Holt *et al*. 2015). However, due to increases in the distribution of this species within the UK and in its national over-wintering population, the current mean peak of 114 individuals in Poole Harbour make it the eleventh most important over-wintering site for the species in the UK. This 5 year mean peak population represents **2.53%** of the latest (2004/05-2008/09) Great Britain wintering population estimate of 4,500 individuals (Musgrove *et al.* 2013). Accordingly it is proposed to add the species as a named feature of the Poole Harbour pSPA in its reclassification.

4.1.6. Eurasian spoonbill *Platalea leucorodia*

The over-wintering population of Eurasian spoonbill in Great Britain was estimated to be 20 individuals between 2004/05 and 2008/09 (Musgrove *et al.* 2013), representing 0.2% of the Western Europe/West Mediterranean and North-west Africa population of 11,300 individuals (AEWA 2012). The latest available estimate for the GB non-breeding population is 44 (Holt *et al.* 2015). Non-breeding spoonbills require extensive areas of shallow water for foraging, with the majority recorded on coastal wetlands in Britain. They are found in the southern half of England, with the highest numbers in East Anglia and on the south coast from Cornwall to Dorset (Holt *et al.* 2015).

The Birds of Poole Harbour website http://www.birdsofpooleharbour.co.uk/poole-harbour-list?name=&begins states that the best places to see Spoonbill are on the Brownsea Lagoon and in the Middlebere Channel depending on the tide. They have also been sighted in Holes Bay in severe cold weather.

Eurasian spoonbill is not a named feature of the existing Poole Harbour SPA as it did not occur in numbers exceeding qualifying thresholds at the time of classification. The over-wintering population of spoonbill in Poole Harbour has significantly increased in the years following designation. The site now supports a 5 year peak mean of 20 individuals recorded between 2009/10-2013/14 (Holt *et al.* 2015), making it the second most important site for the species in the UK. The latest (2004/05 – 2008/09) Great Britain wintering population estimate is 20 individuals (Musgrove *et al.* 2013), on the basis of which it may be calculated that the latest Poole Harbour mean peak count accounts for **100%** of the GB population. However, the maximum GB population recorded in 2013/14 was 44 (Holt *et al*. 2015). Based on these recent figures, Poole Harbour supports about **45%** of the GB population. Accordingly it is proposed to add the species as a named feature of the Poole Harbour pSPA in its reclassification.

4.2. Regularly occurring migratory species

4.2.1. Shelduck *Tadorna tadorna*

The over-wintering population of shelduck in Great Britain is estimated to be 61,000 individuals (Musgrove *et al.* 2013), representing about 20% of the north-west European population of 300,000 individuals (AEWA 2012). The species is widely distributed around the coast of the UK in winter with the most important sites being large estuaries and bays on the west and east coasts of England.

Within Poole Harbour over-wintering shelduck either roost in areas of saltmarsh (*Spartina spp.)* or rest in open water. However, many shelduck have also been observed to rest on the fields and wet grassland bordering the harbour (Pickess, 2007). Feeding appears to take place throughout the harbour although favoured areas between 1991 and 2005 were Keysworth, Holes Bay and Brands Bay (Pickess, 2007).

Shelduck is a nationally important species in Poole Harbour. When classified in 2000 the site supported 3,569 individuals, then representing 1.2% of the north-west European population

(English Nature, 2000). The over-wintering population of Shelduck in Poole Harbour has declined in the years following designation and the site now supports a 5 year peak mean of 1,275 individuals recorded between 2009/10 and 2013/14 (Holt *et al*. 2015) such that the SPA is only just within the top 20 most important sites for the species in the UK, and holds just **0.40%** of the north-west European population. This Departmental Brief does not propose any amendment to the notified population of 3,569 individuals.

4.2.2. Black-tailed godwit, *Limosa limosa islandica*

The over-wintering population of the Icelandic race of the black-tailed godwit in Great Britain is estimated to be 43,000 individuals (Musgrove *et al.* 2013), representing at least 57% of the Icelandic/western European population of up to 75,000 individuals (AEWA 2012). The species is widely distributed around the coast of the southern half of the UK in winter with the most important sites being large estuaries and bays on the west and east coasts of England.

Within Poole Harbour, normally, this is a rather nomadic species. Flocks tend to congregate in one bay to feed for a number of days or weeks before moving on to another bay or creek. Their roost attendance is therefore limited to the area in which they are feeding (Morrison, 2003). With the exception of Brownsea Lagoon, observations have shown that preferred feeding sites were all in areas of fine silt that had a medium to high biomass of ragworm *Hediste diversicolor* (Pickess, 2007). As well as feeding at low tide on the intertidal mudflats, black tailed godwit also feed during wet winters on wet grassland moving as far afield as the lower Avon Valley (Pickess, 2007). During periods of riverine flooding, large numbers of birds have been observed using wet grassland areas with lower numbers of birds roosting and feeding in the Harbour at this time (Morrison, 2003). In the winters of 2013/14 a peak of 553 birds (27% of the harbour-wide peak count of 2,070 in that winter) was recorded feeding at French's farm which is the location of the proposed extension to the landward boundary of the pSPA.

When classified in 2000 the site supported 1,576 individuals, then representing 2.4% of the Icelandic population (English Nature, 2000). The over-wintering population of black-tailed godwit in Poole Harbour has increased in the years following designation and the site now supports a 5 year peak mean of 1,878 individuals recorded between 2009/10-2013/14 (Holt *et al*. 2015) making it the twelfth most important over-wintering site for the species in the UK. This 5 year mean peak population represents at least **2.3%** of the latest (1997-2007) estimate of the population of the Icelandic race of this species i.e. up to 75,000 individuals (AEWA 2012). This Departmental Brief does not propose any amendment to the notified population of 1,576 individuals.

4.3. Non-breeding waterfowl assemblage

Poole Harbour is one of the most important sites in the UK for wintering wildfowl and waders. The site qualifies under article 4.2 of the Birds Directive (79/409/EEC) as it is used regularly by over 20,000 waterbirds over the winter.

The wintering waterbird assemblage includes as its main components, all the Annex 1 species and regularly occurring migratory species which qualify in their own right under Articles 4.1 and 4.2 respectively of the Birds Directive (79/409/EEC) i.e. pied avocet, Icelandic black-tailed godwit and shelduck. Species do not need to be present in numbers of European importance to be major assemblage components. Numbers equal to or exceeding the national importance threshold (e.g. 1% or more of GB population) or in excess of 2000 individuals are sufficient for a species to be listed as a major component of the assemblage. Thus, the assemblage also includes as main components the following species (English Nature 2000):

- dunlin *Calidris alpina alpina*,
- cormorant *Phalacrocorax carbo*,

- dark-bellied brent geese *Branta bernicla bernicla*,
- teal *Anas crecca*,
- goldeneye *Bucephala clangula*,
- red-breasted merganser *Mergus serrator*,
- curlew *Numenius arquata*,
- spotted redshank *Tringa erythropus*,
- greenshank *T. nebularia,*
- redshank *T. totanus*,
- pochard *Aythya ferina*
- black-headed gull *Larus* (now *Chroicocephalus) ridibundus*.

4.3.1. Non-listed assemblage species

In addition to the main components of the assemblage described above, the assemblage also includes numbers of all other waders and waterfowl that occur in the SPA. While not meeting numbers of national importance (1% of GB population) or contributing 10% or more to the minimum qualifying assemblage of 20,000 birds, these migratory species are still considered part of the designated assemblage protected by the SPA in accordance with the SPA selection guidelines (Stroud *et al.* 2001). Thus, at the time of classification the SPA supported a grand total of 25,091individual water birds in the non-breeding season (4 year peak mean 1993/94-1996/97 as no waterfowl count available in 1992/93).

With little egret and Eurasian spoonbill now occurring in numbers that result in them attaining the qualifying threshold under the SPA selection guidelines, it is proposed that they are included within the assemblage and that the new, greater numbers of these species are considered in determining the size of the over-wintering waterbird assemblage of Poole Harbour pSPA. Thus, a new assemblage total of 25,176 is proposed and is derived by addition of the figure of 114 little egrets and 20 Eurasian spoonbills (5 year mean peaks 2009/10-2013/14) to the existing assemblage figure of 25,091 (after subtracting the figure of 48 little egrets (4 year peak mean 1993/4-1996/97) and 1 spoonbill (4 year peak mean 1993/4- 1996/97) from the original assemblage total. (The original assemblage was calculated using a 4 year peak mean due to no data being available for wildfowl over 1992/3)

4.4. Qualifying interests features which do not currently meet the SPA selection criteria

4.4.1. Shelduck *Tadorna tadorna*

As previously noted (section 3.2.1) the over-wintering population of Shelduck in Poole Harbour has declined in the years following designation and the site now supports a 5 year peak mean of 1,275 individuals recorded between 2009/10 and 2013/14 (Holt *et al*. 2015). This represents just **0.40%** of the north-west European population of 300,000 individuals (AEWA 2012). Shelduck no longer occur in the SPA in numbers exceeding the qualifying threshold set out in the SPA selection guidelines (Stroud *et al.* 2001) for a regularly occurring migratory species i.e. 1% of the biogeographic population. In spite of this, it is proposed that in this re-classification process, this species is retained as a qualifying feature of the pSPA in its own right with no change being made to the originally notified population of 3,569 individuals. This will continue to be the population size on which conservation objectives for this feature will be based as the level of ambition for the species within the pSPA remains unchanged from that at original notification of the Poole Harbour SPA.

5. Comparison with other sites in the UK

A comparison is presented in Table 3 of the populations of each named qualifying feature of the Poole Harbour pSPA with the largest breeding and/or overwintering populations supported by

individual SPAs across Great Britain. In the case of Sandwich terns and common terns the figures for the Poole Harbour pSPA populations are the same as those used in deriving the populations of these species supported by the Solent & Dorset Coast pSPA (Natural England 2015) i.e. based on the most recent 5 year mean. The same is true for the overwintering little egret and Eurasian spoonbill populations which are being proposed as new qualifying features of the Poole Harbour pSPA. For the Mediterranean gull, the comparison is based on the only count of the Poole Harbour colony within the last 5 years i.e. 64 pairs. This has been used in acknowledgement of the increase in the numbers of this rare breeding Annex 1 species. For the other qualifying features i.e. pied avocet, black-tailed godwit and shelduck, which are not new features of the pSPA, the populations at the time of original classification of Poole Harbour SPA are used in the comparison with other sites.

Unless otherwise stated, for the purposes of this comparison exercise, the population from each of the other individual SPAs is that presented in the SPA review (Stroud *et al.* 2001), which in all cases are of course many years out of date. It is acknowledged that in the case of the two tern species, little egret and Mediterranean gull, the ranking is therefore not based on like-for-like directly comparable information and instead merely indicates Poole Harbour pSPA's general level of relative importance in a national context. For the other species (excepting Eurasian spoonbill), the ranking is like for like in terms of the count data being contemporary but it is acknowledged to be a historical comparison that may not be indicative of the current relative importance of the populations in Poole Harbour. The ranking is based on the total number of the SPAs listed for each species in Stroud *et al.* (2001). In the case of Eurasian spoonbill, for which no historical figures are provided by Stroud *et al* (2001), the comparison of numbers across the Poole harbour pSPA and all other sites at which the species has been recorded in the WeBS database, is based on the most recent 5 year mean peak count at all sites complied by Holt *et al* (2015).

Table 3 Comparison of the numbers of individuals (and pairs) of each of the proposed new features of the Poole Harbour pSPA and of the existing features of the Poole Harbour SPA with numbers at other SPAs for which figures are provided in Stroud *et al.* (2001)[1].

Species	Site	Individuals (pairs)[1]	Rank[2,3]	Comments
New and **2001 review** qualifying features for Poole Harbour pSPA				
Sandwich tern *Sterna sandvicensis* (breeding)	North Norfolk Coast	6,914 (3,457)	1st of 17	At the time of classification, this species did not occur in qualifying numbers in Poole Harbour. The increase in numbers in Poole Harbour since then has resulted in the most recent 5 year mean population of 181 pairs now equating to **1.65%** of the GB breeding population of 11,000 pairs.
	Farne Islands	4,140 (2,070)	2nd of 17	
	Coquet Island	3,180 (1,590)	3rd of 17	
	Ythan Estuary, Sands of Forvie and Meikle Loch	1,200 (600)	4th of 17	
	Strangford Lough	1,186 (593)	5th of 17	
	Carlingford Lough	1,150 (575)	6th of 17	
	Loch of Strathbeg	1,060 (530)	7th of 17	
	Ynys Feurig, Cemlyn Bay and The Skerries	920 (460)	8th of 17	
	Foulness	640 (320)	9th of 17	
	Morecambe Bay	580 (290)	10th of 17	
	Solent & Southampton water	462 (231)	11th of 17	
	Duddon Estuary	420 (210)	12th of 17	
	Poole Harbour	362 (181)[5]	13th of 17	
Eurasian spoonbill *Platalea leucorodia* (non-breeding)	North Norfolk Coast	35	1st of 30	This species did not occur in qualifying numbers at the time of classification of Poole Harbour SPA. The most recent 5 year peak mean of 20 individuals (2009/10 – 2013/14) places it as the 2nd most important site at this time, and equates to about 45% of the current national population. It should also be noted that the North Norfolk coast supports a summer non breeding population while Poole Harbour supports a winter population.
	Poole Harbour	20[5]	2nd of 30	
	Taw Torridge Estuary	9	3rd of 30	
	Tamar Complex	7	4th of 30	
	The Wash	6	5th of 30	
Little Egret *Egretta garzetta* (non-breeding)	Poole Harbour	114[5]	1st of 3	This species did not occur in qualifying numbers at the time of classification of Poole Harbour SPA. At the time of the SPA review (Stroud et al 2001), Poole Harbour supported 83 individuals and was ranked as the 2nd most important site for the species at that time (Stroud *et al* 2001). Chichester & Langstone Harbours SPA and Tamar Estuaries Complex SPA were the only other two SPAs with this as a qualifying feature.
	Chichester & Langstone Harbours	100	2nd of 3	
	Tamar Estuaries Complex	42	3rd of 3	

Species	Site	Individuals (pairs)[1]	Rank[2,3]	Comments
				In comparison with historical numbers at those sites (Stroud *et al*. 2001), the current over-wintering population of 114 in Poole Harbour places it above these other 2 sites. However, the most recent WeBS report (Holt *et al*. 2015) indicates that in comparison with all other UK sites, 114 birds in Poole Harbour makes it the 11th most important site at this time, and equates to **2.53%** of the current national population.
Existing qualifying features for Poole Harbour SPA (and hence pSPA)				
Shelduck *Tadorna tadorna* (non breeding)	The Wash	15,981	1st of 32	Poole Harbour ranked 12th of the 32 SPAs for which this is a qualifying feature or an important component. It supported 1.2% of the biogeographical population at that time (Stroud *et al*. 2001). The most recent WeBS report (Holt *et al*. 2015) indicates that in comparison with all other UK sites 1,275 birds in Poole Harbour makes it the 21st most important site at this time, and the current population of 1,275 equates to only 0.4% of the biogeographcal population.
	Dee Estuary	6,827	2nd of 32	
	Morecambe Bay	6,372	3rd of 32	
	Mersey Estuary	5,039	4th of 32	
	Blackwater Estuary	4,594	5th of 32	
	Medway Estuary and Marshes	4,465	6th of 32	
	Ribble and Alt Estuaries	4,103	7th of 32	
	Humber Flats, Marshes & Coast	4,083	8th of 32	
	Strangford Lough	3,871	9th of 32	
	Stour and Orwell Estuaries	3,672	10th of 32	
	Firth of Forth	3,586	11th of 32	
	Poole Harbour	3,569	12th of 32	
Avocet *Recurvirostra avosetta* (non-breeding)	Alde – Ore Estuary	766	1st of 16	Poole Harbour ranked 2nd of the 16 SPAs for which this is a qualifying feature or an important component. At classification it supported 36.1% of the GB non-breeding population (Stroud *et al.* 2001). The most recent 5 year mean population of 1,417 individuals represents **18.9%** of the national population and the most recent WeBS report (Holt *et al.* 2015) indicates that Poole harbour currently ranks as the 3rd most important wintering site in the UK.
	Poole Harbour	459	2nd of 16	
	Exe Estuary	359	3rd of 16	
	Hamford Water	317	4th of 16	
	Medway Estuary and Marshes	314	5th of 16	
Icelandic-race Black-tailed godwit *Limosa limosa islandica*	Stour and Orwell Estuaries	2,475	1st of 27	Poole Harbour ranked 4th of the 27 SPAs for which this is a qualifying feature or an important component. At classification it supported 2.4% of the biogeographical population (Stroud *et al.* 2001). The most recent 5 year mean population of 1,878
	The Swale	1,755	2nd of 27	
	The Dee Estuary	1,739	3rd of 27	

Species	Site	Individuals (pairs)[1]	Rank[2,3]	Comments
(non-breeding)	Poole Harbour	1,576	4th of 27	individuals represents at least **2.5%** of the biogeographical population and the most recent WeBS report (Holt *et al*. 2015) indicates that Poole harbour currently ranks as the 12th most important wintering site in the UK.
	Blackwater Estuary	1,280	5th of 27	
Mediterranean Gull *Larus melanocephalus* (breeding)	Poole Harbour	128 (64)[6]	1st of 5	At the time of classification, Poole Harbour supported 5 pairs which represented 22.7% - 38.5% of the GB breeding population of 13-22 pairs. Poole Harbour ranked as the 2nd most important site for the species in the UK. The most recent 5 year mean count for Poole Harbour is 15 pairs (2002-2006) and this represents **2.5%** of the national population of 600-630 pairs near that time (Musgrove *et al.* 2013). Since then, the GB population has increased to 1028-1047 pairs by 2012 (Holling *et al*. 2014). Underhill-Day (2007) reports a count of at least 50 nests in 2006, and there are counts of 87 nests in 2008 (2008, RBBP 2000) and 64 nests in 2015. On the basis of the latter i.e. the only count within the last 5 years, Poole Harbour may now support up to **6.2%** of the current GB breeding population.
	The Swale	24 (12)	2nd of 5	
	Dungeness to Pett level	4 (2)	3rd = of 5	
	North Norfolk Coast	4 (2)	3rd = of 5	
	Solent and Southampton Water	4 (2)	3rd = of 5	
Common tern *Sterna hirundo* (breeding)	Firth of Forth Islands	1,600 (800)	1st of 22	At the time of classification, Poole Harbour supported 155 pairs which represented 1.3% of the GB breeding population. Poole Harbour ranked as the 20th most important site for the species in the UK (Stroud *et al.* 2001). The most recent 5 year mean of 178 pairs represents **1.78%** of the GB breeding population, and in comparison with historical populations at the other sites, results in Poole Harbour remaining the 20th most important site for the species in the UK.
	Coquet Island	1,480 (740)	2nd of 22	
	Strangford Lough	1,206 (603)	3rd of 22	
	Glas Eileanan	1,060 (530)	4th of 22	
	North Norfolk Coast	920 (460)	5th of 22	
	Carlingford Lough	678 (339)	6th of 22	
	Inner Moray Firth	620 (310)	7th of 22	
	Cromarty Firth	588 (294)	8th of 22	
	The Dee Estuary	554 (277)	9th of 22	
	Solent and Southampton Water	534 (267)	10th of 22	
	Dungeness to Pett Level	532 (266)	11th of 22	
	Ythan estuary, Sands of Forvie and Meikle Loch	530 (265)	12th of 22	
	Farne Islands	460 (230)	13th of 22	

Species	Site	Individuals (pairs)[1]	Rank[2,3]	Comments
	Foulness	440 (220)	14th of 22	
	Monach Isles	388 (194)	15th of 22	
	Ynys Feurig, Cemlyn Bay and The Skerries	378 (189)	16th of 22	
	Lough Neagh and Lough Beg	370 (185)	17th of 22	
	Ribble and Alt Estuaries	364 (182)	18th of 22	
	Larne Lough	360 (180)	19th of 22	
	Poole Harbour	356 (178)[5]	20th of 22	
Waterbird assemblage **(non-breeding)**	Poole Harbour	25,176		25,176 individuals 1993/94-1996/7 for all species except new feature of little egret and Eurasian spoonbill for which 5 year means from 2009/10 – 2013/14 (114 and 20 respectively) added to original overwintering assemblage total minus little egret 4 year peak mean (48) for 1993/94-1996/7 and spoonbill 4 year peak mean (1) 1993/94-1996/7

[1] Stroud *et al. (2001)* notes: Data from the JNCC/RSPB/ Seabird Group's Seabird Colony Register have been used. These comprised the best available, whole colony counts for the period 1993-1997 or earlier. These data have been supplemented with additional census data for some sites provided by country agencies (especially in Scotland) and/or as a result of more recent surveys of particular species.

[2] Note that these rankings should only be considered indicative of the relative importance of the pSPA as they are based on comparison of the most recent 5 year mean populations of each species at Poole Harbour SPA with the historical populations of each species at each SPA in the UK as listed in Stroud *et al.* (2001). The number of sites ranked is based on the number of sites listed for each species in Stroud *et al.* (2001) and adding one site to account for Poole harbour itself where this is not listed for a given species in Stroud *et al.* (2001).

[3] These rank orders to not take account of numbers currently being considered in the context of other pSPAs in the United Kingdom.

[4] Note that these rankings should only be considered indicative of the current relative importance of the pSPA as they are based on comparison of the historical 5 year mean peak populations of each species at Poole Harbour SPA at the time of its original classification i.e. 1992/93 – 1996/97 (with the exception of common tern for which 2010-2014 data are used and Mediterranean gull for which 2002-2006 data are used) with the historical populations of each species at each SPA in the UK as listed in Stroud *et al.* (2001). The number of sites ranked is based on the number of sites listed for each species in Stroud *et al.* (2001) and adding one site to account for Poole harbour itself where this is not listed for a given species in Stroud *et al.* (2001).

[5] Based on the most recent 5 year mean peak population: 2010-2014 (breeding Sandwich and common terns), 2009/10 -2013/14 (overwintering little egrets and Eurasian spoonbills,

6 Based on the most recent count in 2015 (Dave Chown, *in litt.*)

6. Conclusion

It can be seen from the evidence presented above that Poole Harbour is an important site. The site features meet the required selection criteria for classification as an SPA.
It ranks in the top 10 sites for all the proposed features (apart from sandwich tern, common tern and shelduck where it is 13th, 20th and 12th, respectively). The site is also the most south-westerly site in the UK holding qualifying numbers of common tern, sandwich tern and Mediterranean gull, and one of the most south-westerly sites in the UK holding qualifying numbers of pied avocet and black-tailed godwit, shelduck, little egret and Eurasian spoonbill.

We are confident that the proposed boundary offers sufficient protection for each species based on a composition of the key areas they use. We therefore feel that the evidence provided is sufficient to be able to take this site to consultation.

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Annex 1

Map 1: Overview of proposed extension to the seaward boundary of the Poole Harbour SPA

See map 1 on the main consultation page.

Annex 2 Special Protection Area (SPA) Citation

EC Directive 79/409 on the Conservation of Wild Birds potential Special Protection Area (SPA)

Name: Poole Harbour

Counties/Unitary Authorities:

Dorset County Council and Poole Borough Unitary Authority

Boundary of the pSPA:

The recommendations propose an extension to Poole Harbour SPA, which will include all the intertidal areas and subtidal areas within the harbour mouth which are not currently encompassed in the existing Poole Harbour SPA. The existing SPA has its seaward boundary set at Mean Low Water (MLW). The proposed new boundary of the pSPA will be at the harbour mouth, an increase in the extent of the current SPA by 1832.84 ha, from 2271.99 ha to 4104.83 ha. This new boundary will include a landward extension to include an additional area, 26.5 ha, of coastal grazing marsh. The seaward boundary will about the coastal boundary of the proposed Solent and Dorset Coast pSPA which is being designated to protect the at sea foraging grounds of the breeding tern features of the Poole Harbour pSPA, as well as those of terns originating from several other nearby SPAs where these birds are also qualifying features.

Size of pSPA: The pSPA covers an area of 4104.83 ha.

Site description:

Poole Harbour (SPA and pSPA) is located on the coast of East Dorset and is bounded by the conurbation of Poole its northern and eastern shores and by the Isle of Purbeck on its western and southern shores. Poole Harbour is a large natural harbour comprising of extensive tidal mudflats and saltmarshes together with associated reedbeds, freshwater marshes and wet grasslands. The existing SPA has its seaward boundary set at Mean Low Water (MLW). The site includes overlaps with: several Sites of Special Scientific interest (SSSI) i.e. Poole Harbour, Arne, Wareham Meadows, The Moors, Holton and Sandford Heaths, Studland and Godlingston Heaths, Poole Harbour Ramsar site, and encompasses the Dorset Wildlife Trust reserve on Brownsea Island.

The proposed extension to the seaward boundary of Poole Harbour SPA will include the sub-tidal and inter-tidal areas not currently encompassed in the existing SPA. This will include seagrass beds located towards the north east of the harbour and the subtidal channels in which 68 seaweed species, 159 invertebrate species and 32 fish species have been recorded, and in which exceptionally dense and extensive aggregations of Peacock worm *Sabellaris pavonina* are the most significant communities in terms of biodiversity interest (Dyrynda 2005). The proposed new boundary will be the harbour mouth, an increase in the extent of the current SPA by 1832.84 ha, from 2271.99 ha to 4104.83 ha.

The proposed extension to the landward boundary of the Poole Harbour SPA will include an area of former freshwater wet grassland at French's Farm which is owned and managed by the Royal Society for the Protection of Birds. Since summer 2013 this land has been subject to regular tidal inundation following a natural breach of the seawall. This has led to an increase in the number of birds using these fields during the whole tidal cycle, especially as a high water roost site.

Qualifying species:

The site qualifies under **Article 4** of the Birds Directive (2009/147/EC) for the following reasons (summarised in Table 1):

- The site regularly supports more than 1% of the Great Britain populations of five species listed in Annex I of the EC Birds Directive. Therefore the site qualifies for SPA Classification in accordance with the UK SPA selection guidelines (stage 1.1).
- The site regularly supports more than 1% of the biogeographic population of two regularly occurring migratory species not listed in Annex I of the EC Birds Directive. Therefore the site qualifies for SPA Classification in accordance with the UK SPA selection guidelines (stage 1.2).

Table 1 Summary of qualifying ornithological interest species in Poole Harbour pSPA

Feature	Count (period)	% of subspecies or population	Interest type
Common tern *Sterna hirundo*	178 Pairs[1] (356 breeding adults) 2010-2014	1.8 % of GB population[2]	Annex 1
Sandwich tern *Sterna sandvicensis*	181 Pairs[1] (362 breeding adults) 2010-2014	1.6 % of GB population[2]	Annex 1
Mediterranean gull *Larus melanocephalus*	64pairs[3] (128 breeding adults) 2015	10% of GB population[2]	Annex 1
Little egret *Egretta garzetta*	114 Individuals[4] 2009/10-2013/14	2.5 % of GB population[5]	Annex 1
Eurasian spoonbill *Platalea leucorodia*	20 individuals [4] 2009/10-2013/14	100% of the GB population[5,7]	Annex 1
Pied Avocet *Recurvirostra avosetta*	459 Individuals[6] 1992/93 – 1996/97	36.1% of GB population[6]	Annex 1
Shelduck *Tadorna tadorna*	3,569 individuals[6] 1992/93 – 1996/97	1.2 % of biogeographic population[6]	Regularly occurring migrant
Icelandic-race black-tailed godwit *Limosa limosa islandica*	1,576 individuals[6] 1992/93 – 1996/97	2.3 % of biogeographic population[6]	Regularly occurring migrant

[1] Data from: Seabird Monitoring Programme (SMP)
[2] GB breeding populations derived from Musgrove *et al*. (2013)
[3] Data from: David Chown (pers. comm.).
[4] Data from: Wetlands Bird Survey database Holt *et al*. (2015)
[5] GB non-breeding populations derived from Musgrove *et al.* (2013)
[6] Data from: Poole harbour SPA citation (March 2000)
[7] GB non-breeding population (20 individuals) derived from Musgrove *et al.* (2013). This source has been used for consistency with that used for all other species, but given the recent growth of the GB population since 2004/05 – 2008/09, this estimate of 100% within Poole is clearly incorrect. Holt *et al* (2015) give a maximum number of individuals counted in GB of 44. The Poole Harbour mean peak count of 20 equates to 45% of that figure.

Assemblage qualification:

The site qualifies under **Article 4** of the Birds Directive (2009/147/EC) as it used regularly by over 20,000 waterfowl (waterfowl as defined by the Ramsar Convention) or 20,000 seabirds in any

season (Table 2)

Table 2 **Summary of qualifying ornithological interest assemblage in Poole Harbour pSPA**

Feature	Count (period)
Overwintering waterbird Assemblage	25,176 individuals[1] 1993/94-1996/7 for all species except new feature of little egret and Eurasian spoonbill for which 5 year means from 2009/10 – 2013/14 (114 and 20 respectively) added to original overwintering assemblage total minus little egret 4 year peak mean (48) for 1993/94-1996/7 and spoonbill 4 year peak mean (1) 1993/94-1996/7

[1] Derived by addition of the most recent 5 year mean peak counts for the new features of little egret and Eurasian spoonbill (from WeBS database Holt *et al.* 2015) to the assemblage figure of 25,091 individuals used in the original Poole Harbour SPA citation in 2000 and based on count data collected between 1993/94 and 1996/97.

During the non-breeding season the area supports 25,176 individual waders and waterfowl including (in addition to the species which qualify as features in their own right (Table 1)): dunlin *Calidris alpina*, great cormorant *Phalacracorax carbo*, dark-bellied brent goose *Branta bernicla bernicla*, teal *Anas crecca,* goldeneye *Bucephala clangula*, red-breasted merganser *Mergus serrator*, curlew *Numenius arquata,* spotted redshank *Tringa erythropus*, greenshank *Tringa nebularia*, redshank *Tringa totanus*, pochard *Aythya farina* and black-headed gull *Chroicocephalus ridibundus,* all of which are present in nationally important numbers.

Principal bird data sources:

Breeding bird features: tern colony counts from JNCC Seabird Monitoring Programme contributed by colony managers: Dorset Wildlife Trust (Brownsea Island) and incidental counts of breeding gulls on saltmarsh islands in the Wareham Channel (David Chown, *in litt.*).
Non-breeding birds: Wetlands Bird Survey (WeBS) database (Holt *et al.* 2015) for most recent years' data, and original Poole Harbour SPA citation for historical figures i.e. WeBS data 1992/93-1996/97.

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Annex 3 Sources of bird data

Source of Data	Data provider	Subject	Date produced	Method of data collection	Verification
Seabird Monitoring Programme	JNCC and site managers	Brownsea Island breeding seabird data	2010-2014	Standard methodology	Verified by site manager and JNCC
Ad hoc colony counts	Study commissioned by Birds of Poole Harbour	Wareham Channel saltmarsh island gull colony counts	2015	Standard methodology	Verified by site manager
Wetland Bird Survey (WeBS) land-based surveys	WeBS	Over-winter wader and waterfowl counts from Poole Harbour	1992/93-1996/97 and 2009/10–2013/14	Land-based counts within defined count sectors	WeBS operates a systematic data verification procedure

ANNEX 4 – Implementation of Evidence Standards within boundary decision-making process

Decision-making processes within NE are evidence driven and the Natural England strategic evidence standard, and supporting guidance were followed. In particular, the four principles for the analysis of evidence set out in the Natural England Standard *Analysis of Evidence* have been adhered to. These two standards documents can be downloaded from the following web-links:

Strategic Evidence Standard:
http://publications.naturalengland.org.uk/publication/7699291?category=3769710

Analysis of Evidence Standard:
http://publications.naturalengland.org.uk/publication/7850003?category=3769710

An explanation follows as to how the principles within the *Analysis of Evidence* standard have been applied in defining the set of qualifying features and boundary of the Poole Harbour pSPA.

1.) The evidence used is of a quality and relevance appropriate to the research question or issue requiring advice or decision

Quantification of Poole Harbour pSPA interest feature population sizes.

As this is a re-classification of the existing Poole Harbour SPA, and with only a few exceptions, which are set out in the Departmental Brief (and covered in the following sections), no changes are being proposed to the suite of qualifying features or the notified populations sizes of those features, the evidence on which those original features were identified and populations quantified is not re-considered in this Annex. Rather, this Annex focuses only on those species which are being proposed in this Departmental Brief as new features of the pSPA (Sandwich tern, little egret and Eurasian spoonbill) and those species for which changes to the notified populations are being proposed either to ensure consistency with populations of other pSPAs which protect the same birds while at sea (common tern) or in recognition of very marked increases in their population since original classification of the Poole Harbour SPA (Mediterranean gull).

The evidence base underpinning the identification of three new qualifying features for the pSPA, and the updating of the populations of two existing features, is provided by bird count data from three main sources. These data sources are as follows (see also Annex 3):

1. Data from JNCC's Seabird Monitoring Programme (SMP) (http://jncc.defra.gov.uk/smp/) provided evidence on the populations of breeding Sandwich and common terns within the Poole Harbour colony (Brownsea Island) between 2010 and 2014.

2. Ad hoc surveys of the black-headed gull colony in Poole Harbour (Wareham Channel and saltmarsh islands) in 2006, 2008 and 2015 provided incidental counts of the number of nests of Mediterranean gull, with 2015 providing the most recent population estimate and previous years providing evidence of regularity of use at that higher population level.

3. Standardised systematic counts of Poole Harbour conducted under the Wetland Bird Survey between 2009/10 and 2013/14 provided the most recent 5 year mean peak populations of over-wintering population of little egret and Eurasian spoonbill.

2.) The Analysis carried out is appropriate to the evidence available and the question or issue under consideration

The site-specific evidence – a breeding population of 178 pairs of common terns and 181 pairs of Sandwich terns is provided by the SMP database (http://jncc.defra.gov.uk/smp/) which contains a collation of all colony counts provided by the Dorset Wildlife Trust which manages the Brownsea Island reserve where the colony is located. These count data were compared to established site

selection criteria (JNCC 1999), meaning the analysis is entirely appropriate to the evidence available.

The site specific evidence – a breeding population of 64 pairs of Mediterranean gulls is not taken form the SMP website but is based on an ad-hoc count in 2015 of the large black-headed gull colony in which the Mediterranean gulls nest. This is the best available recent evidence regarding the size of this expanding population and reflects the difficulty in accessing and counting this large colony which results in significant disturbance to the colony and therefore the Annex 1 species which it supports. These count data were compared to established site selection criteria (JNCC 1999), meaning the analysis is entirely appropriate.

Natural England has drawn the seaward boundary of the pSPA across the mouth of the harbour to include all areas below Mean Low Water that previously lay out with the designated site boundary. This reflects the fact that both breeding tern features feed in the main channels of the harbour i.e. over areas below MLW (Pickess 2007), and that the WeBS counts in Poole Harbour are routinely conducted at times of low tide and use count sectors which cover the entirety of the harbour and therefore include areas below MLW within which many of the birds counted are seen (Pickess 2007). The implementation of this extension to include supporting habitat for the site's features which lie below MLW is entirely appropriate and is consistent with other sites eg Chichester and Langstone Harbours SPA.

The area of the proposed terrestrial extension (French's Farm) has been subject to regular high tide counts coordinated over the last 2 years (2013-14 and 2014-15) by the RSPB who own and manage the site. Most recently there have been 2 counts per month on spring tide high tides (Toby Branston RSPB *pers. comm.*). These counts have revealed peak counts on the site of particularly important numbers of black-tailed godwit (a qualifying feature of the Poole Harbour SPA) and of other noteworthy components of the over-wintering waterbird assemblage including teal and redshank. The best available data has been used to provide the evidence base on which to justify the terrestrial extension of the pSPA.

3.) Conclusions are drawn which clearly relate to the evidence and analysis

All recommendations for new pSPA features and amendments to populations of existing features are based on application of selection guidelines issued by JNCC (JNCC 1999), and conclusions are based on application of these guidelines to relevant data (SMP data and WeBS data).

The amendment of the seaward boundary to lie across the harbour mouth is based on the evidence regarding the use of areas of the harbour below MLW by the site's breeding bird features, over-wintering bird features and many of the species that make up the waterbird assemblage of the site (Pickess 2007).

As mentioned above the proposed terrestrial extension was identified based on the best available waterbird data (RSPB survey data 2013-15).

4.) Uncertainty arising due to the nature of the evidence and analysis is clearly identified and explained

The available information on tern populations within the SPA is drawn from the JNCC's Seabird Monitoring Programme database (http://jncc.defra.gov.uk/smp/). This is based on colony counts at the Brownsea Island reserve and submitted to the SMP by the Dorset Wildlife Trust. The counts are conducted by experienced observers in a standardised way and are recorded as being "accurate" on the SMP database. There is no uncertainty regarding the reliability of these data.

The available information on the over-wintering population of little egret within the SPA is drawn from the Wetland Bird Survey (WeBS) reporting scheme. The 2009/10 - 2013/14 5 year mean peak count of 114 individuals is taken from the most recent annual report (Holt et al 2015). This is an average of peak counts in 4 of the last 5 winters with the value in 2010/11 (of 115 birds) being

excluded on the grounds of being incomplete or uncertain (parenthesised on the database). However, as this lies so close to 114, a five year mean including this value, so as to make use of all available evidence within the last 5 years, would be unchanged. The WeBS counts in Poole Harbour are conducted in a systematic and standardised manner by experienced observers. There is no uncertainty regarding the reliability of these data.

The available information on the over-wintering population of Eurasian spoonbill within the SPA is drawn from the Wetland Bird Survey (WeBS) reporting scheme. The 2009/10 – 2013/14 5 year mean peak count of 20 individuals is taken from the most recent annual report (Holt *et al*. 2015). The WeBS counts in Poole Harbour are conducted in a systematic and standardised manner by experienced observers. There is no uncertainty regarding the reliability of these data.

Due to the logistical difficulties of carrying out a census of the breeding black-headed gull colony in Poole Harbour, and the level of disturbance to the nesting birds that such surveys cause, including to the Annex 1 Mediterranean gull, comprehensive walk-over colony surveys on the islands using for breeding are carried out only irregularly. As a result, the only population estimate within the last 5 years is that from 2015 i.e. 64 pairs. The next most recent count was 7 years ago (2008), and that yielded a population estimate of 87 pairs. Thus, there is considerable uncertainty regarding precisely how many pairs of Mediterranean gull nest within the pSPA now, and hence the reliability of the figure of 64 pairs proposed here as the current population of this species. However, with counts of 87 pairs in 2008, and at least 50 pairs in 2006, the average of the three most recent counts is 67 pairs. There is therefore no uncertainty that the population of Mediterranean gull breeding in Poole Harbour has over the last several years regularly exceeded 50 pairs and has exhibited an increase of an order of magnitude in abundance from the population of 5 pairs present between 1993 and 1997. This is considered a sufficiently certain basis to inform the proposed upward revision of the population of this species supported by the pSPA.

Confidence in the data

The UK SMP is an internationally recognised monitoring scheme coordinated by JNCC in partnership with others (e.g. statutory nature conservation bodies, the RSPB as a main data provider, etc.). It collects data according to standardised field methods (Walsh *et al.* 1995). SMP data concerning the Brownsea Island tern colonies are verified by the Dorset Wildlife Trust count coordinator and the JNCC seabird team. Therefore, there is high confidence in SMP data.

WeBS is a long-established and internationally recognised monitoring scheme run by the British Trust for Ornithology (BTO) and funded by BTO in partnership with others i.e. the RSPB, JNCC (on behalf of the statutory nature conservation bodies) and in association with the Wildfowl and Wetlands Trust. Poole Harbour survey data are gathered by volunteer WeBS counters and verified and quality assured by the local WeBS count coordinator. In regard of the data concerning little egret in Poole Harbour, only one of the peak counts for the last 5 winters is considered to be uncertain (i.e. 2010/11). However, as discussed above, it is so similar to the 4 year mean which excludes it, that there remains confidence that this 4 year mean is a reliable estimate of the most recent population of this proposed new feature in the pSPA.

The irregular counts of the gull colony in Poole Harbour are conducted by experienced observers. While there is uncertainty regarding the precise number of pairs of Mediterranean gulls nesting within this colony, there is high confidence that the size of this population has grown by an order of magnitude since the data that were used when Poole Harbour SPA was first classified was gathered i.e. 1993-1997.

The counts of birds using the French's Farm site, which is proposed as an extension to the landward boundary of the Poole Harbour pSPA, are carried out by RSPB volunteers and RSPB staff members, and are coordinated by local RSPB staff. These counts are conducted in a systematic way at high tide on a twice monthly basis. There is high confidence in the reliability of the count data gathered over the winters of 2013-14 and 2014-15 on the basis of which it is proposed to include this area of land within the pSPA boundary due to its regular use by several of

the pSPAs qualifying features and/or components of its qualifying waterbird assemblage.

Independent expert review and internal quality assurance processes

Natural England's standard in quality assurance of use of evidence, including peer review, (http://www.naturalengland.org.uk/images/operationalstandardsforevidence_tcm6-28588.pdf) has been followed in determining the level of independent expert review and internal quality assurance required in relation to Natural England's analysis of the evidence for this site and the way that the boundary has been drawn up. Independent expert review is to be adopted where there is a high novelty or technical difficulty to the analysis.

The proposal to alter the landward boundary of the designated site to include an area of former wet grassland which is now subject to tidal inundation is not dependent upon either highly novel or technically difficult analysis to inform the revised boundary. Natural England believes the amendment not to be contentious and therefore independent review of how it has applied the evidence in drawing up a boundary is not being sought.

The proposal to alter the seaward boundary to lie across the mouth of the harbour, and therefore to include all marine habitats below Mean Low Water inside the harbour within the site boundary, is also not dependent upon the results of highly novel or technically difficult data analysis. WeBS surveys, from which the sizes of the over-wintering waterbird populations supported by Poole Harbour pSPA have been derived, have always covered the entirety of the harbour, and made no distinction that excluded from the counts any birds seen below Mean Low Water Mark. Accordingly, the realignment of the seaward boundary simply brings in to alignment the site boundary and areas over which the supporting count data have been gathered. Natural England believes the amendment not to be contentious and therefore independent review of how it has applied the evidence in drawing up a boundary is not being sought.

The proposal to add three new features to the list of qualifying features of the pSPA i.e. breeding Sandwich tern and over-wintering little egret and Eurasian spoonbill has been made on the basis of an assessment of standard breeding bird and over-wintering bird datasets i.e. the SMP database and WeBS database. The count data have been assessed against and conform with the SPA selection guidelines (JNCC 1999). The most recent breeding populations of two existing features of the Poole Harbour SPA i.e. common tern and Mediterranean gull have both been assessed against and conform with the SPA selection guidelines (JNCC 1999). The population size of common tern is being updated to ensure consistency with the use of the most recent 5 year mean (2010-2014) in the case of the Solent and Dorset Coast pSPA. The population size of Mediterranean gull is being updated in the light of its order of magnitude increase since classification of the original SPA. Natural England believes these amendments not to be contentious and therefore independent review of how it has applied the evidence in making these amendments is not being sought.

Internal quality assurance of the Departmental Brief has been carried out as follows:

The first version of this Departmental Brief was drawn up by Naomi Downes-Tettmar (Senior Adviser) with support from Susan Burton (Lead Adviser) of Natural England. This was edited by Dr Richard Caldow (with further input from the original author) to produce this version of the Departmental Brief.

Departmental Briefs are drafted by an ornithologist with support from the site lead who provides the local site specific detail. This document is then quality assured by the marine N2K National Project Management team as well as selected members of the Project Board. The brief is then circulated for external comments from Defra Marine Policy Officer, JNCC senior seabird ecologists, Marine Protected Area Technical Group (MPATG) and UK Marine Biodiversity Policy Steering Group (UKMBPSG). The briefs are also sent to Natural England Board members for early sight of SPA proposals. The amended briefs are then reviewed and approved by the Marine N2K Project Board, Marine Director and relevant Area Managers and subsequently by the Natural England Chief Scientist in accordance with our Quality Management Standard. The brief is then signed off as

required by our Non-Financial Scheme of Delegation by a representative of the Senior Leadership Team with delegated authority before being submitted to Defra.

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