

Departmental brief

**Northumbria Coast Special Protection Area (SPA) – site amendment**

Natural England

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## Summary

The Northumbria Coast SPA was classified in 2000, qualifying under Article 4.1 of the EC Birds Directive because it supported 1.7% of the GB population of breeding little tern *Sternula albifrons* listed in Annex I of the Directive and under Article 4.2 of the Directive because it supported two regularly occurring migratory species: 2.6% of the biogeographic population of turnstone *Arenaria interpres* and 1.6% biogeographic population of purple sandpiper *Calidris maritima*.

Since the time of original classification the colony of Arctic terns (*Sterna paradisaea*) at Newton Links/Long Nanny has undergone a sustained increase, and now meets qualification criteria on the basis of the latest 5-year mean supporting 2.9% of the GB population of this Annex I species. Additionally, the recent work to identify the proposed Northumberland Marine SPA to protect important areas of sea for foraging terns from the Northumberland SPAs (Farne Islands, Lindisfarne, Coquet Island and Northumbria Coast SPAs) includes foraging Arctic terns breeding at the existing Northumbria Coast SPA. Therefore, it is now proposed that breeding Arctic tern is added as a new qualifying feature to the Northumbria Coast SPA in order to reflect this. No alterations to the boundary of the existing Northumbria Coast SPA are proposed as the breeding colony is wholly within the existing SPA boundary.

This Departmental Brief makes use of the most recent available estimates of the population sizes of the proposed new feature (breeding Arctic tern) to derive the populations supported by the Northumbria Coast SPA.

This Departmental Brief sets out the scientific case for the amendment to the Northumbria Coast SPA.

**Table 1 Summary of qualifying ornithological interest in Northumbria Coast SPA**

Feature	Count (period)	% of subspecies or population	Interest type	Selection criteria
<b>Proposed new qualifying features</b>				
Arctic tern <i>Sterna paradisaea</i>	1,549 pairs 3,098 individuals (2010-2014) <sup>1</sup>	2.92% of GB population <sup>3</sup>	Annex 1	Stage 1.1
<b>Qualifying features with counts remaining as at 2000 classification</b>				
Little tern <i>Sternula albifrons</i>	40 pairs 80 individuals (1993-1997) <sup>2</sup>	1.7% of GB population <sup>2</sup>	Annex 1	Stage 1.1
Turnstone <i>Arenaria interpres</i>	1,739 individuals (1992/93 - 1996/97) <sup>2</sup>	2.6% of biogeographic population <sup>2</sup>	Regularly occurring migrant	Stage 1.2
Purple sandpiper <i>Calidris maritima</i>	787 individuals (1992/93 - 1996/97) <sup>2</sup>	1.6% of biogeographic population <sup>2</sup>	Regularly occurring migrant	Stage 1.2

<sup>1</sup> Data from: Seabird Monitoring Programme (SMP) and colony managers (pairs multiplied by 2 to arrive at breeding adults).

<sup>2</sup> Data from: Northumbria Coast SPA citation (Available from: <http://publications.naturalengland.org.uk/publication/6372874327687168?category=4698884316069888>).

<sup>3</sup> GB breeding populations derived from Musgrove *et al.* (2013).

## 1. Assessment against SPA selection guidelines

The UK SPA Selection Guidelines set out two stages to assist the identification of potential SPAs (Stroud *et al.* 2001). The first stage is intended to identify areas that are likely to qualify for SPA

status on the basis of the numbers of birds regularly using them. 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:

- 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,
- 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).

The Northumbria Coast SPA regularly supports greater than 1% of the GB population of Arctic tern (2.92%) listed in Annex I of the Directive.

### 1.2. Stage 2

The addition of Arctic tern as a feature of the Northumbria Coast SPA 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.

**Table 2** Assessment of the addition of Arctic tern as a feature of the Northumbria Coast SPA against stage 2 of the SPA selection guidelines

Feature	Qualification	Assessment
1. Population size & density	✓	3 <sup>rd</sup> largest breeding Arctic tern colony in the UK <sup>1</sup>
2. Species range	✓	Lies within the southernmost limits of Arctic tern breeding range

3. Breeding success	✓	Arctic tern productivity is variable, but has averaged 0.78 fledglings per nest between 2010 and 2014 (JNCC SMP/National Trust and Bridge <i>et al.</i> 2014). Since 1986, Arctic tern UK annual average productivity has only risen above 0.40 chicks per pair once, in 2000, and in most years it lies below 0.30 (JNCC 2014) and productivity at the Northumbria Coast has exceed 0.40 in all years from 2011 to 2014.
4. History of occupancy	✓	Has held Arctic terns since 1980 (Bridge <i>et al.</i> 2014).
5. Multi-species area	✓	Already classified for one Annex I species (little tern) and two regularly occurring migratory species - turnstone and purple sandpiper.
6. Naturalness	n/a	No longer applicable, following ruling from the SPA and Ramsar site Working Group.
7. Severe weather refuge	n/a	Not relevant to breeding species.

<sup>1</sup> Note that these rankings should only be considered indicative of the relative importance of the SPA as it is based on comparison of the sum of the most recent 5 year mean populations of the species at the SPA (as listed in Table 1) with the historical populations of the species at each SPA in the UK as listed in Stroud *et al.* (2001).

## 2. Rationale and data underpinning site amendment

### 2.1. Data collection

It is proposed that the Northumbria Coast SPA is amended to add breeding Arctic tern as a new qualifying feature of the site. This is because the recent work to identify the proposed Northumberland Marine pSPA to protect important areas of sea for foraging terns from the Northumberland SPAs (Farne Islands, Lindisfarne, Coquet Island and Northumbria Coast SPAs) includes foraging Arctic terns breeding at the existing Northumbria Coast SPA. Since the time of original classification in 2000 the colony of Arctic terns (*Sterna paradisaea*) at Newton Links/Long Nanny has undergone a sustained increase, and now qualifies as a feature of the site on the basis of the latest 5-year mean. The size of the breeding Arctic tern population has been taken to be the most recently available from the Seabird Monitoring Programme (SMP) website (<http://jncc.defra.gov.uk/smp/>) i.e. within the last 5 years (2010-2014). Where possible, the dataset from the SMP has been augmented by information requested directly from colony managers.

### 3. Site status and boundary

The Northumbria Coast SPA was classified in 2000 for its populations of breeding little tern and its wintering populations of turnstone and purple sandpiper. The Natura 2000 Standard Data Form submitted to the European Commission (JNCC 2006) defines an area of 1,107.98 hectares. The SPA is underpinned by parts of the following SSSIs: Northumberland Shore SSSI, Durham Coast SSSI, Newton Links SSSI and Lindisfarne SSSI.

No changes to the boundary of the Northumbria Coast SPA are proposed. The boundary of the Northumbria Coast SPA can be found on: <http://www.magic.gov.uk/MagicMap.aspx>

### 4. Location and habitats

The Northumbria Coast SPA includes much of the coastline between the Tweed and Tees Estuaries in north-east England. The site consists of mainly discrete sections of rocky shore with associated boulder and cobble beaches. The SPA also includes parts of three artificial pier structures and a small section of sandy beach (Stroud *et al.* 2001).

The inter-tidal rock platform is an important resource used by wintering purple sandpiper and turnstones although they are commonly found along the strandline of sandy beaches. The rocky shores and the strand line support high densities of invertebrates which are important food for waterfowl. Purple sandpiper are almost entirely restricted to the rocky shore where they feed on a variety of marine invertebrates but their main food preference is for mussels, winkles and dog whelks (Feare 1996). Turnstones feed on seaweed covered rocks congregating at high tide to roost on the mainland shore or continue to feed on the washed up seaweed on the strandline. Discrete areas of estuarine intertidal mudflats and sand flats are also included within the Northumbria Coast SPA.

Arctic and little terns in the Northumbria Coast SPA nest at Newton Links/Long Nanny. The Long Nanny tern site is situated at the mouth of the Long Nanny burn, in Beadnell Bay and comprises of a long section of sandy beach ending in a small, low-lying sand spit at the mouth of the river, bordered by an accreting sand dune system to the west. The site has been a National Trust reserve since 1977 (Bridge *et al.* 2014). The beaches of fine sand, vegetated banks of sea rocket and dunes of marram and lyme grass provide good conditions for nesting. Terns forage in Beadnell Bay and the surrounding coastal waters, which support large numbers of lesser sandeel *Ammodytes lancea* (Bridge *et al.* 2014).

## 5. Assessment of ornithological interest

### 5.1. Survey information and summary

The site was classified in 2000 for breeding little tern and two migratory species: turnstone and purple sandpiper, for which no amendments are proposed in this Departmental Brief.

This site amendment proposes that breeding Arctic tern is added as a new qualifying feature of the site. This is because the recent work to identify the proposed Northumberland Marine pSPA to protect important areas of sea for foraging terns from the Northumberland SPAs (Farne Islands, Lindisfarne, Coquet Island and Northumbria Coast SPAs) includes foraging Arctic terns breeding at the existing Northumbria Coast SPA. The contemporary basis for breeding Arctic terns to be considered as a qualifying feature of the amended Northumbria Coast SPA is set out below.

#### 5.1.1. Arctic tern *Sterna paradisaea*

The breeding population of Arctic terns in Great Britain is estimated to be 53,000 pairs (Musgrove *et al.* 2013), representing at least 2.9% of the European & North Atlantic breeding population (1,800,000 pairs being the maximum estimate given in Mitchell *et al.* (2004): AEW (2012) only give an estimate of in excess of 1,000,000 individuals for the Western Eurasian breeding population – from which a % value cannot be derived). Arctic terns have a strongly northerly distribution in the UK, with the breeding population concentrated on Shetland, Orkney and north and west Scotland (Mitchell *et al.* 2004). Apart from three large colonies in Northumberland (Coquet Island, the Farne Islands and Newton Links/Long Nanny), they are a rare breeding bird in England.

Newton Links/Long Nanny is the only site supporting breeding Arctic terns within the Northumbria Coast SPA. The species first bred at Long Nanny in 1980 when just a single pair joined the small colony of little terns (Bridge *et al.* 2014). Since then the population has increased rapidly and the number of pairs of Arctic terns nesting during a recent 5-year period (2010-2014) were **900** (2010), **1,400** (2011), **1,500** (2012), **1,504** (2013) and **2,443** (2014). This provides a recent 5-year mean of **1,549** breeding pairs (counted as occupied nests) representing 3,098 breeding adults (1 occupied nest = 1 pair *i.e.* no correction factor applied to counts of nests). This represents **2.92%** of the GB breeding population. Accordingly, this Departmental Brief recommends its addition as a new qualifying feature of the amended Northumbria Coast SPA.

## **6. Comparison with other sites in the UK**

A comparison is presented in Table 3 of the population breeding Arctic tern with the largest breeding populations supported by individual SPAs across Great Britain. The figures for the amended Northumbria Coast SPA are based on the most recent 5 year mean.

Unless otherwise stated, for the purposes of this comparison exercise, the populations from each of the other individual SPAs are those 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 the rankings are therefore not based on like-for-like directly comparable information and instead merely indicates the amended Northumbria Coast SPA's general level of relative importance in a national context.

**Table 3** Comparison of the numbers of individuals (and pairs) of Arctic tern at the Northumbria Coast SPA with numbers at other SPAs for which figures are provided in Stroud *et al.* (2001)<sup>1</sup>.

Species	Site	Individuals (pairs) <sup>1</sup>	Rank <sup>2,3</sup>	Comments
Arctic tern <i>Sterna paradisaea</i> (breeding)	Farne Islands	5,680 (2,840)	1 <sup>st</sup> of 18	At the time of classification, this species did not occur in qualifying numbers at the Northumbria Coast. The increase in numbers at the Northumbria Coast since then has resulted in the most recent 5 year mean population of 1,549 pairs now equating to <b>2.92%</b> of the GB breeding population, and in comparison with historical populations at the other sites, results in the Northumbria Coast becoming the 3 <sup>rd</sup> most important site for the species in the UK.
	Papa Westray (North Hill and Holm)	3,900 (1,950)	2 <sup>nd</sup> of 18	
	Northumbria Coast	3,098 (1,549) <sup>4</sup>	3 <sup>rd</sup> of 18	
	Ynys Feurig, Cemlyn Bay and The Skerries	2,580 (1,290)	4 <sup>th</sup> of 18	
	Pentland Firth Islands	2,400 (1,200)	=5 <sup>th</sup> of 18	
	West Westray	2,400 (1,200)	=5 <sup>th</sup> of 18	

<sup>1</sup> 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.

<sup>2</sup> Note that these rankings should only be considered indicative of the relative importance of the Northumbria Coast SPA as they are based on a comparison of the sum of the most recent 5 year mean populations of each species at the SPA (as listed in Table 1) 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 the amended SPA itself. For brevity, only the top 5 ranked sites are tabulated for each species, except where the Northumbria Coast SPA position in the rank order is lower than this – in which case all sites down to that rank position are tabulated.

<sup>3</sup> These rank orders do not take account of numbers currently being considered in the context of other pSPAs in the United Kingdom.

<sup>4</sup> Based on the most recent 5 year mean peak population: 2010-2014.

## 7. Conclusion

It can be seen from the evidence presented above that the Northumbria Coast is an important site for breeding Arctic tern which ranks in the top 10 sites in the UK. The site lies within the southernmost limits of Arctic tern breeding range.

## 8. References

AEWA – African-Eurasian Waterbird Agreement (2012): Report on the Conservation Status of Migratory Waterbirds in the Agreement Area. Fifth Edition. AEWA, Bonn.

Available at:

[http://www.unep-aewa.org/meetings/en/stc\\_meetings/stc7docs/info\\_docs\\_pdf/stc\\_inf\\_7\\_4\\_csr5.pdf](http://www.unep-aewa.org/meetings/en/stc_meetings/stc7docs/info_docs_pdf/stc_inf_7_4_csr5.pdf)

Bridge, C., Hibbert, T., Legg, W., Macleod-Nolan, C. & Wilkie, N. (2014); Long Nanny Tern Report, 2014.

Feare C.J. 1966. The winter feeding of the purple sandpiper. *British Birds*. 59: 165-179.

JNCC (1999): The Birds Directive – selection guidelines for Special Protection Areas. JNCC, Peterborough. Available at: <http://jncc.defra.gov.uk/page-1405>

JNCC (2006): Natura 2000 Standard Data Form for Special Protection Areas (SPA), for sites eligible for identification as Sites of Community Importance (SCI) and for Special Areas of Conservation (SAC) – Northumbria Coast SPA. Available at: <http://jncc.defra.gov.uk/pdf/SPA/UK9006131.pdf>

JNCC (2014): Seabird Population Trends and Causes of Change: 1986-2013 Report (<http://www.jncc.defra.gov.uk/page-3201>). Joint Nature Conservation Committee. Updated August 2014.

Mitchell, P.I., Newton, S.F., Ratcliffe, N. & Dunn, T.E. (2004): Seabird Populations of Britain and Ireland. Poyser, London. 511pp. *Summary findings available at:* <http://jncc.defra.gov.uk/page-1548>

Musgrove, A., Aebischer, N., Eaton, M., Hearn, R., Newson, S., Noble, D., Parsons, M., Risely, K. & Stroud, D. (2013): Population estimates of birds in Great Britain and the United Kingdom. *British Birds*, **106**, 64-100.

Stroud, D.A., Chambers, D., Cook, S., Buxton, N., Fraser, B., Clement, P., Lewis, P., McLean, I., Baker, H., Whitehead, S. (2001): The UK SPA network: its scope and content, Volume 2: Species accounts. JNCC, Peterborough, 438 pp. Available at: <http://jncc.defra.gov.uk/page-1418>.



## Annex 2 Special Protection Area (SPA) Citation

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

**Name:** Northumbria Coast

**Counties/Unitary Authorities:** Northumberland County Council, Durham County Council, South Tyneside Metropolitan Borough Council, North Tyneside Council, and City of Sunderland.

**Boundary of the SPA:**

The boundary of Northumbria Coast SPA includes the coastline between Berwick-upon-Tweed in the north to the Tyne Estuary in the south. The boundary is defined by the Mean High Water Mark.

**Size of SPA:** The SPA covers an area of 1,107.98 ha.

**Site description:**

The Northumbria Coast SPA includes much of the coastline between the Tweed and Tees Estuaries in north-east England. The site consists of mainly discrete sections of rocky shore with associated boulder and cobble beaches. The SPA also includes parts of three artificial pier structures and a small section of sandy beach (Stroud *et al.* 2001).

The rocky shore areas with reefs, have small areas of sand interspersed amongst the main reefs. The man-made structures such as the piers at River Tyne South Pier and Seaham Harbour pier are used as high tide roosts. The tops of the piers and the sides are used by birds throughout the tidal cycle.

The inter-tidal rock platform is an important resource used by wintering purple sandpiper and turnstones although they are commonly found along the strandline of sandy beaches. The rocky shores and the strand line support high densities of invertebrates which are important food for waterfowl. Purple sandpiper are almost entirely restricted to the rocky shore where they feed on a variety of marine invertebrates but their main food preference is for mussels, winkles and dog whelks (Feare 1996). Turnstones feed on seaweed covered rocks congregating at high tide to roost on the mainland shore or continue to feed on the washed up seaweed on the strandline. Discrete areas of estuarine intertidal mudflats and sand flats are also included within the Northumbria Coast SPA.

Arctic and little terns nest at Newton Links/Long Nanny. The Long Nanny tern site is situated at the mouth of the Long Nanny burn, in Beadnell Bay and comprises of a long section of sandy beach ending in a small, low-lying sand spit at the mouth of the river, bordered by an accreting sand dune system to the west (Bridge *et al.* 2014). The beaches of fine sand, vegetated banks of sea rocket and dunes of marram and lyme grass provide good conditions for nesting. Terns forage in Beadnell Bay and the surrounding coastal waters, which support large numbers of lesser sandeel *Ammodytes lancea* (Bridge *et al.* 2014).

**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 GB populations of two 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).

**Table 1 Summary of qualifying ornithological interest in Northumbria Coast SPA**

Feature	Count (period)	% of subspecies or population	Interest type
Arctic tern <i>Sterna paradisaea</i>	1,549 pairs 3,098 individuals (2010-2014) <sup>1</sup>	2.92% of GB population <sup>3</sup>	Annex 1
Little tern <i>Sternula albifrons</i>	40 pairs 80 individuals (1993-1997) <sup>2</sup>	1.7% of GB population <sup>2</sup>	Annex 1
Turnstone <i>Arenaria interpres</i>	1,739 individuals (1992/93 - 1996/97) <sup>2</sup>	2.6% of biogeographic population <sup>2</sup>	Regularly occurring migrant
Purple sandpiper <i>Calidris maritima</i>	787 individuals (1992/93 - 1996/97) <sup>2</sup>	1.6% of biogeographic population <sup>2</sup>	Regularly occurring migrant

<sup>1</sup> Data from: Seabird Monitoring Programme (SMP) and colony managers (pairs multiplied by 2 to arrive at breeding adults).

<sup>2</sup> Data from: Northumbria Coast SPA citation (Available from: <http://publications.naturalengland.org.uk/publication/6372874327687168?category=4698884316069888>).

<sup>3</sup> GB breeding populations derived from Musgrove *et al.* (2013).

### Principal bird data sources

Breeding Arctic tern: 2010-2014 colony counts from JNCC Seabird Monitoring Programme contributed by colony managers: National Trust, supplemented by most up to date counts in some instances from those colony managers.

All other qualifying features (breeding little tern and wintering turnstone and purple sandpiper): data from 1992-1997 as presented in 2000 classification citation of Northumbria Coast SPA, available from:

<http://publications.naturalengland.org.uk/publication/6372874327687168?category=4698884316069888>

### 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 manager	Northumbria Coast breeding seabird data	2008-2014	Standard methodology	Verified by site manager and JNCC
Northumbria Coast SPA citation	Available from: <a href="http://publications.naturalengland.org.uk/publication/6372874327687168?category=4698884316069888">http://publications.naturalengland.org.uk/publication/6372874327687168?category=4698884316069888</a>	Population counts for existing qualifying features of breeding little tern and wintering turnstone and purple sandpiper	1992-1997	Standard methodology	

## Annex 4 Implementation of Evidence Standard within decision process

Decision-making processes within Natural England 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 of the amended Northumbria Coast SPA.

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

#### **Quantification of Northumbria Coast SPA interest feature population sizes.**

As this is an amendment of the existing Northumbria Coast SPA, no changes are being proposed to the suite of existing qualifying features or the notified population 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 amended SPA (breeding Arctic tern).

The evidence base underpinning the identification of the new qualifying feature for the amended SPA is provided by bird count data from one main source:

- Data from JNCC's Seabird Monitoring Programme (SMP) (<http://jncc.defra.gov.uk/smp/>):

Arctic tern count data 2010-2014. Counts in 2010-2012 are assessed as "estimates" whereas counts in 2013 and 2014 are assessed as "accurate".

The count data taken from the SMP database is the best available information. In addition, the 2013 SMP data has been checked by JNCC. Natural England contacted Jane Lancaster at National Trust to determine how the 'estimates' for Arctic tern data at Northumbria Coast between 2010-2012 were arrived at. These estimates were based on a single walk-through survey of the Arctic tern colony, with every Arctic tern nest recorded, the nests being marked individually to prevent double counting. The results of these surveys were then rounded to the nearest 50, hence being estimates rather than accurate counts. The 'accurate' counts in 2013 and 2014 used the same methodology, but in these years the total number of nests/pairs was not rounded to the nearest 50.

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

The count data used for the proposed additional qualifying feature were compared to established site selection criteria (JNCC 1999), meaning the analysis is entirely appropriate to the evidence available.

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

All recommendations for the proposed new feature of breeding Arctic tern 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). As such the conclusions in this respect clearly relate to the best available evidence.

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

The UK SMP is an internationally recognised monitoring scheme coordinated by JNCC in partnership with others (e.g. statutory nature conservation bodies, the RSPB and other colony managers as data providers, etc.). It collects data according to standardised field methods (Walsh *et al.* 1995). SMP data are verified by the JNCC seabird team. Therefore, there is high confidence in SMP data. The data which has been used in determining the size of the populations for new SPA feature of breeding Arctic tern is based on counts which are on the SMP database and so justify high confidence.

#### **5.) *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](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. Independent expert review is to be adopted where there is a high novelty or technical difficulty to the analysis.

The proposal to add breeding Arctic tern as a qualifying feature to the amended Northumbria Coast SPA has been made on the basis of an assessment of standard breeding bird data i.e. the SMP database. The count data have been assessed against and conform with the SPA selection guidelines (JNCC 1999). Natural England believes this amendment 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 Tim Dixon and Martin Kerby with support from Katie Finkill-Coombs of Natural England. This was edited by Allan Drewitt and Helen Rowell 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 Natural England staff including Ben Fraser, Sarah Anthony, Angela Moffat and Phil Eckersley. The amended briefs are then reviewed and approved by the relevant Area Manager 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.

#### **References**

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