

**Written Submission
for
The Royal Society for the Protection of Birds**

**Response to the Secretary of State's December 2019
Consultation**

27 February 2020

Planning Act 2008 (as amended)

In the matter of:

**Application by Norfolk Vanguard Limited for an Order Granting
Development Consent for the**

Norfolk Vanguard Offshore Wind Farm

**Planning Inspectorate Ref: EN010079
Registration Identification Ref: 20012785**



Contents

1. Introduction	4
2. The nature conservation importance of the seabirds affected by the Norfolk Vanguard offshore wind farm scheme.....	5
Context.....	5
The Flamborough and Filey Coast SPA.....	5
Qualifying features.....	5
Site Conservation Objectives and draft Supplementary Advice	7
Conservation Objectives	7
Draft Supplementary Advice on Conservation Objectives (dated 13 September 2019)	8
Kittiwakes.....	13
The Alde-Ore Estuary SPA.....	15
Qualifying features.....	15
Site conservation Objectives and draft Supplementary Advice.....	17
Conservation objectives.....	17
Draft Supplementary Advice on Conservation Objectives (dated 13 September 2019)	18
3. Legal requirements	22
4. The RSPB’s position at the end of the Norfolk Vanguard examination	24
The RSPB’s position on adverse effects on the integrity of the Flamborough and Filey Coast SPA	25
The RSPB’s position on adverse effects on the integrity of the Alde-Ore Estuary SPA	26
5. The RSPB’s conclusions on affected SPA features of the Flamborough and Filey Coast SPA and the Alde-Ore Estuary SPA	27
In-combination plans and projects	27
Flamborough and Filey Coast SPA	29
Conservation Objectives and Supplementary Advice	29
Kittiwake	30
Kittiwake as an SPA feature	30
Gannet	31
Guillemot	31
Razorbill	31
The breeding seabird assemblage	32
Alde-Ore Estuary SPA.....	32
Conservation Objectives and Supplementary Advice	32
Lesser black-backed gull	33

Overall conclusions with regards AEOI on the Flamborough and Filey Coast SPA and Alde-Ore Estuary SPA	33
The RSPB’s view on affected features	33
Conclusion.....	34
6. Next steps.....	35
Relationship between adverse effect on integrity and the derogation tests	35
Annex 1: RSPB note on precaution	37

1. Introduction

The RSPB is grateful for the opportunity to make submissions in response to the Secretary of State's request for additional comments in relation to the Norfolk Vanguard offshore wind farm scheme and the matters raised by the previous Secretary of State in the letter from the Department for Business, Energy and Industrial Strategy (BEIS) dated 6 December 2016.

This document sets out the RSPB's initial views on those matters and considers:

- The features of the Flamborough and Filey Coast SPA and their conservation objectives;
 - The features of the Alde-Ore Estuary SPA and their conservation objectives
 - Legal requirements;
 - The RSPB's position at the end of the Hornsea Three examination;
 - The RSPB's position at the end of the Norfolk Vanguard examination;
 - The RSPB's view on the additional information supplied;
 - The RSPB's conclusions on affected SPA features of the Flamborough and Filey Coast SPA;
 - The RSPB's conclusions on affected SPA features of the Alde-Ore Estuary SPA;
- and
- Next steps

While we appreciate that some of the information in this submission is likely to be contained within the Examining Authority's report, for ease of reference we have included the relevant background information here to provide context to our comments and observations.

2. The nature conservation importance of the seabirds affected by the Norfolk Vanguard offshore wind farm scheme

Context

The UK is of outstanding international importance for its breeding seabirds, including northern gannet for which the UK supports over 50% of the world population and around 10% of the world population of black-legged kittiwake (Table 1). As with all Annex I and regularly occurring migratory species, the UK has particular responsibility under the Birds Directive¹ to secure the conservation of these important seabird population.

Table 1: Proportion of the world population of seabird species relevant to the Norfolk Vanguard project that the UK supports.

Species	% World population	Status
Northern gannet ²	c.56	Most increasing, but a few colonies have declined
Black-legged kittiwake ³	8	Declining
Common guillemot ⁴	c.13	Some colonies increasing but many declining
Razorbill ⁵	c.22	A few colonies increasing but many declining
Lesser black-backed gull (<i>graellsii</i>) ⁶	c.38 [c.63% of <i>graellsii</i> sub-species]	Most declining, including many large coastal colonies

The Flamborough and Filey Coast SPA

Qualifying features

The Flamborough Head and Bempton Cliffs SPA was designated under Article 4(2) of the Birds Directive as an SPA in 1993 due to the presence of 83,370 pairs of black-legged kittiwake (*Rissa tridactyla*), representing 4% of the Eastern Atlantic breeding population. In 2001, the UK SPA Review⁷ found that it also qualified under Article 4(2) as a site regularly supporting at least 20,000 seabirds, as at the time of designation the site regularly supported 305,784 individual seabirds including: Atlantic puffin (*Fratercula arctica*), razorbill (*Alca torda*), guillemot (*Uria aalge*), European

¹ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version) (the Birds Directive).

² <https://jncc.gov.uk/our-work/northern-gannet-morus-bassanus/>

³ <https://jncc.gov.uk/our-work/black-legged-kittiwake-rissa-tridactyla/>

⁴ <https://jncc.gov.uk/our-work/guillemot-uria-aalge/>

⁵ <https://jncc.gov.uk/our-work/razorbill-alca-torda/>

⁶ <https://jncc.gov.uk/our-work/lesser-black-backed-gull-larus-fuscus/>: based on biogeographic population for

⁷ Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds). 2001. The UK SPA network: its scope and content. JNCC, Peterborough.

herring gull (*Larus argentatus*), gannet (*Morus bassanus*), and kittiwake. Kittiwake and the seabird assemblage are therefore the qualifying features of this SPA.

In January 2014, Natural England held a consultation on proposals to change the SPA. The proposals comprised changes to the designated site boundary including extending it to cover part of the Filey Coast (hence the change in its name) and changes to the numbers of qualifying species. This new site was formally designated in August 2018⁸, incorporating the Flamborough Head and Bempton Cliffs SPA.

At the same time, Natural England also conducted a review of the seabird populations using contemporary data (Natural England Departmental Brief 2014⁹). A summary of Natural England’s review of the ornithological interest of the SPA is as follows with the key features set out in more detail in [Table 2](#) below:

The application of the JNCC SPA selection guidelines to current data for this site confirm that it qualifies by regularly supporting internationally important numbers of breeding black-legged kittiwakes, northern gannet, common guillemot and razorbill and an assemblage of European importance of over 20,000 breeding seabirds. Black-legged kittiwake, northern gannet, common guillemot and razorbill are all main components of the assemblage and present in internationally important numbers. However, northern fulmar is also present in sufficient numbers to warrant being listed as main component species of the assemblage, since numbers exceed 2,000 individuals (10% of the minimum qualifying assemblage of 20,000 individuals). In addition, Atlantic puffin, herring gull, European shag (*Phalacrocorax aristotelis*) and great cormorant (*Phalacrocorax carbo*) are also part of the breeding seabird assemblage.

Table 2: Summary of Ornithological Interest of the SPAs

Feature	Count (period)	% of subspecies or population (pairs)	Interest Type
Flamborough Head and Bempton Cliffs SPA			
Black-legged kittiwake <i>Rissa tridactyla</i>	83,700 pairs (1987)	4% Western Europe	Migratory
Flamborough and Filey Coast SPA			
Black legged kittiwake <i>Rissa tridactyla</i>	44,520 pairs	2% North Atlantic	Migratory

⁸ Flamborough and Filey Coast SPA citation: <http://publications.naturalengland.org.uk/file/4690761199386624>

⁹ Natural England (2014) Proposed extension to Flamborough Head and Bempton Cliffs Special Protection Area and renaming as Flamborough and Filey Coast potential Special Protection Area. Departmental Brief. Natural England.

Feature	Count (period)	% of subspecies or population (pairs)	Interest Type
	89,041 breeding adults (2008-2011)		
Northern gannet <i>Morus bassanus</i>	8,469 pairs 16,938 breeding adults (2008-2012)	2.6% North Atlantic	Migratory
Common guillemot <i>Uria aalge</i>	41,607 pairs 83,214 breeding adults (2008-2011)	15.6% (<i>Uria aalge albionis</i>)	Migratory
Razorbill <i>Alca torda</i>	10,570 pairs 21,140 breeding adults (2008-2011)	2.3% (<i>Alca torda islandica</i>)	Migratory
	Count period	Average number of individuals	
Seabird assemblage	2008-2012	215,750	

Site Conservation Objectives and draft Supplementary Advice

Natural England has set out draft conservation advice for the Flamborough and Filey Coast SPA, including Conservation Objectives¹⁰ and Supplementary Advice on Conservation Objectives¹¹. Below, we summarise the key aspects of that conservation advice.

Conservation Objectives

The Conservation Objectives for the Flamborough and Filey Coast SPA are as follows:

...to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- *The extent and distribution of the habitats of the qualifying features*
- *The structure and function of the habitats of the qualifying features*
- *The supporting processes on which the habitats of the qualifying features rely*
- *The population of each of the qualifying features*
- *The distribution of the qualifying features within the site.*

Since this site was originally designated as an SPA in 1993, the national populations of both kittiwake and some assemblage species have suffered substantial declines. For example, the UK breeding

¹⁰ [Natural England Conservation Advice for Marine Protected Areas: Draft advice for Flamborough and Filey Coast SPA](#) (variously dated March and September 2019). Accessed 13 December 2019.

¹¹ [Natural England: Flamborough and Filey Coast SPA: draft Supplementary Advice on Conservation Objectives \(updated 13 September 2019\)](#). Accessed 13 December 2019.

kittiwake population has reduced by 70% since 1986 (State of the UK's Birds, 2017¹²). Within the SPA there has been an approximate 50% reduction in the kittiwake population from the original 83,700 breeding pairs (designation population, 1987) to an average of 44,520 breeding pairs between 2008 and 2011.

The current SPA citation does not reflect this substantial decline in the population of breeding kittiwake or other seabird species included under the assemblage feature.

Draft Supplementary Advice on Conservation Objectives (dated 13 September 2019)

Natural England's Supplementary Advice on the Conservation Objectives for the Flamborough and Filey Coast SPA¹³ identifies, for each SPA feature, key attributes and targets. Attributes¹⁴ are the ecological characteristics or requirements of the classified features within the SPA and deemed to best describe the site's ecological integrity. If safeguarded this will enable achievement of the Conservation Objectives and favourable conservation status for all the designation features, including the assemblage.

Table 3 below sets out, for each qualifying feature, the targets in respect of the following attributes:

- Breeding population: abundance;
- Connectivity with supporting habitats;
- Disturbance caused by human activity;
- Extent and distribution of supporting habitat for the breeding season; and
- Food availability.

The RSPB considers these attributes and targets are particularly relevant to BEIS's consideration of the Norfolk Vanguard scheme as they respectively relate to:

- the population levels at which the features should be maintained or restored to;
- the need to:

¹² Hayhow D.B., Ausden M.A., Bradbury R.B., Burnell D., Copeland A.I., Crick H.Q.P., Eaton M.A., Frost T., Grice P.V., Hall C., Harris S.J., Morecroft M.D., Noble D.G., Pearce-Higgins J.W., Watts O., Williams J.M. (2017) State of the UK's Birds 2017. The RSPB, BTO, WWT, DAERA, JNCC, NE and NRW, Sandy, Bedfordshire.

<https://www.bto.org/research-data-services/publications/state-uk-birds/2017/state-uk-birds-2017>

¹³ Supplementary Advice on the Conservation Objectives for the Flamborough and Filey Coast SPA, Natural England, 13 September 2019:

<https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9006101&SiteName=&SiteNameDisplay=Flamborough+and+Filey+Coast+SPA&countyCode=&responsiblePerson=>

¹⁴ Supplementary Advice on the Conservation Objectives for the Flamborough and Filey Coast SPA, Natural England, 13 September 2019:

<https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9006101&SiteName=&SiteNameDisplay=Flamborough+and+Filey+Coast+SPA&countyCode=&responsiblePerson=>

- maintain or restore safe passage of birds moving between their nesting and feeding areas;
- to reduce/avoid disturbance to foraging, feeding, moulting and/or loafing birds;
- to maintain the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle; and
- restore (or maintain) the distribution, abundance and availability of key food and prey items.

Table 3: Flamborough and Filey Coast SPA: draft supplementary advice on conservation objectives – breeding population (abundance) and connectivity with supporting habitats.

SPA feature	Attribute	Target	Season	Site specific comments
Kittiwake (breeding)	Breeding population: abundance	Restore the size of the breeding population at a level which is above 83,700 breeding pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	Breeding (summer season)	Current population figures indicate major decline since designation population count (1987). Indications of ongoing decline in breeding productivity.
	Connectivity with supporting habitats	Restore safe passage of birds moving between nesting and feeding areas	Year-round	NE has advised regulators that predicted in-combination collision mortality from consented or proposed offshore wind farms could adversely affect the integrity of the SPA.
	Disturbance caused by human activity	Restrict the frequency, duration and / or intensity of disturbance affecting roosting, nesting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed	Breeding (summer season)	
	Supporting habitat: extent and distribution of supporting habitat for the breeding season	Maintain the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding) at existing level.	Year round – to ensure the habitat remains suitable for when the feature is present	Colony reliant on chalk and limestone ledges, water column out to 2km for feeding and loafing, and the offshore environment for feeding.
	Supporting habitat: food availability	Restore the distribution, abundance and availability of key food and prey items (e.g.	Year-round	Kittiwake feed mainly on small shoaling fish near the sea surface.

SPA feature	Attribute	Target	Season	Site specific comments
		Sandeel, sprat, cod, squid, shrimps) at preferred sizes.		Evidence for the wider North Sea indicates that availability of sandeels is likely to be a factor in kittiwake decline. Recent evidence suggests that the decline in sandeel in the area around Flamborough may be attributable to fishing activity. Sea surface temperature rise (related to climate change) may be an additional factor in reduction in sandeel availability.
Gannet (breeding)	Breeding population: abundance	Maintain the size of the breeding population at a level which is above 8,469 pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	Breeding (summer season)	Latest colony count (2017) showed increase to 13,392 Apparently Occupied Nests (AON).
	Connectivity with supporting habitats	Maintain safe passage of birds moving between nesting and feeding areas.	Year-round	Evidence that gannet may be vulnerable to collision with offshore turbines. They are also sensitive to displacement effects.
	Disturbance caused by human activity	Restrict the frequency, duration and / or intensity of disturbance affecting roosting, nesting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed	Breeding (summer season)	
	Supporting habitat: extent and distribution of supporting habitat for the breeding season	Maintain the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding) at: current extent.	Year round – to ensure the habitat remains suitable for when the feature is present	Colony reliant on 5km of high cliffs at Bempton, water column out to 2km for feeding and loafing, and the offshore environment for feeding.
	Supporting habitat: food availability	Maintain the distribution, abundance and availability of key food and prey items (e.g.	Year-round	

The Royal Society for the Protection of Birds (Registration Ref: 20012785)

Written submission in response to the Secretary of State's December 2019 consultation (February 2020)

SPA feature	Attribute	Target	Season	Site specific comments
		Herring, mackerel, sprat, sandeel) at preferred sizes.		
Guillemot (breeding)	Breeding population: abundance	Maintain the size of the breeding population at a level which is above 41,607 breeding pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	Breeding (summer season)	[No post-designation colony count noted.]
	Connectivity with supporting habitats	Maintain safe passage of birds moving between nesting and feeding areas.	Year-round	Cumulative effect of habitat loss and displacement due to offshore developments may result in reduced breeding productivity and/or lower adult fitness and survival.
	Disturbance caused by human activity	Restrict the frequency, duration and / or intensity of disturbance affecting roosting, nesting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed	Breeding (summer season)	
	Supporting habitat: extent and distribution of supporting habitat for the breeding season	Maintain the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding).	Year round – to ensure the habitat remains suitable for when the feature is present	Colony reliant on chalk and limestone ledges, water column out to 2km for feeding and loafing, and the offshore environment for feeding.
	Supporting habitat: food availability	Maintain the distribution, abundance and availability of key food and prey items (e.g. sandeel, herring, sprat) at preferred sizes.	Year-round	Recent studies at Flamborough Head indicate that clupeid species (most likely sprats) form 91.5% of guillemot chick diet. They have also been recorded to forage for sandeels and gadoid species.
Razorbill (breeding)	Breeding population: abundance	Maintain the size of the breeding population at a level which is above 10,570 breeding pairs whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	Breeding (summer season)	[No post-designation colony count noted.]

SPA feature	Attribute	Target	Season	Site specific comments
	Connectivity with supporting habitats	Maintain safe passage of birds moving between nesting and feeding areas.	Year-round	Cumulative effect of habitat loss and displacement due to offshore developments may result in reduced breeding productivity and/or lower adult fitness and survival.
	Disturbance caused by human activity	Restrict the frequency, duration and / or intensity of disturbance affecting roosting, nesting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed	Breeding (summer season)	
	Supporting habitat: extent and distribution of supporting habitat for the breeding season	Maintain the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding).	Year round – to ensure the habitat remains suitable for when the feature is present	Colony reliant on chalk and limestone ledges, water column out to 2km for feeding and loafing, and the offshore environment for feeding.
	Supporting habitat: food availability	Maintain the distribution, abundance and availability of key food and prey items (eg. Sandeel, sprat, krill) at preferred sizes.	Year-round	Recent studies at Flamborough Head indicate that almost 90% of razorbill chick diet was sandeels, with a smaller proportion of clupeid species (most likely sprats).
Seabird assemblage (breeding)	Assemblage of species: abundance	Maintain the overall abundance of the assemblage at a level which is above 216,730 individuals whilst avoiding deterioration from its current level as indicated by the latest peak mean count or equivalent.	Breeding (summer season)	[No post-designation colony count noted.]
	Disturbance caused by human activity	Restrict the frequency, duration and / or intensity of disturbance affecting roosting, nesting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed	Breeding (summer season)	Offshore: some species may be vulnerable to impacts of habitat loss, displacement and collision from offshore developments.
	Supporting habitat: extent and distribution of supporting habitat	Maintain the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting,	Year round – to ensure the habitat remains suitable for when the feature is present	

SPA feature	Attribute	Target	Season	Site specific comments
	for the breeding season	feeding) current extent - (water column; vegetated sea cliffs of the Atlantic and Baltic coast; intertidal rock).		

The RSPB considers these attributes and targets are directly relevant to BEIS's consideration of whether the SPA's conservation objective to maintain or restore site integrity can be met and the SPA achieve favourable conservation status for all its features including the assemblage.

[Kittiwakes](#)

With particular reference to the SPA kittiwake population, we note that Natural England's Supplementary Advice refers to Aitken et al, 2017¹⁵ where recent census data has shown that kittiwake productivity has declined rapidly at the SPA. As a long-lived species, such lowering in productivity will take some time before it becomes apparent in population numbers. However, if this trend continues it will have severe long-term impacts on the population growth (Figure 1 below reproduces Fig.3 from the report).

¹⁵ Aitken, D., Babcock, M., Barratt, A., Clarkson, C. and Prettyman, S. 2017. Flamborough and Filey Coast pSPA Seabird Monitoring Programme: RSPB.

Figure 1: Reproduction of Fig.3 from Aitken *et al* (2017). Flamborough/Bempton Black-legged Kittiwake productivity 2009-2017, mean of plot results plus/minus SE.

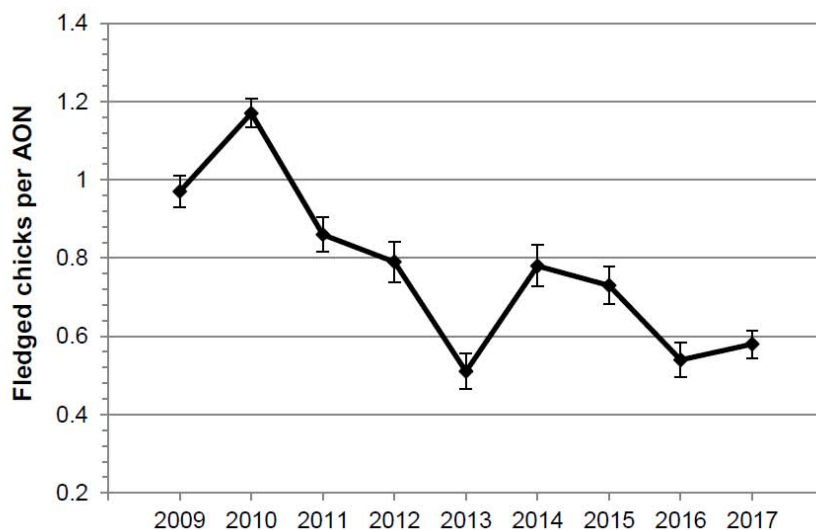


Fig. 3: Flamborough/Bempton Black-legged Kittiwake productivity 2009 – 2017, mean of plot results plus/minus SE.

JNCC (2018a)¹⁶ discusses the rapid decline in the UK kittiwake population observed since the early 1990s and links this to declining productivity and adult survival, with declines in sandeel prey and the effects of climate change on sea surface temperatures noted as likely contributory factors.

Frederiksen *et al.* (2004)¹⁷ also demonstrated the vulnerability of kittiwake populations to human activities through a study based on the Isle of May. Their population modelling showed that this population was unlikely to increase should the local sandeel fishery remain active and would be likely to decline further if sea surface temperature also increased, due to effects on both productivity and adult survival.

Given this context of continued declines in the UK kittiwake population since the early 1990s and the effect of anthropogenic impacts on adult survival and productivity, the RSPB considers that offshore windfarm mortality could add significantly to the multiple stressors affecting this population and reduce the likelihood of population recovery.

¹⁶ JNCC (2018a) Latest population trends: black-legged kittiwake. Available at: <http://jncc.defra.gov.uk/page-2889#2>

¹⁷ Frederiksen, M., Harris, M.P., Daunt, F., Rothery, P. and Wanless, S. 2004. The role of industrial fisheries and oceanographic change in the decline of North Sea black-legged kittiwakes. *Journal of Applied Ecology* 41: 1129-1139.

The Alde-Ore Estuary SPA

Qualifying features

The main feature of the Alde-Ore Estuary SPA affected by the Application is the breeding lesser black-backed gull population, the majority of which currently breed at Havergate Island (which is a RSPB reserve) and, to a much-reduced extent, Lantern Marshes on Orfordness (a National Trust reserve).

The Alde-Ore Estuary SPA was classified in 1996¹⁸ for, among other things, supporting 12% of the British population and 8% of the biogeographic population of breeding lesser black-backed gulls of the *graellsii* race. Natural England established a peak-mean population of 14,070 pairs based on the period 1994-1997. Following classification, the lesser black-backed gull population experienced a rapid increase in the late 1990s, peaking in 2000. This is reflected in the population of 21,700 pairs described in the Alde-Ore Estuary SPA site account in the UK SPA Review (Stroud *et al.* 2001). Since this time, the population has experienced a severe decline, such that in 2019 there were only 1,717 breeding pairs recorded in the Alde-Ore Estuary SPA. Further details of the population figures are set out in Table 4 and Figure 2 below.

The Alde-Ore Estuary is the only SPA for lesser black-backed gull on the east coast of England, the others being located in north-west and south-west England. As such it plays an important role, both in terms of population and range, with respect to the UK conservation of this species. Even at its now much reduced size the most recent population estimate (1,717 pairs) represents 1.53% of the UK population of 112,000 AON.¹⁹

Table 4: Number of pairs of lesser black-backed gulls breeding at the Alde-Ore Estuary SPA between 1986 and 2019. The RSPB Havergate Island data comes from the RSPB’s Annual Reserves Monitoring data set. The Orfordness data comes from the JNCC Seabird Monitoring Programme.

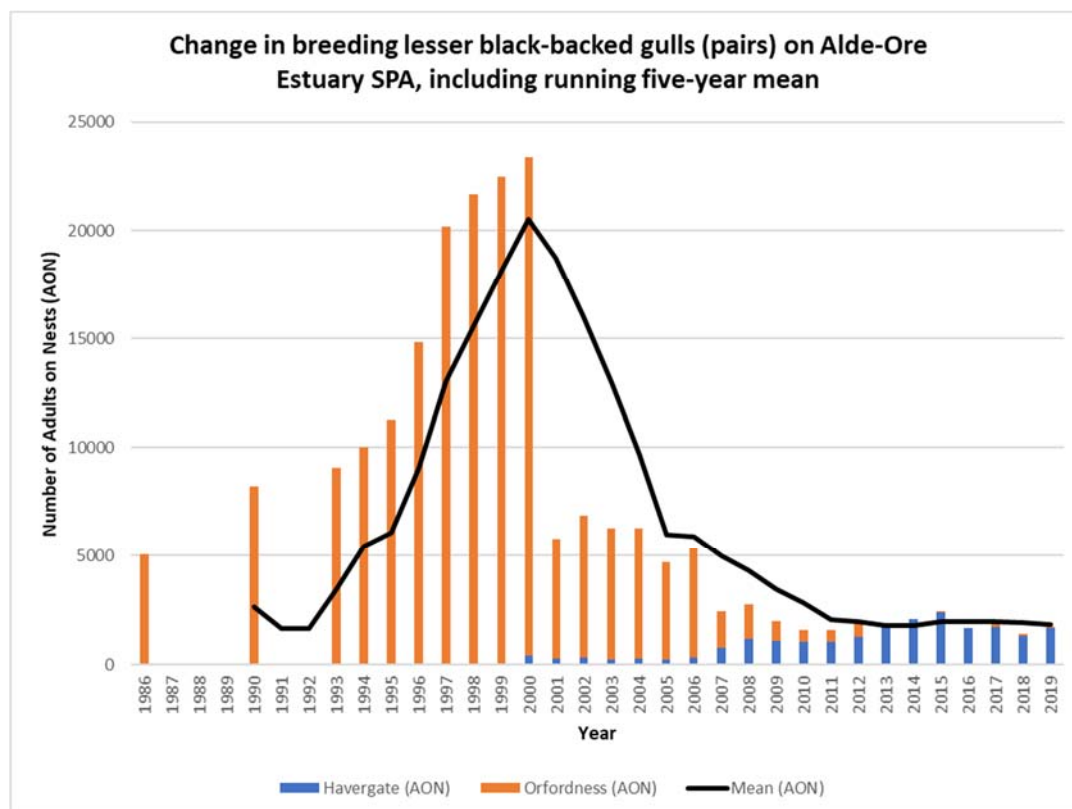
Year	Havergate (AON)	Orfordness (AON)	Total (AON)	Running 5-year mean (AON)
1986	0	5043	5043	
1987	1		1	
1988	0		0	
1989	0		0	
1990	0	8223	8223	2653
1991	0		0	1645
1992	4		4	1645

¹⁸ See SPA citation dated 1996 available from: <http://publications.naturalengland.org.uk/publication/5170168510545920>

¹⁹ See: <https://jncc.gov.uk/our-work/lesser-black-backed-gull-larus-fuscus/>

Year	Havergate (AON)	Orfordness (AON)	Total (AON)	Running 5-year mean (AON)
1993	7	9043	9050	3455
1994	27	9981	10008	5457
1995	35	11221	11256	6064
1996	3	14814	14817	9027
1997	2	20216	20218	13070
1998	4	21700	21704	15601
1999	14	22500	22514	18102
2000	400	23000	23400	20531
2001	290	5500	5790	18725
2002	338	6500	6838	16049
2003	249	6000	6249	12958
2004	264	6000	6264	9708
2005	208	4500	4708	5970
2006	325	5000	5325	5877
2007	768	1678	2446	4998
2008	1185	1584	2769	4302
2009	1074	900	1974	3444
2010	1053	550	1603	2823
2011	1030	550	1580	2074
2012	1267	640	1907	1967
2013	1747		1747	1762
2014	2070		2070	1781
2015	2399	60	2459	1953
2016	1668		1668	1970
2017	1714	239	1953	1979
2018	1327	87	1414	1913
2019	1665	52	1717	1842

Figure 2: Changes in breeding lesser black-backed gulls (pairs) on Alde-Ore Estuary SPA



Site conservation Objectives and draft Supplementary Advice

Natural England has set out draft conservation advice for the Alde-Ore Estuary SPA, including Conservation Objectives²⁰ and Supplementary Advice on Conservation Objectives²¹. Below, we summarise the key aspects of that conservation advice.

Conservation objectives

Natural England has determined that the target population of the SPA is 14,074 pairs of lesser black-backed gulls if the SPA is to meet its conservation objectives.

The Conservation Objectives for the Alde-Ore Estuary SPA are as follows:

Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- *The extent and distribution of the habitats of the qualifying features*
- *The structure and function of the habitats of the qualifying features*

²⁰ [Natural England Conservation Advice for Marine Protected Areas: Draft advice for Alde-Ore Estuary SPA](#) (variously dated). Accessed 17 February 2020.

²¹ [Natural England: Alde-Ore Estuary SPA: draft Supplementary Advice on Conservation Objectives \(updated 13 September 2019\)](#). Accessed 17 February 2020.

- *The supporting processes on which the habitats of the qualifying features rely*
- *The populations of each of the qualifying features*
- *The distribution of the qualifying features within the site.*

Draft Supplementary Advice on Conservation Objectives (dated 13 September 2019)

Natural England's Supplementary Advice on the Conservation Objectives for the Alde-Ore Estuary SPA identifies, for each SPA feature, key attributes and targets. Attributes²² are the ecological characteristics or requirements of the classified features within the SPA and deemed to best describe the site's ecological integrity. If safeguarded this will enable achievement of the Conservation Objectives and favourable conservation status for all the designation features, including the assemblage.

Table 5 below sets out, for each qualifying feature, the targets in respect of the following attributes:

- Breeding population: abundance;
- Connectivity with supporting habitats;
- Disturbance caused by human activity;
- Predation – all habitats;
- Supporting habitat: conservation measures;
- Extent and distribution of supporting habitat for the breeding season; and
- Food availability.

The RSPB considers these attributes and targets are particularly relevant to BEIS's consideration of the Norfolk Vanguard scheme as they respectively relate to:

- the population levels at which the features should be maintained or restored to;
- the need to maintain or restore safe passage of birds moving between their nesting and feeding areas; and
- the need to
 - reduce/avoid disturbance to foraging, feeding, moulting and/or loafing birds;
 - maintain the extent, distribution and availability of suitable breeding habitat (either within or outside the site boundary) which supports the feature for all necessary stages of its breeding cycle; and

²² Supplementary Advice on the Conservation Objectives for the Alde-Ore Estuary SPA, Natural England, 13 September 2019:

<https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9009112&SiteName=alde-ore&SiteNameDisplay=Alde-Ore+Estuary+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAAarea=&NumMarineSeasonality=8>

- maintain the distribution, abundance and availability of key food and prey items.

Table 5: Alde-Ore Estuary SPA: draft supplementary advice on conservation objectives.

SPA feature	Attribute	Target	Season	Site specific comments
Lesser black-backed gull (breeding)	Breeding population: abundance	Restore the size of the breeding population to a level which is above 14,074 [pairs] whilst avoiding deterioration from its current level indicated by the latest mean peak count or equivalent	Breeding (summer) season	After peak of 23,400 pairs in 2000, numbers reduced significantly below the target, the 5-year peak mean (2011-2015) was 1,940 breeding pairs. Survey/monitoring evidence shows the feature to be negatively impacted.
	Connectivity with supporting habitats	Maintain safe passage of birds moving between nesting and feeding areas	Year-round	Results from study of tagged individuals during 2010 and 2011 breeding seasons show that 10% of journeys made from Orfordness were offshore.
	Disturbance caused by human activity	Reduce the frequency, duration and/or intensity of disturbance affecting roosting, nesting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed	Breeding (summer) season	Disturbance to birds at the site can be caused by people accessing the site by boats or through walking overland. Trampling can affect vegetated shingle habitats. Aircraft can cause disturbance when flown low over the site. An investigation into public access/disturbance at the site will help inform a plan to reduce disturbance (NE, 2014).
	Predation – all habitats	Reduce predation and disturbance caused by native and non-native predators	Breeding (summer) season	Issues associated with fox predation/disturbance are being assessed and will inform a predator control

SPA feature	Attribute	Target	Season	Site specific comments
				management plan (NE, 2014)
	Supporting habitat: conservation measures	Maintain the structure, function and supporting processes associated with the feature and its supporting habitat through management or other measures (whether within and/or outside the site boundary as appropriate) and ensure these measures are not being undermined or compromised	Year round – to ensure the habitat remains suitable for when the feature is present	<p>Considerable part of site sympathetically managed by Suffolk Wildlife Trust, National Trust, RSPB and Natural England.</p> <p>Threats posed by sea level rise and coastal squeeze being addressed through the Environment Agency Local Environment Action Plan and estuary Management Plan.</p> <p>Issues associated with fox predation/disturbance are being assessed and will inform a predator control management plan (NE, 2014)</p>
	Supporting habitat: extent and distribution of supporting habitat for the breeding season	Maintain the extent, distribution and availability of suitable habitat (either within or outside the site boundary) which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding). Please see site specific supporting notes for extent details.	Year round – to ensure the habitat remains suitable for when the feature is present	<p>Target may apply to supporting habitat outside the site boundary.</p> <p>Birds will not nest on habitat regularly flooding by the tide but will be found on intertidal habitats above mean high water mark. Habitat include intertidal mixed sediments, intertidal mud and intertidal sand and muddy sand.</p> <p>A range of supporting habitats are used by the species at this site, including: coastal lagoons, freshwater and coastal grazing marsh.</p>
	Supporting habitat: food availability	Maintain the distribution, abundance and availability of key food and prey items (eg.	Year-round	

SPA feature	Attribute	Target	Season	Site specific comments
		voles, small seabirds, waders, sandeel, sprat, cod, herring, roach, rudd, beetles, flies, earthworm, shellfish) at preferred sizes.		

The above information highlights the substantial decline in the lesser black-backed gull population and the scale of the challenge needed to restore this SPA feature to a favourable conservation status. Any additional mortality and disturbance to foraging birds from the Alde-Ore Estuary SPA could have serious implications for the maintenance of the SPA population and hinder efforts to restore it to a favourable conservation status through appropriate site management. The RSPB considers that this is directly relevant to BEIS's consideration of whether the SPA's conservation objective to maintain or restore site integrity can be met and the SPA achieve favourable conservation status.

3. Legal requirements

SACs and SPAs are “European sites” in inshore waters (up to 12 nautical miles from the baselines) under provisions within the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations); and in offshore waters (i.e. from 12-200 nautical miles) are “European Offshore Marine sites” under provisions within the Conservation of Offshore Marine Habitats and Species Regulations 2017 (Offshore Regulations).

The Habitats and Offshore Regulations set out the sequence of steps to be taken by the competent authority (here the Secretary of State for Business, Energy and Industrial Strategy (BEIS)) when considering authorisation for a project that may have an impact on a European site and its features before deciding to authorise that project. These are as follows:

- i) Step 1: consider whether the project is directly connected with or necessary to the management of the SPA and its species (regulation 63 (1)). If not –
- ii) Step 2: consider, on a precautionary basis, whether the project is likely to have a significant effect on the SPA and its features, either alone or in-combination with other plans or projects (the Likely Significance Test) (regulation 63 (1)).
- iii) Step 3: make an appropriate assessment of the implications for the SPA and its features in view of its conservation objectives. There is no requirement or ability at this stage to consider extraneous (non-conservation e.g. economics, renewable targets, public safety etc) matters in the appropriate assessment (regulation 63 (1)).
- iv) Step 4: consider whether it can be ascertained that the project will not, alone or in-combination with other plans or projects, adversely affect the integrity of the SPA and its features, having regard to the manner in which it is proposed to be carried out, and any conditions or restrictions subject to which that authorisation might be given (the Integrity Test) (regulation 63 (6)).
- v) Step 5: In light of the conclusions of the assessment, the competent authority shall agree to the project only after having ascertained that it will not adversely affect the integrity of the SPA, alone or in-combination with other plans or projects (regulation 63 (5)).
- vi) Step 6: only if the competent authority is satisfied that, there being no alternative solutions and the plan or project must be carried out for imperative reasons of overriding public interest (which, subject to (regulation 64(2)), may be of a social or economic nature), they may agree to the plan or project notwithstanding a negative assessment of the implications for the European site (regulation 64 (1)).
- vii) Step 7: in the event of the no alternative solutions and imperative reasons of overriding public interest tests being satisfied, the Secretary of State must secure that any necessary

compensatory measures are taken to ensure that the overall coherence of the Natura 2000 network is protected (regulation 68).

It is important to add that in addition to the requirements set out above, in relation to both inshore area and the offshore marine area, any competent authority must exercise its functions so as to secure compliance with the requirements of the Habitats Directive and the Birds Directive; and in particular to take such steps as it considers appropriate to secure the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds²³, having regard to the requirements of Article 2 of the Birds Directive.²⁴ And for offshore SPAs and SACs regulation 26 of the Offshore Regulations requires competent authorities to exercise their functions (as far as possible) to secure steps to avoid the disturbance of species and the deterioration of habitats or habitats of species within those sites.

It is clear that the Norfolk Vanguard scheme is not directly connected with or necessary for the management of the SPA.

²³ As required by Article 3, Birds Directive.

²⁴ See regulation 9(1) and 10(1)(2)(3) and (8) of the Habitats Regulations and regulation 6 of the Offshore Regulations. Article 2 Birds Directive imposes a requirement on Member States to maintain all wild bird populations at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or if necessary, to restore the population of these species to that level (Article 2).

4. The RSPB’s position at the end of the Norfolk Vanguard examination

Table 6 below summarises the RSPB’s position on impacts on features at the Flamborough and Filey Coast SPA and Alde-Ore Estuary SPA at the end of the Norfolk Vanguard Examination.

Table 6: The RSPB’s position on adverse effects on site integrity of the Flamborough and Filey Coast SPA and Alde-Ore Estuary SPA

Feature	SPA	Alone	In-combination with other plans or projects
Kittiwake	FFC	Conclude that there will not be an adverse effect on site integrity	Adverse effect on site integrity exists (irrespective of whether Hornsea Project Three figures are included)
Gannet	FFC	Conclude that there will not be an adverse effect on site integrity	Adverse effect on site integrity exists (when mortality from Hornsea Three is included)
Guillemot	FFC	Conclude that there will not be an adverse effect on site integrity	Adverse effect on site integrity exists (when mortality from Hornsea Three is included)
Razorbill	FFC	Conclude that there will not be an adverse effect on site integrity	Adverse effect on site integrity exists (when mortality from Hornsea Three is included)
Seabird assemblage	FFC	Conclude that there will not be an adverse effect on site integrity	Not possible to rule out adverse effect on site integrity due to collision risk and displacement (based on combined impacts of: kittiwake, gannet, guillemot and razorbill).
Lesser black-backed gull	Alde-Ore Estuary	Conclude that there will not be an adverse effect on site integrity	Adverse effect on site integrity exists.

In addition, the RSPB considered the following cumulative EIA impacts were significant:

- Collision: kittiwake and great black-backed gull
- Displacement: red-throated diver, guillemot, razorbill and puffin.

The RSPB’s focus during the Expert Topic Group process for the Norfolk Vanguard application, and during the examination, was upon these SPA features. However, the breeding²⁵ seabird assemblage (including but not restricted to migratory birds) as a combination of these features and other species

²⁵ The breeding population includes juveniles and non-breeding adults. Natural England’s [Conservation Advice for the Flamborough and Filey Coast SPA](#) further notes that: “The species of the seabird assemblage are distributed throughout the SPA and components of the assemblage are present year-round.”

is equally important and we are unable to exclude the risk of an adverse effect on that assemblage feature as well. Our current position on the assemblage is set out in Table 8 below.

There were a number of important areas of disagreement with the Applicant over assessment methodology during the Norfolk Vanguard examination, but the majority of these were resolved. The key outstanding issues were the level of precaution that was being applied to calculate the number of birds that could be impacted by the proposed scheme and, ultimately, the interpretation of the evidence. The RSPB has explained in detail why we consider that the position adopted by ourselves and Natural England is not overly precautionary (as set out in the "RSPB's note on Precaution", included here as Annex 1).

The RSPB accepts the methods applied to understand the potential impacts of Norfolk Vanguard on the seabird populations identified in Table 6 and the model outputs that have been provided. We therefore have confidence in the information provided by the Applicant enabling the RSPB to reach more definite conclusions on the possible adverse effects on integrity i.e. adverse effects existed for certain SPA features. Our final position on both the Filey to Flamborough Coast SPA and Alde-Ore Estuary SPA are set out below.

[The RSPB's position on adverse effects on the integrity of the Flamborough and Filey Coast SPA](#)

At the end of the Norfolk Vanguard examination the RSPB considered that adverse effects on integrity existed for the kittiwake, gannet, guillemot and razorbill populations of the Flamborough and Filey Coast SPA.

For gannet, guillemot and razorbill this was in-combination with Hornsea Three, for kittiwake the conclusion was reached irrespective of whether the impacts of Hornsea Three were included. This was a significant shift in position – moving from a position where we were unable to exclude the risk of adverse effects on integrity to one where we were confident that effects existed, and reflects a continuing development of our understanding of the impacts of offshore wind farms in the southern North Sea on the seabirds of the Flamborough and Filey Coast SPA (as well as other protected sites). We also considered that as a consequence of these impacts it was not possible to rule out adverse effects on the integrity of the breeding seabird assemblage of the Flamborough and Filey Coast SPA when considered in-combination with other offshore wind farms.

[The RSPB's position on adverse effects on the integrity of the Alde-Ore Estuary SPA](#)

At the end of the Norfolk Vanguard examination the RSPB considered that adverse effects on integrity existed for the lesser black-backed gull population of the Alde-Ore Estuary SPA. We concluded that the project would not result in adverse effects on the integrity of the lesser black-backed gull population of the Alde-Ore Estuary SPA feature alone. However, the RSPB concluded adverse effects on integrity existed in respect of the lesser black-backed gull population of the SPA when the Norfolk Vanguard scheme was considered in-combination with other plans or projects.

5. The RSPB's conclusions on affected SPA features of the Flamborough and Filey Coast SPA and the Alde-Ore Estuary SPA

This section sets out the RSPB's conclusions in respect of affected SPA features based on the additional ornithological information provided by Ørsted for Hornsea Three, the Norfolk Vanguard information, and further information in the light of the commencement of the examinations for Norfolk Boreas, East Anglia One North and East Anglia Two. We also note the implications of The Crown Estate's announcements on offshore wind farm extensions and the Round 4 leasing process.

In-combination plans and projects

The RSPB has identified a number of schemes that have changed status since the Norfolk Vanguard Development Consent Order application was submitted. Table 7 below, based on *Table 2 – Assigning certainty to 'other existing development and/or approved development'* from the Planning Inspectorate's Advice Note 17 (Cumulative Effects Assessment)²⁶, lists the schemes which the RSPB is aware have changed status since Table 13.64 (Summary of projects considered for the CIA in relation to offshore ornithology) in Chapter 13 Offshore Ornithology (ES Volume 1) for Norfolk Vanguard was published²⁷. We have compared this with information contained in various species-specific tables contained in "Offshore Ornithology Cumulative and In-combination Collision Risk Assessment (Update) - Accepted at the discretion of the Examining Authority. May 2019 (Ref: AS-048)".²⁸

We also wish to highlight that some in-combination projects have only had their constructed turbines and footprint considered rather than their full consent and unless that consent is changed there remains the possibility of these developers constructing further wind turbines and increasing their footprint. Therefore, it is very important that the entirety of project consents are considered when assessing potential in-combination effects.

In addition, the RSPB remains concerned that some constructed and operational offshore windfarms are now being considered as part of the baseline and not considered in the in-combination assessment. Part of our concern is due to there being insufficient monitoring at this stage to be able to determine that their impacts are as predicted or whether there are some residual or further effects that mitigation has not solved meaning no account is being taken of them. As all are aware, in-combination assessments are vital to ensure these residual effects are taken into account.

²⁶ <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/12/Advice-note-17V4.pdf> (accessed on 17 December 2019).

²⁷ Norfolk Vanguard Offshore Wind Farm, Chapter 13 Offshore Ornithology, Environmental Statement Volume 1 (document reference 6.1.13).

²⁸ Additional Submission - Offshore Ornithology Cumulative and In-combination Collision Risk Assessment (Update) - Accepted at the discretion of the Examining Authority. May 2019 (Ref: AS-048)

Table 7: Schemes to be considered in-combination that have changed status since the Norfolk Vanguard application was submitted

Assessment Tier	Stage	Schemes
Tier 1	Under construction	Kincardine Offshore Wind Farm ²⁹
	Permitted application(s), whether under the PA2008 or other regimes, but not yet implemented	Methil Demonstration Project ³⁰ Moray West
	Submitted application(s) whether under the PA2008 or other regimes but not yet determined	East Anglia One North ³¹ East Anglia Two ³² Norfolk Boreas ³³ Thanet Extension ³⁴ Hornsea Three ³⁵
	Submitted Scottish Offshore Wind Farm applications	Seagreen Alpha ³⁶ Seagreen Bravo ²⁹
Tier 2	Projects on the Planning Inspectorate's Programme of Projects where a scoping report has been submitted	East Anglia One North East Anglia Two Norfolk Boreas Norfolk Vanguard Thanet Extension Kincardine Offshore Wind Farm Hornsea Three Hornsea Four ³⁷ *
Tier 3	Projects on the Planning Inspectorate's Programme of Projects where a scoping report has not been submitted	Hornsea Four
	Identified in the relevant Development Plan (and emerging Development Plans – with appropriate weight being given as they move closer to adoption) recognising that there will be limited information available on the relevant proposals	

²⁹ Construction is due to complete in 2020 (<https://www.4coffshore.com/news/kincardine-up-and-running-nid8745.html>).

³⁰ Awarded a Contract for Difference (as Forthwind) on 20/9/19 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/838914/cfd-ar3-results-corrected-111019.pdf).

³¹ Accepted for Examination on 22/11/19.

³² Accepted for Examination on 22/11/19.

³³ Accepted for Examination on 4/7/19.

³⁴ Accepted for Examination on 23/7/18.

³⁵ Accepted for Examination on 8/6/18.

³⁶ Revised Application for Seagreen Alpha and Bravo submitted to Marine Scotland (September 2018) (<https://www.offshorewind.biz/2018/09/21/seagreen-submits-application-for-optimised-seagreen-alpha-and-bravo/>)

³⁷ Scoping Opinion published on 23/11/18.

Assessment Tier	Stage	Schemes
	Identified in other plans and projects (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward	The Crown Estate’s Extensions ³⁸ The Crown Estate Offshore Wind Leasing Round 4 ³⁹

* By agreement with Natural England the results from the Hornsea Four Preliminary Environmental Information Report have been included as part of the Offshore Ornithology Assessment Update for Norfolk Boreas⁴⁰.

Flamborough and Filey Coast SPA

Conservation Objectives and Supplementary Advice

As set out and discussed above the conservation objectives and Supplementary Advice are central to the consideration of potential adverse effects on the SPA and its features and also for the consideration of any compensation required.

Among other things, the Conservation Objectives for SPAs require the maintenance or restoration of the population for each qualifying feature and the supporting processes on which the habitats of the qualifying features rely. The Supplementary Advice then sets out the key attributes and targets for each qualifying feature of which the following are particularly relevant:

- Breeding population abundance;
- Connectivity with supporting habitats (safe passage);
- Restricting disturbance;
- Maintaining the extent, distribution, and availability of suitable breeding habitat; and
- Maintaining or restoring food availability.

Below, we consider the effects of the project on the following SPA features and summarise our view in Table 8:

- Kittiwake
- Gannet
- Guillemot
- Razorbill

³⁸ Announced on 28/8/19 (<https://www.thecrownestate.co.uk/en-gb/media-and-insights/news/2019-28-gw-of-offshore-wind-extension-projects-to-progress-following-completion-of-plan-level-habitats-regulations-assessment/>)

³⁹ Announced on 14/10/19 (<https://www.thecrownestate.co.uk/en-gb/media-and-insights/news/2019-offshore-wind-leasing-round-4-officially-opens/>)

⁴⁰ <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-001420-Offshore%20Ornithology%20Assessment%20Update.pdf>

- Seabird assemblage.

Kittiwake

The RSPB note the letter from BEIS in relation to the Norfolk Vanguard DCO application on 6 December 2019. In particular, paragraph 3 of the letter covers “the qualifying kittiwake feature of the Flamborough and Filey Coast SPA” rather than asking about kittiwake as part of the assemblage of the SPA.

The RSPB consider that the key concern relates to kittiwake as one of the qualifying features of the SPA (which we will cover below), but we also consider the SPA assemblage at the end of this section and kittiwake's contribution to that SPA feature.

Kittiwake as an SPA feature

The RSPB accepts the Applicant's view that there will be no adverse effects on the integrity of the Flamborough and Filey Coast SPA **alone**. The RSPB also concludes that the data demonstrate that an adverse effect on integrity in-combination with other projects exists, irrespective of whether mortality from the Hornsea Three project is included. With this in mind it is worth noting our comments on kittiwake in relation to the Hornsea Three offshore wind farm, namely:

“The kittiwake population of the Flamborough and Filey Coast SPA is one of only two kittiwake populations in the North Sea that is relatively stable, the other being on the Suffolk Coast (Lowestoft harbour and Sizewell Rigs CWS). All others are declining precipitously. And the enhanced monitoring of the Flamborough and Filey Coast SPA is demonstrating that productivity has declined and is consequently a concern for the long-term viability of the population.”⁴¹

Notwithstanding its relative recent stability, the SPA population has declined by around 50% from its original SPA level of 83,700 pairs such that it is in unfavourable conservation status. It is for this reason that Natural England has set its conservation objective as one of restoration to its original designation population of 83,700 pairs, alongside targets of restoring safe passage for birds moving between nesting and feeding areas, reducing disturbance, maintaining the extent, distribution, and availability of suitable breeding habitat, and restoring food availability.

This decline has also acted to reduce the overall seabird assemblage population from its historic level of 305,784 individual seabirds (as per JNCC UK SPA Review 2001) to 216,730 individuals at the designation of the Flamborough and Filey Coast SPA.

⁴¹ RSPB/Ørsted Statement of Common Ground (March 2019), page 25.

In this context, the RSPB's view is that the predicted increases in mortality as a consequence of collision risk from Norfolk Vanguard in-combination with other plans and projects undermine the achievement of the SPA's conservation objectives and Natural England's targets.

Gannet

The population abundance target for gannet set out in Natural England's Supplementary Advice on Conservation Objectives is to maintain the population of gannets at its designation level of 8,469 pairs whilst avoiding deterioration from its current level e.g. 13,392 pairs in 2017 (see Table 3). It also sets out additional targets of maintaining safe passage for birds moving between nesting and feeding areas, reducing disturbance, maintaining the extent, distribution, and availability of suitable breeding habitat, and maintaining food availability.

In this context, it is the RSPB's view that the increase in mortality as a consequence of collision risk, in-combination with other plans and projects, undermines the achievement of the SPA's conservation objectives and Natural England's targets. Therefore, the RSPB continues to conclude an adverse effect on site integrity exists as a result of the project in-combination with other plans or projects (including Hornsea Three).

Guillemot

The population abundance target for guillemot set out in Natural England's Supplementary Advice on Conservation Objectives is to maintain the population of guillemots at its designation level of 41,607 pairs whilst avoiding deterioration from its current level (see Table 3). It also sets out additional targets of maintaining safe passage for birds moving between nesting and feeding areas, reducing disturbance, maintaining the extent, distribution, and availability of suitable breeding habitat, and maintaining food availability.

In this context, it is the RSPB's view that the increase in mortality as a consequence of displacement, in-combination with other plans and projects, undermines the achievement of the SPA's conservation objectives and Natural England's targets. The RSPB continues to conclude an adverse effect on site integrity exists as a result of the project in-combination with other plans or projects (including Hornsea Three).

Razorbill

The population abundance target for razorbill set out in Natural England's Supplementary Advice on Conservation Objectives is to maintain the population of razorbills at its designation level of 10,570 pairs whilst avoiding deterioration from its current level (see Table 3). It also sets out additional targets of maintaining safe passage for birds moving between nesting and feeding areas, reducing

disturbance, maintaining the extent, distribution, and availability of suitable breeding habitat, and maintaining food availability.

In this context, it is the RSPB's view that the increase in mortality as a consequence of displacement, in-combination with other plans and projects, undermines the achievement of the SPA's conservation objectives and Natural England's targets. Therefore, the RSPB continues to conclude an adverse effect on site integrity exists as a result of the project in-combination with other plans or projects (including Hornsea Three).

[The breeding seabird assemblage](#)

BEIS' consultation letter specifically requests views on the impacts on kittiwake as a qualifying feature of the Filey and Flamborough Coast SPA. However, as summarised in section 2 above, the seabird assemblage comprises several seabird species. Historically, kittiwake was the most numerous component of the seabird assemblage (83,700 pairs) but as noted above has declined by approximately 50%, such that it is in unfavourable conservation status.

The population abundance target for the seabird assemblage set out in Natural England's Supplementary Advice on Conservation Objectives is to maintain the population at its designation level of 216,730 individuals, while avoiding deterioration from its current level (see Table 3). It also sets out an additional target of restricting the frequency, duration and intensity of disturbance affecting, among other things, foraging, feeding, moulting and/or loafing birds, with particular reference to the vulnerability of some species to collision and displacement from offshore developments; and maintaining the extent, distribution, and availability of suitable breeding habitat.

Given the level of risk to the individual SPA features of kittiwake, gannet, guillemot and razorbill set out above, the RSPB's view is that it is not possible to exclude the risk of adverse effects on the SPA seabird assemblage feature, and therefore site integrity, as a result of the project in-combination with other plans or projects.

[Alde-Ore Estuary SPA](#)

[Conservation Objectives and Supplementary Advice](#)

As set out and discussed above the conservation objectives and Supplementary Advice are central to the consideration of potential adverse effects on the SPA and its features and also for the consideration of any compensation required.

Among other things, the Conservation Objectives for SPAs require the maintenance or restoration of the population for each qualifying feature and the supporting processes on which the habitats of the

qualifying features rely. The Supplementary Advice then sets out the key attributes and targets for each qualifying feature of which the following are particularly relevant:

- Breeding population abundance;
- Connectivity with supporting habitats (safe passage);
- Restricting disturbance;
- Maintaining the extent, distribution, and availability of suitable breeding habitat; and
- Maintaining food availability

Below, we consider the effects of the project on the following SPA features and summarise our view in Table 8:

- Lesser black-backed gull

[Lesser black-backed gull](#)

The population abundance target set out in Natural England's Supplementary Advice on Conservation Objectives is to restore the size of the breeding population of lesser black-backed gulls to above 14,074 pairs, whilst avoiding deterioration from its current level (based on mean peak count or equivalent). We estimate its current level is 1,842 pairs (five year mean 2015-2019, see Table 4). It also sets out additional targets of maintaining safe passage for birds moving between nesting and feeding areas, reducing disturbance, maintaining the extent, distribution, and availability of suitable breeding habitat and maintaining food availability.

In this context, it is the RSPB's view that the increase in mortality as a consequence of collision risk, in-combination with other plans and projects, undermines the achievement of the SPA's conservation objectives and Natural England's targets. The RSPB continues to conclude an adverse effect on site integrity exists as a result of the project in-combination with other plans or projects.

[Overall conclusions with regards AEOI on the Flamborough and Filey Coast SPA and Alde-Ore Estuary SPA](#)

[The RSPB's view on affected features](#)

The RSPB's overall conclusions with regards all potential adverse effect on integrity of the Norfolk Vanguard scheme on the Flamborough and Filey Coast SPA and Alde-Ore Estuary SPA are summarised below and in Table 8.

The RSPB consider that adverse effects on integrity exist for kittiwake, gannet, guillemot, razorbill and the seabird assemblage as a whole in-combination with other plans or projects.

The RSPB considers there to be sufficient certainty in the data presented by the Applicant to support this conclusion.

Table 8: The RSPB's current position on impacts on the Flamborough and Filey Coast SPA and Alde-Ore Estuary SPA

Feature	SPA	Alone	In-combination with other plans or projects
Kittiwake	FFC	Conclude that there will not be an adverse effect on site integrity	Adverse effect on site integrity exists (irrespective of whether Hornsea Project Three figures are included)
Gannet	FFC	Conclude that there will not be an adverse effect on site integrity	Adverse effect on site integrity exists (when mortality from Hornsea Three is included)
Guillemot	FFC	Conclude that there will not be an adverse effect on site integrity	Adverse effect on site integrity exists (when mortality from Hornsea Three is included)
Razorbill	FFC	Conclude that there will not be an adverse effect on site integrity	Adverse effect on site integrity exists (when mortality from Hornsea Three is included)
Assemblage	FFC	Conclude that there will not be an adverse effect on site integrity	Not possible to rule out adverse effect on site integrity due to collision risk and displacement (based on combined impacts of: kittiwake, gannet, guillemot and razorbill).
Lesser black-backed gull	Alde-Ore Estuary	Conclude that there will not be an adverse effect on site integrity	Adverse effect on site integrity exists.

Conclusion

As all are aware, the application can only be granted consent if the Secretary of State is convinced that it will not have an adverse effect on the integrity of European Sites and their qualifying features, having applied the precautionary principle and taken account of the conservation objectives for those sites and their features. *Waddenzee* confirmed that where reasonable scientific doubt remains as to the absence of adverse effects on the integrity of the site, approval should be refused⁴², subject to the consideration of alternative solutions, imperative reasons of overriding public interest and the provision of compensatory measures, as set out in regulations 64 and 68 of the Conservation of Habitats and Species Regulations 2017.

⁴² CJEU Case-127/02; [2004] ECR-7405 at [56]-[57]

6. Next steps

The RSPB has noted that BEIS will provide a 28-day period for interested parties to respond to the detailed information provided by the Applicant and Natural England at the 28 February 2020 deadline. Critically, this includes the views of those organisations on the matters raised by BEIS in its letter of 6 December 2019 in respect of ornithology:

- whether there are any feasible alternative solutions to the project which could avoid or lessen any adverse effects on the integrity of the site;
- any imperative reasons of overriding public interest for the project to proceed;
- any in principle compensatory measures proposed to ensure that the overall coherence of the network of European sites is protected.

We are aware that similar questions have been posed in relation to the Haisborough, Hammond and Winterton SAC. We reserve the right to comment on the submissions in relation to alternative solutions, IROPI and compensation insofar as such answers have a bearing on the interpretation and operation of the Habitats Regulations.

The RSPB submitted its views on these matters to the Norfolk Vanguard examination at Deadline 7.5 by way of including its Deadline 10 submission to the Hornsea Three examination. The RSPB reserves the right to review and amend these submissions in light of the further information from the Applicant and Natural England. However, we wish to make the following comment we consider relevant to proper consideration of the three derogation tests.

Relationship between adverse effect on integrity and the derogation tests

A key starting point in addressing the Regulations 64 and 68, Habitats Regulations, derogation tests is agreeing the nature and magnitude of the predicted and potential adverse effects on the impacted Natura 2000 site(s) and its/their features. This is critical to the three derogation tests as follows:

- **Alternative solutions:** enables an assessment of whether an alternative solution is more or less damaging than the plan or project under consideration;
- **IROPI:** enables the need to protect the Natura 2000 site to be weighed against the claimed need (including public interest(s)) of the project; and
- **Compensatory measures:** enables clear objectives and related targets to be defined to identify and design compensatory measures that will protect the overall coherence of the Natura 2000 network.

Ensuring this is done to a common, agreed standard will be important to ensure the tests are addressed in a robust, fair and proportionate way in decisions by the competent authority relating to this and any future offshore wind farm schemes e.g. Hornsea Three.

In respect of seabirds, creating this level-playing field is particularly important given the known variation and inconsistency in impact assessment methodology between the various consultants advising the different wind farm developers e.g. see section 4 above. Therefore, the RSPB recommends that BEIS work closely with its statutory nature conservation adviser, Natural England, and other stakeholders to:

- agree such a standard for assessing all potential adverse impacts (e.g. annual mortality of breeding adult birds from collision);
- develop a consistent approach to translate those potential impacts into suitable objectives for any compensatory measure(s) deemed necessary to protect the overall coherence of the Natura 2000 network for each affected feature. This must ensure success is measured in terms of whether the compensation measure results in actual benefits to the affected feature e.g. increased number of breeding pairs, or improved breeding productivity above a defined level.

There needs to be a transparent link between these two aspects to ensure the compensatory measures are targeted at the requirements of the SPA feature(s) adversely affected. The RSPB would welcome being part of and able to contribute to such discussions.

Annex 1: RSPB note on precaution

Re: Application by Norfolk Vanguard Limited for an Order Granting Development Consent
for the Norfolk Vanguard Offshore Wind Farm

**RSPB response to the Applicant's Deadline 8 submission 'Precaution in ornithological
assessment for offshore wind farms'
Submitted at Deadline 9: 6th June 2019**

Introduction

This note is a response to the submission by the Applicant to Deadline 8 of Document Reference: ExA; AS; 10.D8.8. In that document the Applicant has argued why they think the current approach to assessment of offshore wind farm developments is overly precautionary. Many of the arguments presented to support that position are unjustified and in this note the RSPB will demonstrate why the approach taken is not overly precautionary, rather is a measured and reasonable response to the considerable uncertainty inherent in the assessment procedure.

The precautionary principle

The precautionary principle exists for situations where scientific data does not exist or is incomplete and therefore it is not possible to complete a full evaluation of the possible risks a plan, project or activity may cause to the environment, including possible danger to humans, animal or plant health, or to the environment in general. The European Commission's Precautionary Principle guidance¹ states that it should apply when a phenomenon, product or process may have a dangerous effect, identified by a scientific and objective evaluation, if this evaluation does not allow the risk to be determined with sufficient certainty. As such the degree of precaution applied to an evaluation, or assessment, can be seen to be directly proportional to the extent of scientific uncertainty inherent in that assessment. As the guidance goes on to recommend, "The implementation of an approach based on the precautionary principle should start with a scientific evaluation, as complete as possible, and where possible, identifying at each stage the degree of scientific uncertainty."

Uncertainty

As there can be "almost as many definitions of uncertainty as there are treatments of the subject"², following Masden *et al* (2015), here we define it as a lack of knowledge, or incomplete information about a particular subject. Masden *et al.*, identified a hierarchy of uncertainty in offshore wind farm assessment. This included not only the uncertainty arising from scientific knowledge, as argued by the Applicant, but uncertainty arising more strategically from the process of assessment itself such as

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52000DC0001&from=EN>

² Argote, L. (1982). Input Uncertainty and Organizational Coordination in Hospital Emergency Units. *Administrative Science Quarterly*, 27(3), 420-434. doi:10.2307/2392320

uncertainty within language and decision-making. Included within this process uncertainty can be considered anything that increases the difficulty in reaching firm and robust conclusions such as revisions in modelling approaches, late submissions, overly complicated language and unsupported arguments put forward as evidence. As such, the approach taken by the Applicant throughout the examination, and as evidenced below, is one of increasing uncertainty rather than reducing it. As the degree of precaution is proportional to the degree of uncertainty, such an approach increases the need for precaution in the assessment, and unfortunately in our view, the Applicant's Deadline 8 precaution submission, further increases this uncertainty. The reasons are described below.

Density and Abundance

Following Masden *et al.*, (2015) Natural England request that an indication of uncertainty is given around estimates of abundance – a request that the RSPB strongly supports. This means that although there may be insufficient scientific knowledge for an estimate to be made with full confidence, as uncertainty is inherent in all scientific research, providing an indication of the extent of this uncertainty provides a measure of confidence that greatly assists any decision making. This point is made by Millner-Gullard & Shea, (2017) as follows: “In order to manage uncertainty it must first be acknowledged and identified”.

However, the Applicant argues in section 2.1 of its Deadline 8 precaution submission, that the 95% confidence intervals requested by Natural England to give the indication of uncertainty, are inappropriate as they are influenced by only one year's data and use of the mean is more appropriate. This misinterprets the advice given by Natural England, which is that the means are used in the overall assessment, but confidence intervals also need to be presented to allow *consideration* of the variability (and therefore the uncertainty) in the underlying annual population estimates. This ensures confidence in any conclusions can be expressed, but does not affect the actual conclusions, which should of course be based on the means (or other measure of central tendency). This is an entirely appropriate method and not in any way over precautionary. Not to express this uncertainty, as the Applicant seems to advocate, would not be consistent with European Commission Guidance on the Precautionary Principle - by not identifying and highlighting uncertainty the need for precaution could therefore increase.

Collision Risk Modelling

This same argument is used by the Applicant in section 2.2 to say that the assessment is over-precautionary in terms of collision risk modelling as Natural England have requested the 95% confidence intervals to be presented. Again, these are only used, quite correctly, to inform the confidence around the assessment, by giving a necessary indication of uncertainty. This is made clear in the conclusions given by Natural England at Deadline 3, as follows:

“From Table 1 below, we note that all the central CRM predictions equate to less than 1% baseline mortality of largest BDMPS for all species. This is also the case for the upper 95% confidence intervals of the bird density for all species except great black-backed gull (GBBG), where the predicted CRM figures of 410 equates to 2.43% of baseline mortality of the largest BDMPS for all turbines in Vanguard East and 0.94% of baseline mortality of the biogeographic population. Therefore, based on these

figures we conclude that the collision risk from Vanguard alone would have no significant impact at the EIA scale for all species, although this conclusion can only be made with low confidence regarding impacts on GBBG at Vanguard East.”

As such we support Natural England’s approach, and argue that by following their advice in quantifying and expressing uncertainty, confidence in the assessment would be increased, leading to a reduction in the need for precaution. Therefore, their recommended approach is not in any way over-precautionary. The Applicant further argues that the use of their own stochastic version of the collision risk model would have reduced uncertainty. However, by relying on a model version that is untested, without peer-review, or the opportunity for review by either Natural England or the RSPB, the Applicant effectively *reduces* confidence in its outputs, thereby *increasing* uncertainty and consequently the need for precaution.

Headroom (Cumulative Impacts)

For section 2.3, the Applicant relies on a report commissioned by the Crown Estate. This report, which was not designed for use in an assessment, was flawed for a number of reasons, given below: The approach taken in the report is counter to the principles of sustainable development. The industry should be aiming to achieve maximum capacity for least environmental effect, not simply looking to fully exploit the available environmental capacity – as they see it. The report implies that the calculated ‘headroom’ for each species is simply expendable. As would be expected we strongly disagree with this proposition, especially when considering protected species. A more appropriate approach would be to simply present the re-established cumulative totals, without referring to any available headroom. It is for the decision-maker to make the decision as to whether predicted impacts of any future proposals are acceptable.

The report is limited as it does not take account of potential impacts from displacement and emerging concerns regarding barrier effects of migratory birds that are largely unexplored, but which are becoming increasingly important due to the scale of development that has and is planned to be deployed.

The report assumes that predicted impacts of consented development were acceptable and still are acceptable and are using the consented impacts as thresholds. They should not be used for this purpose. Assessment methodologies and improvements in understanding of seabird ecology are developing all the time whilst new marine areas are being identified as important and the need for their protection recognised. This new knowledge and understanding is not accommodated within the report. For instance, there is no clarity on the accuracy of the underlying baseline data sets, uncertainties within the modelling and expression of confidence intervals for the outputs of those models.

Perhaps most importantly, a number of assumptions are stated throughout the report in a discursive manner, the majority or all stating that existing methodologies of assessment are precautionary and that impacts are likely to be smaller (which is not always demonstrated to be true, for example Bowgen and Cook, (2018), and Wischniewski *et al.*, (2018)). There also exist considerable inaccuracies throughout

the report that we could comment on separately. Taking these two points together there exists the risk of raising expectations amongst the intended audience in the absence of any evidence and which could be unfounded. This report simply emphasises the point that adequate monitoring is required to provide an evidence base to inform future assessment and consideration of cumulative/in-combination impacts.

Therefore, the RSPB do not agree that this report should be used as part of the consideration of this application.

The Applicant also suggests that the criticisms made under section 2.2 of its Deadline 8 precaution submission, regarding the use of confidence intervals in collision risk modelling are also applicable for in-combination assessments. None of the assessments in the list of in-combination projects used the upper confidence limits for conclusions of mortality and so this has no bearing on the precautionary nature, or lack of, in the in-combination assessment. Again, by presenting information in a confusing and contradictory manner, the Applicant is increasing the uncertainty around the assessment and thereby increasing the need for precaution.

Displacement

In Section 2.4 of its Deadline 8 precaution submission, on displacement, the Applicant repeats their assertion that 95% confidence limits are used to reach conclusions of displacement impact by Natural England, despite, quite correctly, their use being restricted to expressing confidence in the conclusions reached by using the central measure or mean. Again, we support Natural England's approach, and argue that by quantifying and expressing uncertainty it increases confidence and therefore reduces the need for precaution. As such the approach is not in any way over-precautionary.

In paragraph 24 of this section the Applicant claims there is "very little evidence" that displacement extends over distances as large as 2-4km, the buffer size recommended by Natural England. However, while there is a large amount of variation in the displacement distances reported in the literature, displacement has been recorded up to 12km³ from a wind farm. As such the Applicant's comments are entirely misleading. The use of such misleading comments has the effect of increasing the uncertainty within the assessment process.

The Applicant further argues, correctly, that displacement rates are based on evidence from studies carried out at older wind farms and that these had smaller, more closely spaced turbines. However, the argument is then made, without evidence, that displacement will be reduced with modern turbine design, where the turbines are spaced further apart and are considerably larger. Notwithstanding the lack of evidence for this assertion it intuitively seems very unlikely that larger turbines will cause less displacement. It would be more far more likely that greater displacement would arise. Again, the use of

³ Mendel, B., Schwemmer, P., Peschko, V., Müller, S., Schwemmer, H., Mercker, M., & Garthe, S. (2019). Operational offshore wind farms and associated ship traffic cause profound changes in distribution patterns of Loons (*Gavia spp.*). *Journal of environmental management*, 231, 429-438.

these speculative and counter-intuitive arguments has the effect of increasing the uncertainty within the assessment process.

Seasonality

In section 2.5. the Applicant details their perception of precaution in the definition of seasonality. In support the Applicant cites Furness (2015) a report commissioned with the specific aim to “review and define species-specific non-breeding season seabird populations maximum ranges”. As part of the report, seasons were defined where there was spatial overlap between breeding and migrating birds. As such it is clear by definition that these periods include breeding birds. However, the Applicant argues that this is not the case for Norfolk Vanguard for several reasons including that the maximum foraging ranges presented by Thaxter *et al.* (2012) represent unusual situations that could not be sustained as typical values by breeding seabirds. This is not the case as these foraging ranges are derived from small samples of birds for constricted periods of time, and as the amount of data from tracking studies increases, carried out with more individuals, more colonies and over greater periods of time, the distances recorded are likely to increase, as has been shown to be the case with kittiwake⁴.

The Applicant further argues that the density of breeding adults declines rapidly with distance offshore from colonies and is likely to be extremely low beyond 100km. It is not true that density simply decreases with distance from colony. While there will be an area of high density around the colony, there will be foraging hotspots, associated with prey density and other factors. As kittiwake have been recorded foraging 324 km from breeding colonies the entirely arbitrary 100 km figure is unsupported. It is concluded by the Applicant that the assumption that all birds present in March, April and August are breeding birds makes a large difference to the assessment but has little support from the available evidence. While it is true that there is little evidence that *all* birds present are breeding, there is evidence that some are breeders, as implicit in the definition of these periods by Furness (2015) as periods of overlap (between breeding and migration). The Applicant’s alternative approach, of excluding all these birds as non-breeders, is equally unsupported by evidence as all birds being breeders. It is such situations, where there is a lack of evidence, that the precautionary principle must be applied, and in this circumstance the precautionary approach is the approach advocated by Natural England.

Density dependence

The RSPB agree with the Applicant that there is strong evidence for density dependence acting on the kittiwake population of the UK, and that the mechanisms remain unknown. We further agree with Furness *et al.* (2013) who recommended the use of density independent PVA outputs, saying “In such circumstances the most robust approach is to avoid the temptation to include density dependence, since it is often based on the premise that ‘it must be operating therefore it must be included’, even if the mechanism is unknown”. Since the publication of Furness *et al.* (2013), there has been no new evidence describing density dependence with sufficient accuracy to include in models. Indeed, almost all

⁴ Wischniewski, S., Fox, D.S., McCluskie, A. and Wright, L.J. 2018. Seabird tracking at the Flamborough & Filey Coast: assessing the impacts of offshore wind turbines. Pilot study 2017 Fieldwork report & recommendations. RSPB, Sandy.

the references cited by the Applicant in support of the use of density independent models predates the publication of Furness *et al.* (2013).

In addition to Furness *et al.* (2013), more recent guidance is available. The Joint Nature Conservation Committee commissioned a review which recommend the use of density independent PVA (Cook and Robinson 2016), and a Marine Science Scotland commissioned review also recommended the same approach (Jitlal *et al.*, 2017). In the JNCC review, Cook and Robinson (2016) also highlighted that using a density independent model is not necessarily the most precautionary approach.

As such, the RSPB support the position of Natural England with regard to the use of the density independent model and disagree with the Applicant that this is an overly precautionary approach. It is not the most precautionary approach, rather it is the most scientifically robust.

Conclusion

In presenting a review of precaution in assessment of offshore wind farms the Applicant, rather than reducing uncertainty has instead increased it. This is because the approaches taken, and information submitted have misrepresented the position of Natural England, advocated the use of a model version that is untested, un-peer-reviewed nor been subject to any scrutiny, relied on partial, incomplete or flawed evidence and set itself against guidance derived from the consensus of the Statutory Nature Conservation Bodies and the scientific community (as well as the European Commission). As such, it increases the need for precaution in the assessment and does not alter the view of the RSPB with regard to the potential for adverse effects on the integrity of protected sites and their species as a result of predicted mortality from this project in-combination with other plans and projects.