

**Appendix 12:  
Clarification Note  
Effects on Terns**

## Aberdeen Harbour Expansion Project

### Clarification Note: Effects on terns

#### 1. Introduction

The Royal Society for the Protection of Birds (RSPB) Scotland, in its combined response to the consultation on the three consent applications for the Aberdeen Harbour Expansion Project (AHEP), raised a concern that insufficient information has been provided in the Environmental Statement (ES) and Habitats Regulations Appraisal (HRA) to enable a conclusion of no adverse effect on integrity to relevant Special Protection Areas (SPAs) in the region, relating to the potential for effects on eider, terns and kittiwake.

Aberdeen Harbour Board (AHB) has produced a separate Clarification Note on the potential effects on eider (February 2016), which was shared with RSPB Scotland on 11 March 2016. Following further discussion at a meeting with Jenny Weston and Charles Nathan on 16 March, RSPB Scotland confirmed that they were largely satisfied with the information provided and the conclusion that there will be no adverse effect on site integrity for the east coast SPAs, subject to the provision of further information relating to the proposal to use mussel ropes as a mitigation measure, which AHB has subsequently provided.

#### 2. Tern foraging areas

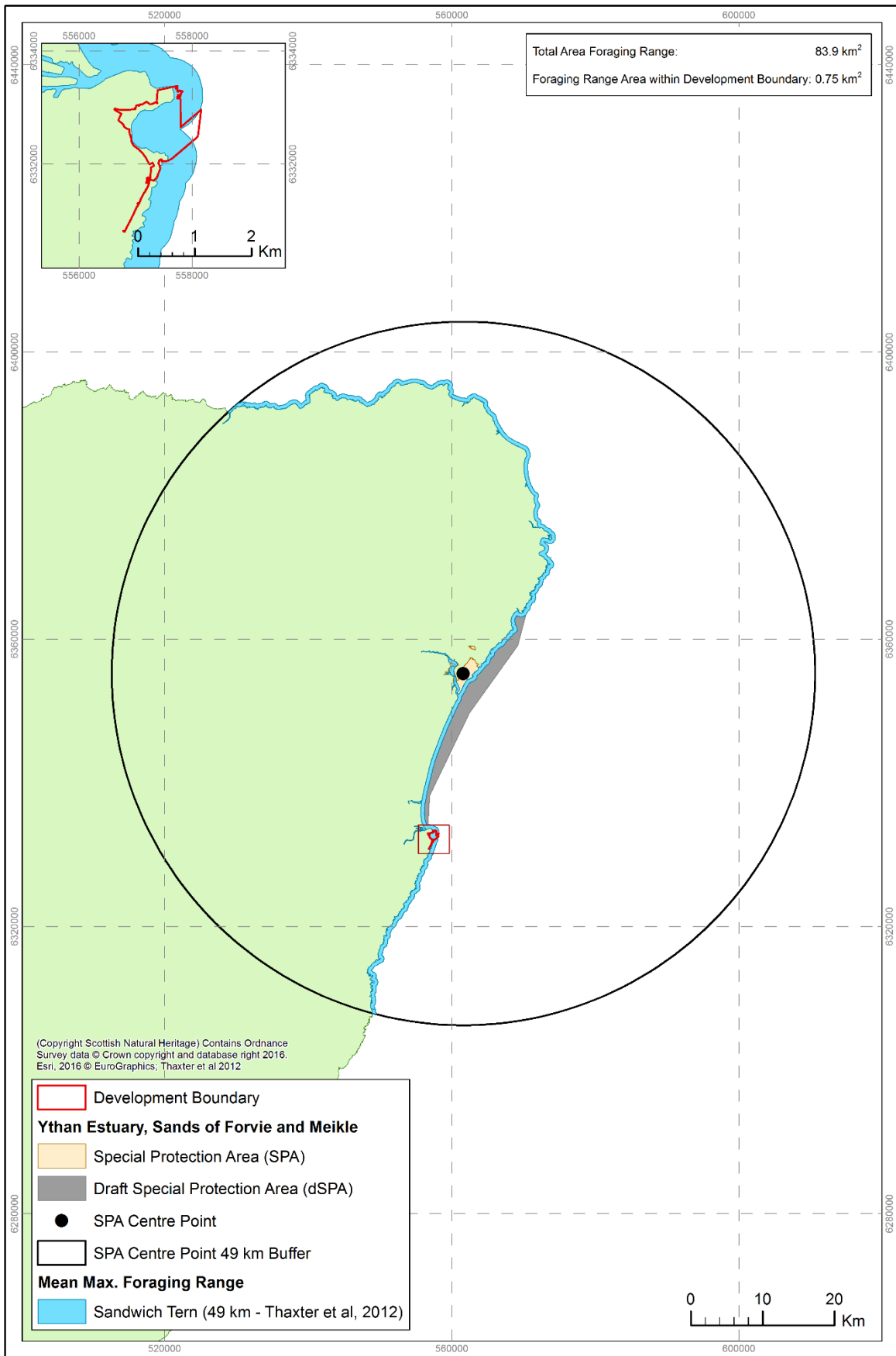
Discussions with local ornithologist and JNCC bird surveyor Mark Lewis have indicated that most terns forage within 0.5 km of the coast; they appear to prefer feeding in the choppiest waters provided by the breaking waves.

RSPB Scotland have indicated that Sandwich terns dive to 1.5 m in clear waters with generally a sandy bottom. Results from the Subtidal Benthic Ecological Characterisation Survey (ES Appendix 12-A) particle size analysis show that sand was the dominant fraction across the survey area (which encompassed Nigg Bay and surrounding areas) in 90% of the samples, with more than 70% of samples comprised of more than 97% sand. Gravel and mud content were low, with slightly muddier stations found close inshore within Nigg Bay and to the north of the existing Aberdeen Harbour. The homogeneity of the substrate indicates that Nigg Bay is a suitable, but not a preferential, feeding habitat for terns.

The foraging ranges for terns provided in Thaxter et al. (2012)<sup>1</sup> (which is referenced in the HRA) have been plotted on Figure 1, centred on the Ythan Estuary SPA and taking into account 49 km of coastline in either direction extending out to 0.5 km. The 49 km is the mean maximum foraging range for Sandwich tern, the only SPA featured species whose foraging range is likely to overlap with Nigg Bay. The area that will be lost within Nigg Bay amounts to 0.89% of the total foraging area for the Sandwich tern SPA population at the Ythan Estuary. None of the other SPA tern species have foraging ranges which overlap with Nigg Bay, so there is considered to be no connectivity with any of the SPAs for the other tern species.

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<sup>1</sup> THAXTER, C.B., LASCELLES, B., SUGAR, K., COOK, A.S.C.P., ROOS, S., BOLTON, M., LANGSTON, R.H.W. and BURTON, N.H.K., 2012. Seabird foraging ranges as a preliminary tool for identifying candidate Marine Protected Areas. *Biological Conservation*, **156**, pp. 53-61.



Map Document: (V:\J3132582\_Nigg\_Bay\_EIA\3\_Plots\4\_IncidentalPlots\PostApplication\PotentialForagingHabitatLoss\Q2582\_PotentialForagingHabitatLoss\_SXC\_20150317.mxd)  
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**Figure 1: Foraging range for Sandwich terns**

### 3. Presentation of data on terns and kittiwakes

RPSB Scotland has commented that presence of sandwich terns is only provided as presence/absence in the ES. The focus of the survey work undertaken by Mark Lewis to inform the ES and HRA was on marine duck, grebe and diver species as agreed with Scottish Natural Heritage (SNH). In this section, other survey sources are identified in which tern and kittiwake numbers and behaviour were recorded.

A survey of Nigg Bay and the adjacent headlands was undertaken for AHB in 2013, conducted over eight visits from May – October 2013<sup>2</sup>. Edited extracts from the Envirocentre Report for terns and kittiwakes are provided in Appendix 1.

As reported in Appendix 11-E of the ES (Wintering Bird Survey 2014- - 2015), no terns were recorded, and kittiwake counts were 14 in September and 79 in October – none were recorded during any other month.

As reported in Appendix 11-C of the ES (Breeding Birds Survey 2014), surveys were undertaken on the following dates in 2014: 30/04, 09/05, 20/05, 27/05, 06/06, 19/06, 30/06 and 09/07. Kittiwakes were recorded on 4 occasions 09/05, 20/05, 27/05 and 30/06. The survey report estimated that there were three pairs of kittiwakes nesting to the south of Nigg Bay (outside the bay).

Also in Appendix 11-C, Sandwich tern were recorded on two occasions (30/04 and 09/05), and common tern recorded on one occasion (09/05). There was no sign of nesting for either Sandwich or common terns locally although they are noted as using the rocky foreshore for roosting.

The data from the surveys presented above indicates the transient use of Nigg Bay by terns and kittiwakes. Most of the large flocks of kittiwake occur on the outer edge of Nigg Bay or further offshore. Both groups of birds make use of the rocky outcrops for roosting areas. Greyhope Bay (to the north of the Girdle Ness headland) is outside the AHEP boundary and will not be affected by the development. At the Greg Ness headland, large areas of the rocky outcrops will remain undeveloped, as described in the Clarification Note for effects on eider. In addition, the rocky habitat will be replicated by the two breakwaters - again as detailed in the Clarification Note on the potential effects on eider.

### 4. Conclusion

It is the conclusion of this clarification note that, based on the survey data and the analysis of substrate types presented, Nigg Bay is not an area of particular importance to terns. Calculation of the potential foraging area for Sandwich terns (the only SPA featured tern species whose foraging range is likely to overlap with Nigg Bay) indicates that the area within the footprint of the AHEP is a small percentage of the foraging area, so there is not considered to be any significant loss of foraging habitat. This supports the conclusions within the HRA that there will be no adverse effect on SPA integrity in relation to terns.

**March 2016**

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<sup>2</sup> ENVIROCENTRE LTD (2013). Nigg Bay Avian Surveys April – October 2013, Interim Report.

**Appendix 1:**  
**Extracts from 2013 Envirocentre Report**

10/05/13

<b>Location</b>	<b>Time</b>	<b>Numbers of Birds</b>	<b>Behaviour</b>
Greg Ness to Girdleness	10.00 – 10.45	None	N/A
Greg Ness to Girdleness	11.00	None	N/A
Foghorn	12.00 – 12.45	95 kittiwakes	Feeding just offshore
South Bay to Greg Ness	13.00 – 13.30	15 Sandwich terns	Feeding offshore
North Bay to Girdleness	13.30 – 14.00	20 Sandwich terns 72 kittiwakes	Feeding nearshore
South Bay to Greg Ness	14.15- 14.45	None	N/A
Foghorn	15.00 – 15.30	80 kittiwakes	Feeding nearshore

17/05/13

<b>Location</b>	<b>Time</b>	<b>Numbers of Birds</b>	<b>Behaviour</b>
Foghorn	09.00 – 10.00	None	N/A
Foghorn to Centre Bay	10.00 – 10.30	None	N/A
Centre Bay to South Bay	10.30 – 11.00	9 kittiwakes	Feeding 250m offshore Centre Bay
Foghorn	12.00 – 12.30	None	N/A
Foghorn to Centre Bay	12.30 – 13.00	None	N/A
Centre Bay to South Bay	13.00 – 13.30	None	N/A
Foghorn	14.30 – 15.00	11 kittiwakes	Feeding on sea within 100m of shore
Foghorn to Centre Bay	15.00 – 15.30	1 Sandwich tern	Roosting on rocks
Centre Bay to South Bay	15.30 – 16.00	None	N/A

27/05/13

Location	Time	Numbers of Birds	Behaviour
Foghorn	09.30 – 09.45	None	N/A
Foghorn to Centre Bay	09.45 – 10.20	None	N/A
Centre Bay to South Bay	10.20 – 11.00	None	N/A
Foghorn	12.00 – 12.15	None	N/A
Foghorn to Centre Bay	12.15 – 12.50	None	N/A
Centre Bay to South Bay	12.50 – 13.30	1 Sandwich tern	Feeding 50m offshore
Foghorn	14.30 – 14.45	None	N/A
Foghorn to Centre Bay	14.45 – 15.15	4 Sandwich tern 1 kittiwake	Fishing 50m out
Centre Bay to South Bay	15.15 – 16.00	None	N/A

11/06/13

Location	Time	Numbers of Birds	Behaviour
Foghorn	09.15 – 09.35	None	N/A
Foghorn to Centre Bay	09.35 – 10.30	None	N/A
Centre Bay to South Bay	10.30 – 11.25	None	N/A
Centre Bay to Foghorn	12.00 – 12.30	None	N/A
Foghorn	12.30 – 12.50	None	N/A
Foghorn to Centre Bay	12.50 – 13.30	None	N/A
Centre Bay to South Bay	13.30 – 14.30	250 kittiwakes	Feeding up to 500m off the south peninsula
Centre Bay to Foghorn	14.30 – 15.00	110 kittiwakes	Feeding >500m of shore
Foghorn	15.00 – 15.20	1 Sandwich tern 1 common tern	Fishing 50m out
Centre Bay to South Bay	15.30 – 16.00	26 kittiwakes	Feeding 250m offshore

19/06/13

<b>Location</b>	<b>Time</b>	<b>Numbers of Birds</b>	<b>Behaviour</b>
Foghorn	09.30 – 10.10	None	N/A
Centre Bay to Foghorn	10.15 – 10.50	20 kittiwakes	400m off Foghorn rocks - feeding
Centre Bay to South Bay	10.55– 11.40	None	N/A
Greg Ness	11.50 – 12.05	None	N/A
Centre Bay to Foghorn	12.45 – 13.15	None	N/A
North Bay to South Bay	13.30 – 14.00	None	N/A
Greg Ness	14.40 – 15.05	>50 kittiwakes	500m off peninsula
Centre Bay to Foghorn	15.20 – 16.30	None	N/A

26/08/13

<b>Location</b>	<b>Time</b>	<b>Numbers of Birds</b>	<b>Behaviour</b>
Foghorn	09.45 – 10.15	None	N/A
Centre Bay to Foghorn	10.15 – 11.00	None	N/A
Centre Bay to South Bay	11.00 – 11.45	None	N/A
Greg Ness	11.45 – 12.15	None	N/A
Centre Bay to Foghorn	13.00 – 13.30	1 kittiwake	Feeding offshore up to 400m offshore
Foghorn	13.30 – 14.00	None	N/A
Centre Bay to South Bay	14.15 – 14.30	2 Sandwich terns	Loafing / roosting on rocks



17/09/13

Location	Time	Numbers of Birds	Behaviour
Foghorn	09.00 – 09.45	5 kittiwakes >500 kittiwakes	Roosting on rocks Mass feeding on water 100 – 300m out
Centre Bay to Foghorn	09.45 – 10.40	40 kittiwakes >500 kittiwakes 6 common terns	On rocks south of Foghorn Mass feeding on water 200 – 400m out On rocks south of Foghorn
Centre Bay to South Bay	10.45 – 11.00	None	N/A
Greg Ness	11.15 – 12.00	>300 kittiwakes	Dip feeding 300m offshore Gregg Ness Point
Centre Bay to Foghorn	12.30 – 13.50	40 kittiwakes 350 kittiwakes 250 kittiwakes	On Rocks Dip feeding 50 -300m out Resting on water 200m out
Centre Bay to South Bay	13.50 – 14.30	2 Sandwich tern	On beach

18/10/13

Location	Time	Numbers of Birds	Behaviour
Foghorn	09.30 – 10.00	None	N/A
Centre Bay to Foghorn	10.00 – 11.00	None	N/A
Centre Bay to South Bay	11.00 – 11.30	None	N/A
Greg Ness	11.30 – 12.00	None	N/A
Centre Bay to Foghorn	12.30 – 13.30	None	N/A
Centre Bay to South Bay	13.30 – 14.15	None	N/A
Greg Ness	14.15 – 15.00	None	N/A