BURBO BANK EXTENSION
OFFSHORE WIND FARM

DONG Energy Burbo Extension (UK) Ltd.

Clarification Note: Herring gull foraging range

Version FINAL
15th November 2013

Burbo Bank Extension offshore wind farm

DONG Energy Burbo Extension (UK) Ltd.

Prepared by: NIRAS Consulting

Checked by: Allen Risby (Environmental Manager, DONG Energy)

Accepted by: Stuart Livesey (Consents Project Manager, DONG Energy)

Approved by: Ferdinando Giammichele (Project Development Manager, DONG Energy)

Revision history

Version	Date	Author	History
V1	12th November 2013	Ian Ellis (NIRAS Consulting)	First draft
FINAL	15th November 2013	Allen Risby (DONG Energy)	Finalisation and sign off

Burbo Bank Extension Offshore Wind Farm
c/o DONG Energy Burbo Extension (UK) Ltd.
33 Grosvenor Place
London
United Kingdom
SW1X 7HY

Telephone: +44 020 7811 5235
Website: www.burbobankextension.co.uk
Email: burbobankextension@dongenergy.co.uk

Name & registered office:
DONG Energy Burbo Extension (UK) Ltd.
Watson, Farley & Williams LLP
15 Appold Street
London
United Kingdom
EC2A 2HB
Company No. 07307131

Produced by DONG Energy Wind Power (UK) Ltd., November 2013.

Burbo Bank Extension Offshore Wind Farm

Clarification Note: Herring Gull Foraging Range

Version 1, November 2013

NIRAS Consulting Ltd
Sheraton House, Castle Park, Cambridge
CB3 0AX, UK

Reg. No.: 07470870
England & Wales
www.niras.com/uk

T: +44 (0)1223 370181
F: +44 (0)1223 370040

Document Details

NIRAS Project Number	N0084
Document Title	Herring Gull Foraging Range Clarification Note
Status	Final
Client	DONG Energy
Client Contact Name	Allen Risby

The following personnel are designated contacts for queries relating to this document:

Name	Job Title	Telephone	Email
Ian Ellis	Principal Ecologist	01223 370181	iel@niras.com
Tim Norman	Managing Director	01223 370181	tno@niras.com

Document Issue Log

	Approval		Issue	
Author/Originator	**Initials**	**Date**	**NIRAS (DocWeb) version no.**	**Date**
IEL	**HAZ**	**12/11/2013**	**1**	**12/11/2013**
FINAL				

Final Document Sign-Off

	Name	Signature	Date
Issued by (NIRAS)	Ian Ellis		12/11/2013
Accepted by (Client)	Allen Risby		15/11/2013

Third Party Disclaimer

Contents

1. Introduction

1.1.1. DONG Energy Burbo Extension (UK) Ltd. ("the Applicant") has made an Application to the Planning Inspectorate (PINS) for a Development Consent Order (DCO) for the Burbo Bank Extension Offshore Wind Farm ("the Project") located in Liverpool Bay.

1.1.2. This Paper provides further clarification on the Burbo Bank Extension ornithological impact assessment, specifically on the information presented concerning the collision risk assessment of herring gull.

1.1.3. Paper 8 (NIRAS Consulting, 2013) presented apportioning and PBR analysis of key species including herring gull. Subsequent advice from Natural England has led to a re-evaluation of the foraging range mechanism to inform assessments. Natural England advised that precise colony location rather than SPA boundary should be included in measuring the extent of the mean-maximum foraging range (using the values in Thaxter *et al.,* 2012).

1.1.4. This note updates the foraging range extent of the herring gull feature of Morecambe Bay SPA and discusses the implications for collision risk assessments of Burbo Bank Extension both alone and in-combination with other projects.

2. Foraging Range and Implications for Assessment

2.1.1. Figure 1 presents the foraging range of herring gull from the Morecambe Bay SPA colony at South Walney. Thaxter et al (2012) detail a mean-maximum foraging range for the species of 61.1 km, while the nearest boundary of Burbo Bank Extension lies 60.76 km from South Walney (i.e. the offshore wind farm site boundary is circa 0.34 km within foraging range).

2.1.2. Paper 8 details an apportioning technique that suggests that a proportion of 0.32 of collisions estimated to occur at the Project Site could be allocated to the Morecambe Bay SPA herring gull colony[1]. This technique uses BirdLife International's Seabird Foraging Range Database which provides cumulative frequency and proportion of birds found foraging at different distances from a colony for several species. This tool provides an efficient and rigorous approach to apportioning collision risk to source colonies. The results for herring gull indicated that 7 and 4 collisions respectively at Options 2 and 3 of the Band (2012) collision risk model can be apportioned to Morecambe Bay SPA.

2.1.3. The apportioning tool does not however provide any guidance to the initial screening of effects; the accepted use of the Thaxter et al. (2012) values for this process strongly suggests the connectivity between the Project site and herring gulls originating from Morecambe Bay SPA in the breeding season is negligible. As Figure 1 indicates, Burbo Bank Extension is only marginally within foraging range of the SPA herring gull colony at South Walney. Any connectivity, no matter how limited, would involve in all likelihood, potential interaction with a very small number of turbines, if any at all.

[1] This proportion applies when a 33% reduction in the populations of other colonies within foraging range is applied. This is in order to correct historic colony counts for recent population declines, as suggested by Natural England. Without this correction a proportion of 0.27 applies.

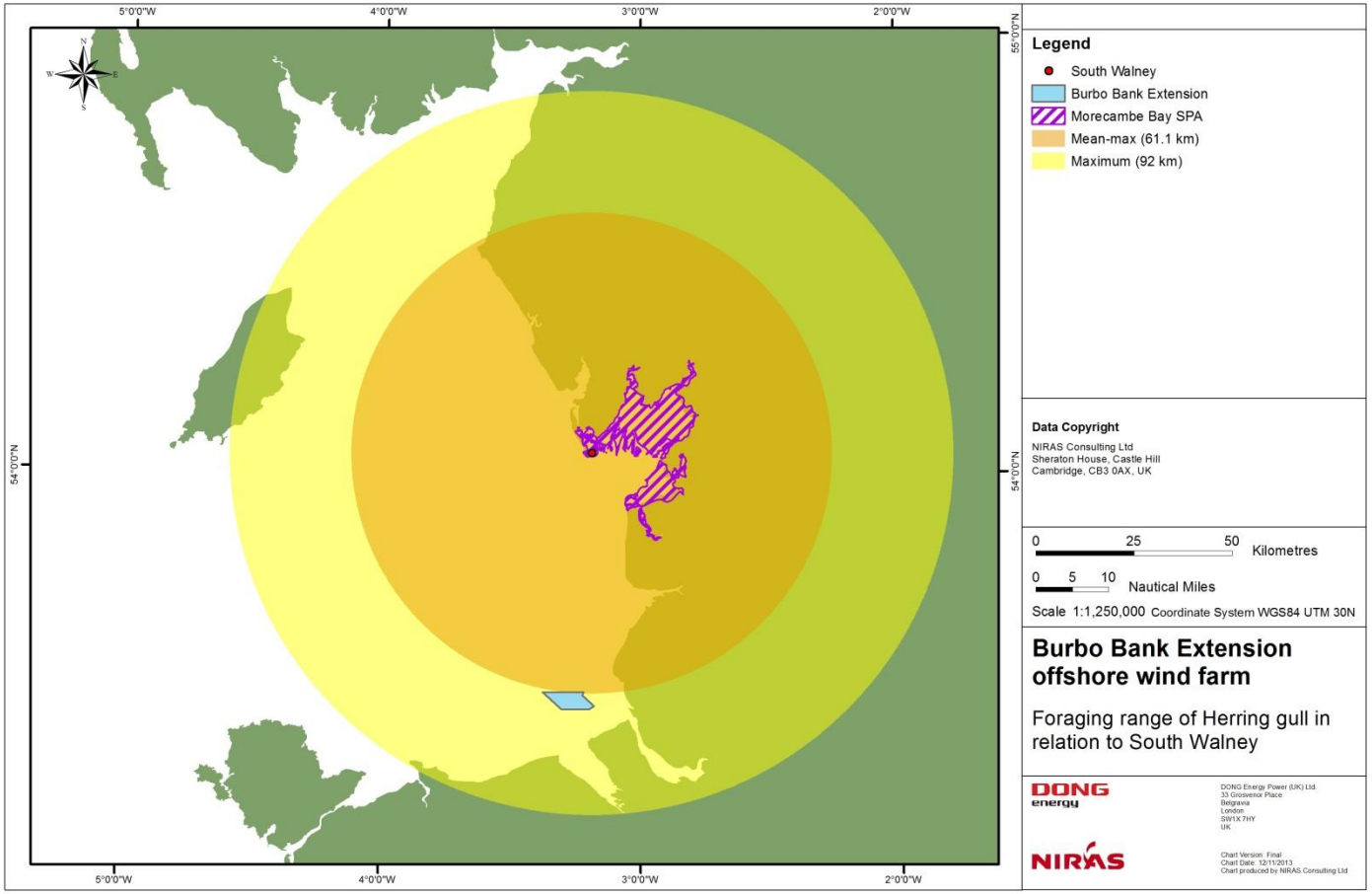

Figure 1. Foraging range of herring gull from the South Walney colony of Morecambe Bay SPA in relation to the location of Burbo Bank Extension.

2.1.4. The contribution of herring gull collisions from the Project site alone (maximum of 7 individuals per breeding season notwithstanding the foraging range issues highlighted above) does not represent an adverse effect on the integrity of the SPA. The SPA supported 4,188 individuals in 2011[2], 7 collisions represent 0.17% of this population.

2.1.5. Limited information is available from constructed or 'in planning' offshore wind farm projects within the Irish Sea with respect to herring gull collision estimates (Paper 9, NIRAS Consulting, 2013b). However, considering the low level of collisions predicted for the Project site (maximum of 7) and the negligible level of connectivity with the area encompassing the Project site, it is highly likely that any contribution from the Project to an in-combination effect on the SPA, would also be negligible. Collision estimated for the Project site are more likely to be accurately attributed to the number of regional breeding colonies that occur in close proximity (Mitchell *et al.*, 2004).

3. Conclusion

3.1.1. Collision risk for herring gull at the Project site is predicted to be low, while subsequent apportioning analysis to Morecambe Bay SPA also suggests that the risk to the SPA is negligible. The Project site lies at the far edge of the mean-maximum foraging range from the SPA colony such that connectivity in the breeding season is predicted to be negligible.

3.1.2. The contribution of Burbo Bank Extension to any collision effects in-combination with other projects is considered to also be negligible. It is considered that in implementing foraging range guidance from Thaxter et al., (2012) it is most likely that collisions predicted for the Project apply to birds from regional colonies in closer proximity than the distant SPA.

3.1.3. This evidence suggests that the Burbo Bank Extension offshore wind farm should not be considered a contributory component to any in-combination effects on the herring gull feature of Morecambe Bay SPA.

4. References

Band, B., 2012. *Using a collision risk model to assess bird collision risks for offshore wind farms – with extended method.* Report to Strategic Ornithological Support Services, March 2012.

Mitchell, P I, Newton, S, Ratcliffe, N. and Dunn, T E., 2004. *Seabird populations of Britain and Ireland*. T & A.D. Poyser, London, UK.

NIRAS Consulting, 2013a. *Burbo Bank Extension Offshore Wind Farm. Paper 8: PBR analysis of common tern, lesser black-backed gull, and herring gull colonies.* Cambridge: NIRAS Consulting Ltd.

NIRAS Consulting, 2013b. *Burbo Bank Extension Offshore Wind Farm. Paper 9: Review of Cumulative Impact Assessment Source Data.* Cambridge: NIRAS Consulting Ltd.

Thaxter, C. B., Lascelles, B., Sugar, K., Cook, A. S. C. P., Roos, S., Bolton, M., Langston, H. W. and Burton N. H. K., 2012. Seabird Foraging Ranges as a Tool for Identifying Candidate Marine Protected Areas. *Biological Conservation*. 156, pp. 53-61.

[2] Ornithology Paper 8 (NIRAS Consulting, 2013a), section 5.2