Hornsea Offshore Wind Farm

Project Two

Clarification Note – Unidentified Birds

Appendix S to the Response submitted for Deadline IIA
Application Reference: EN010053

25 August 2015

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Document title	Unidentified birds
Document Reference	
Status	DRAFT
Version	V1.0
Date	August 2015
Project name	Hornsea Offshore Wind Farm, Project Two
Client	SMart Wind Ltd on behalf of Optimus Wind Limited and Breesea Limited (together the 'Applicant')

Authorisation	
Signed	
For	SMart Wind Ltd on behalf of Optimus Wind Limited and Breesea Limited (together the 'Applicant')
Date/Print Name	
Position	

1 Unidentified birds

1.1 Introduction

This document responds to a request from Natural England to provide a more detailed methodology as to how the attribution of unidentified birds recorded during boat-based surveys to species level was carried out.

1.2 Methodology

The following text was included in the Technical Report which supported the Environmental Statement for Hornsea Project Two in regard to the methodology used to attribute unidentified birds to species level:

"Approximately 1.3% of observations within formal survey methods were not identified to species level, of which 88% are attributable to auks. Following Maclean et al. (2009) observations that were not identified to species but met the criteria for Distance analysis (see section C.21) and were identified to a species grouping were randomly allocated to member of the group in proportion to the numbers observed. Unknowns on Subzone 2 and Hornsea Zone transects sets were treated separately. Where a member of a species group was only present during a particular season (for instance little auk is not present during the summer months) unidentified birds were treated seasonally."

A more detailed explanation as to how this process was carried out is outlined below:

- Step 1: Each observation of an unidentified bird is allocated a random floating point number between 0 and 1.
- Step 2: From observations that are valid for Distance analysis (i.e. those observations in transect and on the water on Subzone 2 and 4 km buffer transects) the proportions of the components of a species group are calculated:

Species	No. of observations	Proportion
Guillemot	17,160	0.823
Razorbill	3,681	0.177

- Step 3: If an observation has a random number below 0.823 it is allocated as guillemot, if the random number is above 0.823 it is allocated as razorbill.

This process was conducted before Distance analysis and as such Natural England's second interpretation of the process, as included in their relevant representations is correct:

"…apportioning was done using the raw counts to derive separate figures for each auk species and then distance estimates calculated using the combined "identified" and apportioned "unidentified" species counts."

1.3 Further clarifications

The figures presented in paragraphs 21 and 22 of Natural England's relevant representation are not representative of the number of birds incorporated into the assessment. These figures include all birds recorded during boat-based surveys and do not represent the figures that would subsequently have been used for Distance analysis and other analyses that informed the assessments within the Environmental Statement (i.e. those within transect, on the water and in the relevant survey area). The disparity between the figures presented by Natural England and the figures used for Distance analysis is addressed in the "*Raw data tables*" clarification note. In reality, the number of unidentified birds that is incorporated into the calculation of population estimates is much lower.