Morlais Project

Marine Ornithology
Revised Collision Risk Modelling
Signposting document

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1. CHANGES TO THE COLLISION RISK MODELLING OUTPUTS FOR DIVING BIRDS

1.1. INTRODUCTION

1. During the course of the work undertaken as preparation for the Public Inquiry on the proposed Development, the Applicant has found an error in some of the workings for the collision risk estimates for diving birds. There are two models that are used to inform collision risk for diving birds i.e. the collision risk model (CRM) and the encounter rate model (ERM). The error affected the outputs from the CRM only.

2. The error affected only some of the CRM outputs and these effects were small. Following correction of this error, none of the conclusions made in the Environmental Statement (ES) ornithology chapter, Habitats Regulations Assessment (HRA) or Further Environmental Information (FEI) have changed.

1.2. DETAILS OF THE CHANGES MADE

3. The required changes have been made to all of the relevant documentation relating to the ornithology assessment. All of the changes made are detailed below.

4. The changes identified are the only changes that have been made to these documents.

1.2.1. Marine Ornithology Collision Risk Modelling Note (MOR/RHDHV/DOC/0115) – submitted as FEI

- **Table 2.2:** Updates made to the devices identified as being the worst-case for different bird species for the designs predicted to give 0.7 bottle nosed dolphin collisions per year.

- **Table 2.4:** Updates made to Manx shearwater collision estimates, as per changes made to ES chapter (see below)

- **Table 3.1:** Updates made to collision estimates for the different bird species for the worst-case scenarios for designs predicted to give 0.7 bottle nosed dolphin collisions per year. Guillemot are the only species with higher collisions than previously, but all differences are small.

- **Tables 3.2 and 3.3:** Updates made to the summary PVA outputs for the breeding guillemot population at the South Stack and Penlas colonies. Differences with the previously presented outputs are all small.

- **Tables 3.4 and 3.5:** Updates made to the summary PVA outputs for the breeding razorbill population at the South Stack and Penlas colonies. These indicate slightly smaller predicted effects than the previously presented outputs.

1.2.2. ES Chapter 11: Offshore Ornithology (MOR/RHDHV/DOC/0016)

- **Table 11-19:** Figures for predicted collisions for the different diving bird species in relation to the 240MW scenario have been updated. Where collision estimates have changed, they have invariably decreased but by small amounts in all cases, with no effects on assessment conclusions.

- **Table 11-20**: Figures for estimated collisions as a percentage of the reference populations for the 240MW scenario have been updated. Where the percentages have changed they have invariably decreased but by small amounts only.

- **Table 11-23**: Figures for predicted collisions for the different diving bird species in relation to the 40MW scenario have been updated (together with identity of worst-case device). Collision numbers remain (effectively) unchanged for all species other than guillemot for which there is an increase in the predicted collisions.

- **Table 11-24:** Figures for estimated collisions as a percentage of the reference populations for the 40MW scenario have been updated for guillemot (no changes required for the other species).

- **Paragraph 167:** The figure for the upper limit of non-breeding season collisions (at 95% avoidance) of guillemot has been updated (from 53to 62).

- **Table 11-25:** Summary figures for the PVA for breeding guillemot at the South Stack and Penlas colonies in relation to the 40MW scenario have been updated.

1.2.3. ES Chapter 11: Offshore Ornithology – Appendix 11.3: Encounter Rate Modelling, Collision Risk Modelling and Population Viability Analysis Technical Report (MOR/RHDHV/APP/0019)

- **Paragraph 44:** Changes made to the figures for the CRM to ERM ratios for foot-propelled and wing-propelled diving birds.

- **Table 2-11:** Figures on CRM/ERM ratios for the different bird species and devices have been updated.

- **Tables presenting the CRM, ERM and averaged ERM/CRM outputs for the 40MW deployment scenario:**

  - A total of 27 tables present details of the above outputs (i.e. Tables 3-1 to 3-27), with 18 of these tables presenting the CRM or averaged ERM/CRM outputs. Changes have been made to all 18 of these tables (i.e. 3-2, 3-3, 3-5, 3-6, 3-8, 3-9, 3-11, 3-12, 3-14, 3-15, 3-17, 3-18, 3-20, 3-21, 3-23, 3-24, 3-26, and 3-27). As indicated by the details given above of the changes that were required to the ES chapter itself, the changes made to the outputs in these 18 tables are generally small and have no effect on resultant conclusions. Also, for 11 of these 18 tables, the worst-case device remains as previously and there is no change to the outputs for the worst-case (so the key outputs are unchanged in these 11 tables). These 11 tables are Tables 3-2 and 3-3 (breeding gannet), 3-11 (breeding Manx shearwater), 3-14 and 3-15 (breeding puffin), 3-17 and 3-18 (breeding razorbill), 3-20 and 3-21 (non-breeding razorbill) and 3-23 and 3-24 (non-breeding red-throated diver).

  - When considering the outputs presented in Tables 3-1 to 3-27 (and the changes made to these outputs), it is important to remember that the assessment does not consider devices 2F and 9F because these are not being considered for the initial deployment (as stated in paragraph 165 of the ES chapter).

- **Tables presenting the CRM, ERM and averaged ERM/CRM outputs for the 240MW deployment scenario:**

  - A total of 27 tables present details of the above outputs (i.e. Tables 3-28 to 3-54), with 18 of these tables presenting the CRM or averaged ERM/CRM outputs. Changes have been made to all 18 of these tables but in all cases these changes represent very small reductions in the predicted collision estimates and these changes have no effects on the assessment conclusions (as indicated from the details given above of the changes that were required to the ES chapter itself).

- **Tables presenting the PVA outputs:**
  - **Table 4-2:** The figures for the collision estimates used as inputs to the PVA for breeding guillemot (in relation to the 40MW deployment scenario) have been updated in this table.
  - **Table 4-5:** The figures summarising the outputs of the PVA for breeding guillemot (in relation to the 40MW deployment scenario) have been updated in this table.

1.2.4. The HRA Report

5.   No changes have been made to the HRA report.