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To: [Hornsea Project Three](#); [Kay Sully](#); [KJ Johansson](#)
Cc: [Andrew Guyton](#); [Stuart Livesey](#)
Subject: Hornsea Project Three (UK) Ltd response to Deadline 3 (Part 7)
Date: 14 December 2018 21:03:00
Attachments: [image001.png](#)
[D3_HOW03_Appendix 14_Markhams_Triangle.pdf](#)
[D3_HOW03_Appendix 15_The Wash.pdf](#)
[D3_HOW03_Appendix 16_NF_Ornithology_Roadmap.pdf](#)
[D3_HOW03_Appendix 17_Age class data.pdf](#)
[D3_HOW03_Appendix 18_Kuhn et al._CIGRE_2016.pdf](#)
[D3_HOW03_Appendix 19_Order Lim_amend.pdf](#)

Dear Kay, K-J

Please find attached the seventh instalment of documents.

Best regards,
Dr Dominika Chalder PIEMA
Environment and Consent Manager

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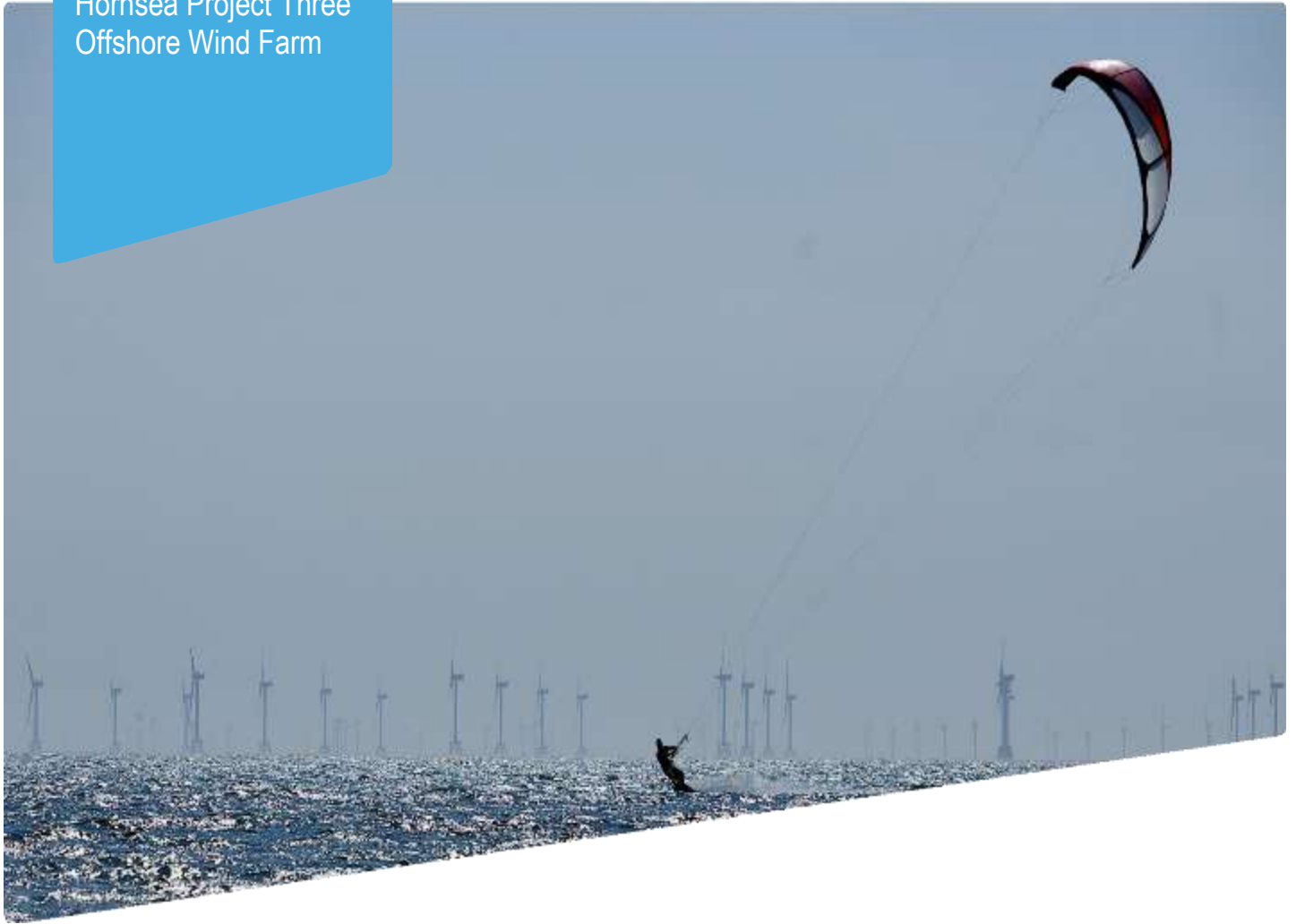
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Appendix 16 to Deadline 3 Submission – Ornithology roadmap with Natural England for the examination phase

Date: 14th December 2018

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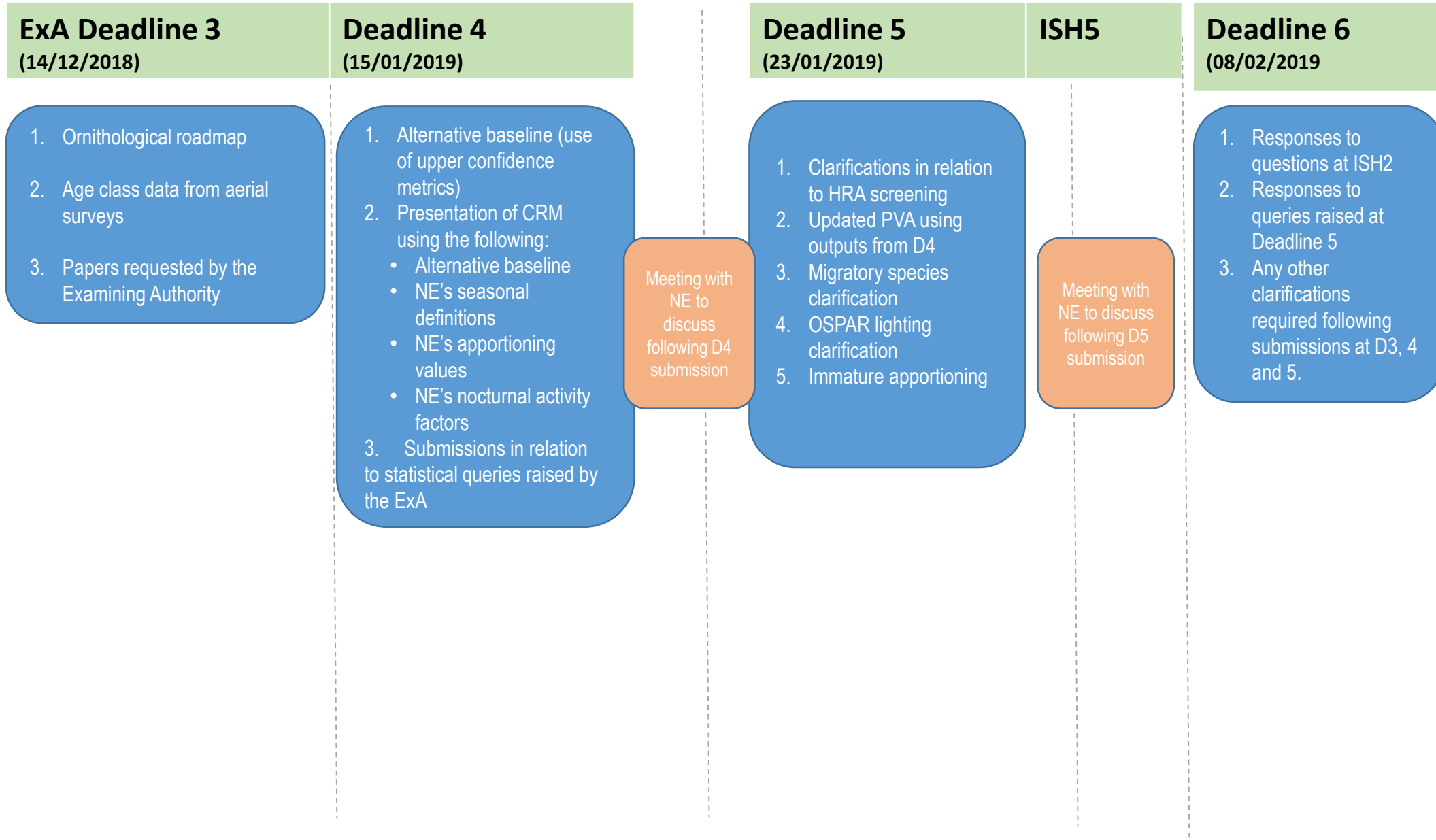
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High level Ornithology Roadmap



Deadline 3

1. Ornithological roadmap
 - To include a request for confirmation of the parameters recommended by Natural England.
2. Age class data from aerial surveys as requested at ISH2.
3. Submission of papers requested by the Examining Authority.
 - Band (2012) - Using a collision risk model to assess bird collision risks for offshore windfarms.
 - McGregor *et al.* (2017) - A Stochastic Collision Risk Model for Seabirds in Flight.
 - Parsons *et al.* (2015) - Quantifying foraging areas of little tern around its breeding colony SPA during chick-rearing.
 - Wilson *et al.* (2014) - Quantifying usage of the marine environment by terns *Sterna* sp. around their breeding colony SPAs.

Deadline 4

1. Alternative baseline - use of upper confidence limits (densities or population estimates) for December to March in both collision risk modelling and displacement analysis.
2. Calculation and presentation of collision risk estimates applying those parameters recommended by Natural England:
 - Nocturnal activity factors – as described in paragraph 3.13 of WR.
 - Density data – use of upper confidence limits for December to March.
 - Seasonal definitions – as described in Table 7.1 of WR.
 - Apportioning values – a range of apportioning values as indicated in paragraph 7.19 of WR (e.g. multiples of 10).
3. Calculation of displacement mortality applying those parameters recommended by Natural England:
 - Population estimates – use of upper confidence limits for December to March.
 - Displacement/mortality rates – full matrix will be presented (10-100 for displacement and 1, 2, 5, 10-100 for mortality) with SNCB guidance on appropriate displacement and mortality rates followed.
 - Seasonal definitions - as described in Table 7.1 of WR.
 - Apportioning values - a range of apportioning values as indicated in paragraph 7.19 of WR (e.g. multiples of 10).
4. Submission of clarifications in relation to those statistical questions raised by the ExA at ISH1.

Meeting with NE following D4

1. Discussion in relation to the information submitted at Deadline 4 and to understand if the information provided is in line with the information requested by NE:
 - Presentation of collision risk estimates utilising Natural England's recommended parameters.
 - Presentation of displacement results utilising Natural England's recommended parameters.
2. Seek to understand whether there's any additional information that can be submitted that may help to reach agreement on any specific topics (without prejudice to NE's position regarding 24 months baseline data).

Deadline 5

1. Clarification in relation to HRA screening as requested by the ExA.
2. Submission of PVA clarifications as requested by Natural England.
3. Identification of those migratory species considered at other projects in the same migratory front.
4. Clarification into the use of OSPAR guidance in relation to the effects of lighting.
5. Application of the SNH apportioning approach for immature auks.