



REPORT on the IMPLICATIONS for EUROPEAN SITES Proposed Dogger Bank Teesside A & B Offshore Wind Farm



December 2014

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Report on the Implications for
European Sites for Dogger Bank
Teesside A & B Offshore Wind Farm

1.0 INTRODUCTION

Background

- 1.1 Forewind Limited (the Applicant) has applied to the Secretary of State for a development consent order (DCO) under section 37 of the Planning Act 2008 (as amended) (PA 2008) for the proposed Dogger Bank Teesside A & B offshore wind farm (the application). The Secretary of State has appointed an Examining Authority (ExA) to conduct an examination of the application, to report its findings and conclusions, and to make a recommendation to the Secretary of State as to the decision to be made on the application.
- 1.2 The relevant Secretary of State is the competent authority for the purposes of the Habitats Directive¹ and the Habitats Regulations² and the Offshore Marine Regulations³ for applications submitted under the PA 2008 regime. The findings and conclusions on nature conservation issues reported by the ExA will assist the Secretary of State in performing their duties under the Habitats Regulations and the Offshore Marine Regulations.
- 1.3 This Report on the Implications for European Sites (RIES) compiles, documents and signposts information provided within the DCO application, and the information submitted throughout the examination by both the Applicant and other Interested Parties⁴ up to and including Deadline VII⁵ (11 December 2014) of the examination, in relation to potential effects of the application on European Sites⁶. The RIES makes reference to examination documents in the Planning Inspectorate's document library. Each document is identified by a unique reference number in the document library. This RIES should be read in conjunction with these documents.
- 1.4 This RIES is issued to ensure that the Interested Parties including the statutory nature conservation bodies: Natural England (NE), Joint Nature Conservation Committee (JNCC)⁷, the Marine

¹ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (as codified) (the Habitats Directive)

² The Conservation of Habitats and Species Regulations 2010 (as amended) (the Habitats Regulations)

³ The Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007 (as amended) (the Offshore Marine Regulations) apply beyond UK territorial waters (12 nautical miles). These regulations are relevant when an application is submitted for an energy project in a renewable energy zone (except any part in relation to which the Scottish Ministers have functions)

⁴ Interested Parties are defined under s.102 of the PA 2008

⁵ This includes a response provided by Natural England (**REP-453**) received on 16 December 2014, which the ExA decided to accept as a document provided for Deadline VII

⁶ The term European Sites in this context includes Special Areas of Conservation (SACs) and candidate SACs, Special Protection Areas (SPAs), potential SPAs, Sites of Community Importance (SCI), Ramsar sites, and any sites identified as compensatory measures for adverse effects on any of the above. For a full description of the designations to which the Habitats Regulations apply, and/ or are applied as a matter of Government policy, see The Planning Inspectorate's Advice Note 10 (<http://infrastructure.planningportal.gov.uk/wp-content/uploads/2013/09/Advice-note-10-HRA.pdf>) and the Habitats Regulations Assessment Handbook (DTA Publications, July 2014)

⁷ NE confirmed that pursuant to an authorisation made on the 9th December 2013 by the JNCC under paragraph 17(c) of Schedule 4 to the Natural Environment and Rural Communities Act 2006, NE is authorised to exercise the JNCC's functions as a statutory consultee in respect of applications for

Management Organisation (MMO)⁸, Natural Resources Wales (NRW)⁹ and Scottish Natural Heritage (SNH)¹⁰ are consulted formally on Habitats Regulations Assessment matters. This process may be relied on by the Secretary of State for the purposes of Regulation 61(3) of the Habitats Regulations and Regulation 25 of the Offshore Marine Regulations and so the RIES is not revised following consultation. The consultation responses received on this RIES will be considered by the ExA in making their recommendation to the Secretary of State and made available to the Secretary of State along with this RIES.

Documents Used to Inform this RIES

Application

1.5 The following documents were provided by the Applicant at the point of submission of the DCO application, to which reference has been made in this RIES:

- Habitats Regulations Assessment (HRA) Report comprising:
 - Information for Appropriate Assessment (**APP-047**)
 - HRA Report Appendix A - Screening Report (**APP-048**)
 - HRA Report Appendix B - Information for Appropriate Assessment Report (**APP-049**)
 - HRA Report Appendix C - Screening Report and Draft HRA Report consultation responses (**APP-050**)
 - HRA Report Appendix D - Consultation responses (**APP-051**)
 - HRA Report Appendix E - Potential Biological Removals (**APP-052**)
 - HRA Report Appendix F - Summary of Appropriate Assessment SPAs and Ramsar sites (**APP-053**)
 - HRA Report Appendix G - Summary of screening in-combination assessment (**APP-054**)
 - HRA Report Appendix H - Screening Matrices (**APP-055**)

offshore renewable energy installations in offshore waters (0-200nm) adjacent to England. This Application was included in that authorisation and therefore NE provided statutory advice in respect of that delegated authority. However, JNCC retains responsibility as the statutory advisors for European Protected sites that are located outside the territorial sea and UK internal waters (i.e. more than 12 nautical miles offshore), in this instance the Dogger Bank SCI, and as such continues to provide advice to NE on the significance of any potential impacts on interest features of that site (paragraph 2.2.1, **REP-132**)

⁸ In paragraph 1.3.3 of the Applicant's written summary of the issue specific hearing on 14 October 2014, in relation to HRA matters (**REP-267**), the MMO are stated as confirming that they "*would defer to Natural England in relation to impacts on designated sites*". This is also reflected in the audio recording of the ISH (**HR-005**)

⁹ NRW have stated that they "*have not raised any concerns in relation to potential impacts to the Welsh environment (terrestrial or marine)...NRW therefore has no comments to make on the application and project proposals*" (**REP-126**)

¹⁰ SNH identified areas of disagreement with the Applicant's assessment of potential effects on European Sites in Scotland (**REP-196**, **REP-239**, **REP-401**)

- HRA Report Habitats Regulations Assessment Appendix I - Integrity Matrices (**APP-056**)
- Environmental Statement (ES), in particular the following Chapters (and their supporting appendices):
 - Chapter 5 Project Description (**APP-071**)
 - Chapter 8 Designated Sites (**APP-084**)
 - Chapter 9 Marine Physical Processes (**APP-087**)
 - Chapter 10 Marine Water and Sediment Quality (**APP-092**)
 - Chapter 11 Marine and Coastal Ornithology (**APP-093**)
 - Chapter 12 Marine and Intertidal Ecology - Marine and Intertidal Ecology (**APP-097**)
 - Chapter 13 Fish and Shellfish Ecology (**APP-106**)
 - Chapter 14 Marine Mammals (**APP-114**)
 - Chapter 35 Summary of Monitoring and Mitigation (**APP-161**)
- Draft Development Consent Order (updated to version 6 at Deadline VII, **REP-426** – **REP-428**)

Examination

- 1.6 The following documents were introduced during the course of the examination to which reference has been made in this RIES:

Procedural Decisions

- Letter to France – Invitation to Preliminary Meeting (**PD-006**, **PD-012** and **PD-013**)
- Letter to Belgium – Invitation to Preliminary Meeting (**PD-007** to **PD-010**)
- Letter to Sweden – Invitation to Preliminary Meeting (**PD-011**)
- Letter to the Netherlands – Invitation to Preliminary Meeting (**PD-014**)
- Letter to Norway – Invitation to Preliminary Meeting (**PD-015**)
- Letter to Denmark – Invitation to Preliminary Meeting (**PD-016**)
- Letter to Natural Resources Wales - Invitation to Preliminary Meeting (**PD-018**)
- Letter to Scottish Executive - Invitation to Preliminary Meeting (**PD-019**)
- Letter to Welsh Government - Invitation to Preliminary Meeting (**PD-020**)

Representations

- Relevant Representations of:
 - Whale and Dolphin Conservation (**REP-009**)
 - The Marine Management Organisation (**REP-015**)
 - The Wildlife Trusts (**REP-037**)
 - Natural England (**REP-041**)
- Written Representations of (Deadline III):
 - Whale and Dolphin Conservation (**REP-130**)
 - The Wildlife Trusts (**REP-131**)
 - Natural England (**REP-132**)
 - Applicant's Written Representation (**REP-134**)
 - Royal Society for the Protection of Birds (**REP-156**)

Statements of Common Ground (SoCG) between the Applicant and IP's (Deadline II)

- Natural England (offshore) (**REP-079**), and supporting appendices (**REP-080 – REP-082**)
- Royal Society for the Protection of Birds (**REP-085**)
- Whale and Dolphin Conservation (**REP-091**)
- The Wildlife Trusts (**REP-123**)
- North York Moors National Park Authority (**REP-250**)

Hearing Documents

- Issue Specific Hearing (ISH) relating to Biodiversity, HRA and geological effects on 14 October 2014 (**HR-005 – HR-008**)
- Documents post ISH on 14 October 2014 (Deadline V)
 - Applicant's correspondence with Scottish Natural Heritage and Marine Scotland (**REP-239**)
 - Applicant's submission with regard to Defra guidance relevant to the status of fishing as a plan, programme or policy (**REP-240**)
 - Applicant's Draft offshore In Principle Monitoring Plan (**REP-245**) and Outline offshore maintenance plan
 - ExA's Action points from first ISH on HRA and Natural Environment (**HR-014**)
 - Natural England (**REP-286**)
 - The Marine Management Organisation (**REP-287**)
 - Applicant (**REP-267**)

- Applicant – Annex 2 of Deadline V response (**REP-240**)
- ISH relating to Biodiversity, HRA and geological effects on 11 November 2014 (**HR-022 – HR-025**)
- Documents post ISH on 11 November 2014 (Deadline VI)
 - Applicant (**REP-371**)
 - Natural England (**REP-310**)
 - The Marine Management Organisation (**REP-311**)
 - The Marine Management Organisation - DML (**REP-312**)
- ISH relating to Biodiversity, HRA and geological effects on 2 December 2014 (**HR-035 – HR-038**)
- Documents post ISH on 2 December 2014 (Deadline VII)
 - Applicant’s response to Natural England’s comments on revised Biologically Defined Minimum Populations Scales work (**REP-404**)
 - Applicant’s Final Dogger Bank SCI Position Statement (**REP-405**)
 - Applicant’s summary of key points from the *Sweetman* Judgment (**REP-406**)
 - Applicant’s Written Statement on Alternatives, IROPI and Compensatory Measures (**REP-407**)
 - Applicant’s Updated HRA Integrity Matrices (**REP-408**)
 - Applicant’s Written Summary of Issue Specific Hearing on 2 December 2014 (**REP-423**)
 - Applicant’s Response to the Royal Society for the Protection of Birds’ Deadline VI Comments (**REP-426**)
 - Applicant’s Outline Offshore Maintenance Plan (**REP-431**) and Offshore In Principle Monitoring Plan (**REP-432**)
 - Applicant’s Fisheries Liaison Plan (**REP-436**)
 - Applicant’s Comments on Natural England Deadline VI Response (offshore) (**REP-441**)
 - Natural England (**REP-448**)
 - Natural England’s Final Site Integrity Position Statement for the Dogger Bank SCI (**REP-449**)
 - Natural England’s full advice on the Applicant’s apportioning updates and Final HRA Ornithology In-combination Tables submitted at Deadline VI (**REP-450**)
 - Natural England’s Response to: Deadline VII Appendix 1 Action 1.4 – Response to Natural England’s Comments on BDMPS Updates (**REP-453**)
 - The Marine Management Organisation (**REP-450**)

- The Wildlife Trusts (**REP-400**)
- Royal Society for the Protection of Birds (**REP-446**)

Other Documents

- Response to ExA 1st Written Questions (ExQ1) (PD-023) (Deadline III)
 - The Marine Management Organisation (**REP-159**)
 - The Wildlife Trusts (**REP-163**)
 - Royal Society for the Protection of Birds (**REP-166**)
 - Applicant's Response to First Written Questions (**REP-169**) and supporting appendices (**REP-170 – REP-192**)
 - Whale and Dolphin Conservation (**REP-193 & REP-195**)
 - Natural England (Written Representations) (**REP-132**)
 - Scottish Natural Heritage (**REP-196**)
- Comments on responses to ExA 1st Questions and WR's
 - The Marine Management Organisation (**REP-198**)
 - Applicant's comments on The Wildlife Trusts (**REP-202**), Whale and Dolphin Conservation (**REP-203**), Natural England (Offshore) (**REP-206**), SoCG with RSPB (**REP-208**)
 - Applicant's Dogger Bank SCI Integrity Position Statement (**REP-218**)
 - Applicant's Update to HRA Ornithology in-combination assessment tables (**REP-228**)
 - Natural England (**REP-232**)
- Responses to ExA 2nd Written Questions (ExQ2) (**PD – 036**) (Deadline VI)
 - Applicant (**REP-332**)
 - Applicant's comments on The Wildlife Trusts' Deadline V response (**REP-349**)
 - Applicant's comments on Natural England's Deadline V response (offshore) (**REP-348**)
 - Royal Society for the Protection of Birds (**REP-304**)
 - Natural England (**REP-381**)
 - The Marine Management Organisation (**REP-311**)
 - Whale and Dolphin Conservation (**REP-302**)
 - The Wildlife Trusts (**REP-303**)
- Response to ExA's Rule 17 request (**PD-040**)
 - Scottish Natural Heritage and Marine Scotland's response (**REP-401**)

- 1.7 The Applicant provided revised HRA integrity matrices at Deadline VI (**REP-357 & REP-360**). In response to a request by the ExA, the Applicant provided further revised HRA integrity matrices at Deadline VII (**REP-408**) but only in relation to those sites where areas of contention arose during the written and oral submissions to the examination (discussed further in Section 4 of this RIES).
- 1.8 The documents listed above have been used to inform the matrices that have been produced by the ExA¹¹, for those European sites and their qualifying features where the Applicant's conclusions have been disputed or queried during the examination. These matrices are included in **Annex 3** to this RIES.

European Sites not considered in the RIES

- 1.9 The Applicant identified potential impacts on European sites in other European Economic Area¹² (EEA) States¹³ (**APP-048**).
- 1.10 The Whale and Dolphin Conservation Trust¹⁴ (WDC) and The Wildlife Trusts¹⁵ (TWT) raised concerns to the ExA about potential impacts on the harbour porpoise feature of the Dogger Bank Sites of Community Importance (SCIs) located in German and Dutch waters¹⁶. The location of these Dogger Bank SCIs in relation to the application is shown on Figure 5.2 and identified in Table 5-1 of the Applicant's HRA screening report (**APP-048**).
- 1.11 Following acceptance of the application, Germany registered as an Interested Party¹⁷ and the ExA made a procedural decision to invite certain other EEA States (the Netherlands, Belgium, Denmark, France, Norway and Sweden) to the Preliminary Meeting as 'other persons'¹⁸. The ExA has asked these EEA States to identify any

¹¹ The matrices provided within this RIES have been produced by the ExA, with support from the Environmental Services Team within the Planning Inspectorate

¹² The EEA includes EU countries and also Iceland, Liechtenstein and Norway

¹³ The Applicant has provisionally concluded Likely Significant Effects (LSE) for European Sites and features in the following countries outside of the UK: Belgium, Denmark, France, Germany, Netherlands, Norway and Sweden (Section 8.3.18 and Table 8.1 of **APP-048**)

¹⁴ WDC position is that "*Parts of the Dogger Bank, in German and Dutch waters, are designated as a harbour porpoise SAC. We anticipate that the UK portion of the Dogger Bank may be an SAC (higher than a grade D) in the future so we would wish it to be considered as such for the purposes of this application*" (**REP-130**)

¹⁵ TWT position in their DLV submission (**REP-292** regarding Harbour Porpoise at Dutch and German SCI)

¹⁶ Cited as the Doggerbank SCI (Germany) and Doggersbank SCI (Netherlands)

¹⁷ A relevant representation was made by the Federal Maritime and Hydrographic Agency (BSH) (**REP-012**)

¹⁸ **PD-006 – PD-016**. The Secretary of State's screening of potential transboundary effects (**PD-028**) identified the need to issue notifications under Regulation 24 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended), to the following EEA member states: Belgium, Denmark, France, Netherlands, Germany, Norway and Sweden. As Germany registered as an Interested Party for the examination, the ExA made a procedural decision to invite the other EEA States identified in the Secretary of State's screening of potential transboundary effects to the preliminary meeting

concerns about the application on the environment in their State¹⁹. No response was received from these States, including Germany.

- 1.12 In response to the ExA's second questions (**PD-036**), the Applicant confirmed that following further discussions with TWT "*the Wildlife Trusts can agree to Forewind's conclusions of no adverse effect on integrity for both the German and Dutch sites*" (**REP-332**, response to ExQ2 no. 2.7). This response identifies that TWT's matter of specific concern is in relation to article 6(2) and the disturbance of harbour porpoise deriving from the German and Dutch sites caused by noise propagating from outside the designated sites (**REP-332**, response to ExQ2 no. 2.7). Further detail regarding these points can be found in the Applicant's response to TWT's Deadline V submission (**REP-349**).
- 1.13 The ExA asked the attending Interested Parties at the issue specific hearing (ISH) on 2 December 2014 if they had any outstanding concerns regarding European sites located outside the UK (**HR-035 – HR-038**). No additional comments were raised by the attending Interested Parties.
- 1.14 Following the ISH on 2 December 2014, TWT's confirmed at Deadline VII that, based on the conservation objectives of the Dutch Dogger Bank SCI and the German Dogger Bank SCI, "*the applicant is able to conclude 'no adverse effect on site integrity'*" (**REP-400**).
- 1.15 Only UK European sites are considered further in this RIES.

Structure of this RIES

- 1.16 The remainder of this report is as follows:
 - **Section 2** identifies the European sites that have been considered within the Applicant's DCO application and during the examination period, up to Deadline VII. It provides an overview of the issues that have emerged during the examination.
 - **Section 3** identifies the European sites screened by the Applicant for potential likely significant effects, either alone or in combination with other projects and plans. The section also identifies whether the Interested Parties have disputed the Applicant's conclusions.
 - **Section 4** identifies the European sites and qualifying features which have been considered in terms of adverse effects on site integrity, either alone or in combination with other projects and plans. The section identifies where Interested Parties have disputed the Applicant's conclusions, regarding effects on site integrity during the examination.

¹⁹ The ExA posed questions 1.6, 1.7 and 1.8 their first round of written questions (ExQ1, **PD-023**) to Belgium, Denmark, France, Germany, Netherlands, Norway and Sweden seeking their views in respect of Applicant's assessment of environmental effects on their State

2.0 OVERVIEW

European Sites considered

- 2.1 The application is not connected with or necessary to the management for nature conservation of any of the European sites considered within the Applicant's HRA (paragraph 1.4.2 of **APP-049** and response by the Applicant to the ExA's first written questions no 2.9 (**REP-169**)).
- 2.2 The Applicant's HRA Report identified a total of 198 European sites (and features) located within the UK for inclusion within their assessment. **Annex 1** of this RIES provides a summary Table of the sites considered. The sites that were screened into the Applicant's assessment are listed in **Column 1 of the Table at Annex 1** of this RIES.
- 2.3 The Applicant's approach to the HRA screening exercise in terms of the identification of sites and features is provided in Section 5 of the Applicant's HRA Screening Report (**APP-048**).
- 2.4 JNCC²⁰, MMO⁸, NRW²¹ and Royal Society for the Protection of Birds (RSPB)²² have not raised concerns or disputes in relation to the sites that have been screened into the Applicant's HRA, nor have they identified any additional sites that the Applicant has failed to consider within their assessment.
- 2.5 NE appears to agree with the sites screened into the Applicant's HRA²³. However, NE has referred to concerns raised by North York Moors National Park Authority (NYMNP) that relate to the consideration of the populations of golden plover recorded at the landfall location for the proposed development, which may include birds that also form part of the interest features of the North York Moors SPA (**REP-286**, Annex B). NE advised that whilst it considers it unlikely that NE would conclude likely significant effect, given the

²⁰ The Applicant's Statement of Common Ground (SoCG) with NE/JNCC on offshore matters (**REP-079**) records agreement of the sites considered in the Applicant's HRA screening process in relation to Marine and Coastal Ornithology (item 4-G-1), Marine and Intertidal Ecology (item 5-G-1), Fish and Shellfish Ecology (item 6-G-1) and Marine Mammals (item 7-G-1). Each item states that "*The list of protected sites listed in the HRA Screening Matrices [APP-055] considered for potential likely significant effect (LSE) is agreed*"

²¹ In relation to European sites located in Wales that were screened into the assessment and for which LSE was provisionally determined, Natural Resources Wales (NRW) were requested (by an email from the Applicant dated 18 August 2014) to clarify their potential interest in the Dogger Bank Teesside A & B examination. By reply (**REP-126**), NRW stated that they "*have not raised any concerns in relation to potential impacts to the Welsh environment (terrestrial or marine)...NRW therefore has no comments to make on the application and project proposals*"

²² The RSPB's position in respect of the Applicant's HRA screening process is set out in item 3-D-1 of their SoCG with the Applicant (**REP-085**). Their concerns relate to only three designated sites, and it is agreed that they have been considered for potential LSE. It is also stated that "*The RSPB offers no comments on any other sites or environmental impacts*". It is therefore concluded that RSPB do not dispute the Applicant's identification of European Sites to be considered in the assessment

²³ The Applicant's Statement of Common Ground (SoCG) with NE/JNCC on offshore matters (**REP-079**) records agreement of the sites considered in the Applicant's HRA screening process in relation to Marine and Coastal Ornithology (item 4-G-1), Marine and Intertidal Ecology (item 5-G-1), Fish and Shellfish Ecology (item 6-G-1) and Marine Mammals (item 7-G-1). Each item states that "*The list of protected sites listed in the HRA Screening Matrices [APP-055] considered for potential likely significant effect (LSE) is agreed*"

mitigation measures proposed by the Applicant and the lack of evidence to suggest a link between the works at the landfall site and the North York Moors SPA, this site needed to be captured for an audit trail. NE have stated that this 'audit trail' would not change NE's conclusions with regard to impacts predicted to arise from the landfall as set out in the Applicant's Written Representation Appendix H – Wintering Birds Position Statement (**REP-149**), although no specific reference is made to the North York Moors SPA in this document (**REP-310**, paragraph 1.14). The Applicant and NYMNP also agreed a SoCG submitted at Deadline III (**REP-250**), item 3-D-3 of which records that "*NYMNP accepts that Natural England considers that the birds associated with North York Moors SPA will not be subject to any likely significant effects due to cumulative impacts of Dogger Bank A & B*".

- 2.6 In response to NE's request for an audit trail, the Applicant has provided a document which demonstrates the extent to which the data exists and how that has informed the assessments to date (**REP-347**). This document concludes that the Applicant's position with regard to the assessment presented within the ES and HRA, with respect to golden plover and the North York Moors SPA, remains unchanged. This position is that as the SPA "*is located approximately 7km to the south of the proposed Dogger Bank Teesside A&B onshore cable corridor. Given the distance of separation between these sites Forewind considered that there will be no significant effects from the onshore works to habitats within the site or the designated bird populations that it supports. As such, the potential for the onshore works to have a Likely Significant Effect (LSE) upon the North York Moors SPA, and its qualifying habitats and species, was screened out within the Habitat Regulations Assessment (HRA) that Forewind submitted with its application*" (**REP-347**, paragraph 1.1.1).
- 2.7 In response to a question raised by the ExA at the ISH on 2 December 2014, NE advised "*that the audit trail relating to this matter, provided by the Applicant at Deadline VI, contained sufficient information to address all remaining concerns*" (paragraph 1.25, Section 1, **REP-448**).
- 2.8 The WDC have not raised any issues in their written representations (**REP-130**) or response to ExA's first written questions (**REP-193** and **REP-195**), that relate to the identification of the European Sites that were considered in the screening of the Applicant's HRA. However, the WDC "*anticipate that the UK portion of the Dogger Bank may be an SAC [with harbour porpoise as a qualifying feature] (higher than a grade D) in the future so we would wish it to be considered as such for the purposes of this application*" (**REP-130**). The WDC notes the current action taken by the EU Commission as part of infringement proceedings against the UK Government, regarding harbour porpoise protection (**REP-302**)²⁴.

²⁴ WDC have identified that depending on the response from the UK Government, they may make further comments on this matter

- 2.9 TWT's position is similar to that of the WDC, in that their written representations (**REP-131**) and responses to ExA's first questions (**REP-163**) do not raise concerns with regard to the identification of the European Sites that were considered in the Applicant's HRA. However, TWT also raised the issue of harbour porpoise as a potential qualifying feature of the candidate UK Dogger Bank SAC in the future (**REP-292**)²⁵.
- 2.10 Paragraph 5.12.2 of the Applicant's Information to inform an Appropriate Assessment (IfAA) Report (**REP-049**) outlines the Applicant's position (reiterated by JNCC in response to consultation on the HRA Screening Report (paragraphs 6.3.29, 6.3.41 and 8.3.11)) that the Dogger Bank candidate SAC (hereafter referred to as a Site of Community Importance (SCI) in this RIES²⁶) does not include harbour porpoise as a qualifying feature even though this species is present, and therefore that harbour porpoise does not need to be assessed as part of the HRA process for the Dogger Bank SCI.
- 2.11 This position is also confirmed in the written representations of NE (**REP-132**) which outline at paragraph 5.3.1(c) the reasons for the UK Dogger Bank SCI notification, with only sandbanks as an Annex I qualifying habitat (acknowledging that harbour porpoise is present within the site as a non-qualifying feature). NE/JNCC has not raised concerns over the Applicant's assessment of harbour porpoise in terms of HRA at any designated site within the UK.
- 2.12 In relation to European sites located in Scotland, SNH's position regarding the Applicant's HRA screening process is set out in their response to ExQ1 No. 2.4 (**REP-196**). SNH state that they are content with the process and conclusions for all species apart from gannet. *"For gannet, we would have preferred that all Scottish colonies were in scope. However, we do not consider that this has a significant effect on the conclusions"*. However, SNH have not identified any additional sites they think the Applicant should have identified and assessed within their HRA where gannet is a qualifying feature.
- 2.13 The ExA issued a Rule 17 request to SNH and Marine Scotland on 1 December 2014 (**PD-040**) seeking clarity on a number of points raised by SNH in their representations to the ExA, including whether SNH were of the opinion that any additional European sites should have been identified and assessed in the Applicant's HRA. SNH and

²⁵ TWT note action taken by the EU Commission as part of infraction proceedings against the UK Government, to urge them to designate protected areas for harbour porpoise by issuing a reasoned opinion. The original infraction proceeding specifically referred to including harbour porpoise as a qualifying feature of the UK Dogger Bank SCI and that by not designating sites the species is at risk from developments such as offshore wind farms. TWT are following this process closely. Depending on the response from the UK Government, may make further representations on this matter later in the Examination

²⁶ Paragraph 5.3.1(a) of NE's written representations (**REP-132**) state *"The Dogger Bank cSAC is currently undergoing classification by the UK Government as an SAC under the provisions of the EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora. Dogger Bank is currently both a cSAC and a SCI (following approval as a Site of Community Importance (SCI) by the European Commission (EC)) and this will be the case until the site has been formally designated as a SAC by UK Government. Therefore through our written representations we refer to the site as an SCI"*

Marine Scotland responded to the Rule 17 request at Deadline VII and confirmed that "*there are no additional SPAs in Scotland that require further consideration by the applicant for this development proposal*" (response to Rule 17-4, **REP-401**).

- 2.14 Based on the positions of the Interested Parties as outlined above, no other UK European site or qualifying features that could be affected by the application, in addition to the 198 European Sites located within the UK that the Applicant has already considered in their HRA Report, have been identified by the Interested Parties.

HRA matters considered during the examination

- 2.15 During the examination, the ExA issued two rounds of written questions on 11 August 2014 (ExQ1, **PD-023**) and 28 October 2014 (ExQ2, **PD-036**). The ExA held three ISH on natural environment effects matters (including HRA): 14 October 2014 (**HR-004 – HR-010**); 11 November 2014 (**HR-022 – HR-025**); and 2 December 2014 (**HR-035 – HR-038**), all of which considered the potential impacts of the application on European sites, including marine and coastal ornithology and marine sediment ecology effects in particular.

- 2.16 The main HRA matters were:

- confirmation that all of the European sites and qualifying features of those sites which may be affected by the application had been screened and assessed by the Applicant; this discussion is summarised above in Section 2 of this RIES;
- that the Applicant had correctly identified the designation for each European site considered within its HRA; confirmation was subsequently provided by NE in responses to ExQ1 No. 2.11 (**REP-132**), and in SoCG from NE (items 4-G-1, 4-G-2, 5-G-1 and 5-G-2, **REP-079**). The RSPB also record this agreement in items 3-D-1 and 3-D-2 of their SoCG with the Applicant (**REP-085**). SNH's position is as set out above in Section 2 of this RIES at paragraphs 2.12 and 2.13;
- agreement that the Applicant had identified and included within their in combination assessment all the relevant 'other plans and projects' which may have a potential in combination effect with the application; these discussions are recorded in Section 3 of this RIES;
- where mitigation has been relied upon by the Applicant, as in the case of the Dogger Bank SCI, to reach a conclusion of No Adverse Effect on Integrity (No AEOI), an understanding of how effective this mitigation would be and how it would be secured and delivered through the requirements in the DCO; these discussions are recorded in the integrity matrices in **Annex 3** of this RIES;

- where European sites have been taken forward by the Applicant to the Appropriate Assessment (AA) stage, identification of any sites and features for which it cannot be concluded No AEOI and clarification how these features would potentially be affected by the application; these discussions are recorded in Section 4 and **Annex 3** of this RIES;
- where European sites have been taken forward by the Applicant to the AA stage, agreement that these sites' conservation objectives have been correctly identified by the Applicant; these discussions are recorded in Section 4 of this RIES; and
- assessment conclusions in relation to the application's potential adverse effects on site integrity for the following European sites (discussed further in Section 4 and **Annex 3** of this RIES):
 - Dogger Bank SCI
 - Flamborough Head and Bempton Cliffs SPA
 - Flamborough and Filey Coast pSPA
 - Farne Islands SPA
 - Forth Islands SPA
 - Fowlsheugh SPA

3.0 LIKELY SIGNIFICANT EFFECTS

- 3.1 The Applicant has described how they have determined what would constitute a 'likely significant effect' (LSE) within their HRA Screening Report (paragraph 1.1.4 of **APP-048**). The Applicant also makes reference to the EC guidance on habitats assessment (EC Guidance document: 'Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (2000)' and EC Guidance document: 'Assessment of plans and projects significantly affecting Natura 2000 sites (2001)') at paragraphs 2.2.4 and 2.2.2 respectively of **APP-048**.
- 3.2 The Applicant has addressed potential in combination effects within their HRA Screening Report (Section 7, **APP-048**) and IfAA Report (Section 7, **APP-048**). A list of the plans and projects considered by the Applicant is provided in Table 3.7 of the IfAA Report (**APP-049**)²⁷, including reference to the receptors that have been assessed in terms of in combination effects with the application for each of the projects identified (i.e. Marine and coastal ornithology, Marine and intertidal ecology, Fish and shellfish ecology or Marine mammals (or a combination thereof)).
- 3.3 The projects included in the Applicant's in combination assessment were disputed by NE. NE highlighted concerns in their written representations (**REP-132**) surrounding the exclusion from the in combination assessment of those wind farms that were commissioned and operational before the start of bird monitoring for Dogger Bank Teesside A & B (referred to as 'Tier 1' projects, paragraphs 3.3.33 – 3.3.37 of **REP-132**).
- 3.4 NE also stated (paragraph 3.3.89, **REP-132**) that "*the Applicant has not used consistent models and parameters, for example Band Option and avoidance rate used, which makes it extremely challenging to draw conclusions on the significance of impact from the in-combination assessment*". NE therefore requested that the Applicant provided 'common currency' tables to address these points (paragraph 3.3.90, **REP-132**).
- 3.5 Following agreement between the Applicant and NE, that the in combination assessment for the application should be updated to reflect the revised apportioning approach (for the sites and species of concern) developed during the examination of the Dogger Bank Creyke Beck draft DCO, the Applicant applied the revised apportioning approach to provide "*updated in-combination tables for the key sites and species of concern identified within the HRA, and as agreed with Natural England*" (**REP-228**, Appendix 25).

²⁷ The list of projects is informed by ES Chapters 9 (Marine Physical Processes, **REP-087**), 10 (Marine Water and Sediment Quality, **APP-092**), 12 (Marine and Intertidal Ecology, **APP-097**), 13 (Fish and Shellfish Ecology, **APP-106**), 14 (Marine Mammals, APP-114) and the Ornithology Technical Report (Appendix 11A of the ES, **APP-094**). However, this does not include the location of the Navitus Bay project which, as discussed at paragraph 3.56 of this RIES, was only considered as part of the in combination assessment after the Teesside A&B application documents were submitted

- 3.6 The Applicant's submission also included an additional offshore wind project, Navitus Bay, "*for which information on impacts such as collision mortality are now available*" and confirmation that the Applicant has agreed this project should now be included in the in combination assessment (paragraph 1.1.3, **REP-228**). This document also addressed NE concerns in relation to Band model options for collision risk (paragraph 1.1.5) and in relation to displacement and scaled mortality rates (paragraph 1.1.6). In each case, the Applicant provided a range of assessment scenarios to cover their position, as well as that advised by NE.
- 3.7 The updated in combination tables were reviewed by NE, and examined at the ISH on 14 October 2014. Following the submission of Deadline IV Appendix 25, the draft report on Biologically Defined Minimum Population Scales (BDMPS) commissioned by NE was finalised. A link to the draft report is provided in **REP-286** (paragraph 6.1). In **REP-310** NE confirmed to the ExA that the contents of this report will not change within the timescales of the examination of the application (paragraph 1.5 and 1.6).
- 3.8 As the draft report had been used to derive the original apportioning figures²⁸ and some minor amendments had been made that affected the overall apportioning figures, it was agreed that the Applicant should update Deadline IV Appendix 25 to reflect the final version. The updated in combination tables were provided by the Applicant at Deadline VI (**REP-358**)²⁹. For each of the collision risk tables, two versions are provided notated as NE's view and the Applicant's view. The Applicant stated that "*The Natural England view is based on guidance and advice from Natural England and is considered to be overly precautionary in the assumptions used*" (paragraph 1.1.6, **REP-358**).
- 3.9 At the ISH on 2 December 2014, NE advised the ExA that NE had identified a number of unexpected errors and omissions made by the Applicant in their work to update the HRA in combination tables with the recently published BDMPS (**REP-358**)³⁰. These errors/omissions relate to the in combination assessments for Flamborough and Filey Coast pSPA (gannet, kittiwake, razorbill and guillemot) and the Farne Islands SPA (kittiwake, guillemot and razorbill). NE's advice on the Applicant's apportioning updates and subsequent Final HRA Ornithology In-combination Tables are provided in Section 4, **REP-450**. Following NE identifying these concerns to the Applicant, the Applicant provided a response to these queries at Deadline VII (**REP-404**). NE provided comments

²⁸ The draft report had previously been used to derive the original apportioning figures in the reports appended to the SoCG between the Applicant and NE (Appendices 5 -7) (**REP-081**)

²⁹ This document provides updated in combination tables for the species and sites presented in Deadline IV Appendix 25. These are: Black-legged kittiwake and northern gannet (collision risk) apportioned to the Flamborough and Filey Coast (FFC) pSPA; Razorbill and guillemot (displacement) apportioned to the FFC pSPA; Black-legged kittiwake (collision risk) apportioned to the Farne Islands SPA; and Razorbill and guillemot (displacement) apportioned to the Farne Islands SPA

³⁰ NE's Written Summary of the Oral Case put forward by Natural England during the ISH on 2 December 2014 is provided in Section 1 of **REP-448**

on the Applicant's response at Deadline VII (**REP-453**)³¹. In **REP-453**, NE clarified that in relation to black-legged kittiwake (paragraph 4), northern gannet (paragraph 11), common guillemot (paragraph 16) and razorbill (paragraph 21), the conclusions reached at Deadlines V and VI still stand³². NE concludes at paragraph 22 of **REP-453** that "*its ornithological HRA conclusions remain the same as those provided by NE at Deadline VI (Section 2) [No AEOI³², REP-310]*".

- 3.10 During the course of the examination, NE raised concerns about the inclusion of fishing as a 'plan or project' as part of the HRA assessment for the Dogger Bank SCI, as acknowledged in the SoCG between the Applicant and NE (offshore). This records that NE advised that "*in line with their position for Dogger Bank Creyke Beck that as inshore fisheries is considered a plan or project by Defra, by extension of this the offshore fisheries should also be considered a plan or project in relation to designated sites (Deadline VI: Natural England's Written Summary of the Oral Case put by Natural England At The Hearing On The Specific Issues Relating To The Habitats Regulations Assessment)*" (paragraph 3.2.4, **REP-079**).
- 3.11 In NE's Site Integrity Position Statement for the Dogger Bank SCI, developed through discussions with JNCC, in Annex D of NE's written presentation (**REP-132**), NE advised that "*recent guidance from Defra has indicated that fishing activity should be considered as if it were a plan or project*" (paragraph 1.3.4, Annex D, **REP-132**). At the ISH on 14 October 2014, NE explained their understanding of the interpretation of the Defra Guidance³³ and confirmed that NE "*considers fisheries as a plan or project and that it should be included within the Applicant's in combination HRA assessment*" (paragraph 1.7, Section 1, **REP-286**).
- 3.12 In response to NE's initial position on whether fishing should be considered a plan or project (as set out in Annex D of **REP-132**), the Applicant produced a Dogger Bank SCI Site Integrity Position Paper (**REP-218**)³⁴, which explained the Applicant's reasons for concluding that fishing should not be considered at an in combination level as a plan or project (**REP-218**, see paragraphs 1.3.52 and 1.3.53 in particular). However, the Applicant's position

³¹ NE's response (**REP-453**) was received on 16 December 2014, which the ExA decided to accept as a document provided for Deadline VII

³² In relation to gannet, kittiwake, razorbill and guillemot at the Flamborough and Filey Coast pSPA and kittiwake, razorbill and guillemot at the Farne Islands SPA, NE agreed with the Applicant's conclusion of no AEOI for the project alone and in combination in their submissions at Deadline V (Section 4, paragraphs 4.33 – 4.66 and Table 1 of **REP-286**) and Deadline VI (section 2 and Table 2.1 of **REP-310**)

³³ Information provided by NE on the Defra Guidance relevant to the status of fishing as a plan or project is provided in Section 8 of **REP-286**, which includes a link to this Guidance at paragraph 8.4

³⁴ It is taken in this RIES that the Applicant's Dogger Bank SCI Site Integrity Position Paper (**REP-218**), supersedes the Applicant's response to NE's relevant representation (**REP-134**), which states that "*Forewind considers that fishing activities do not qualify under the Habitats Regulations and maintains confidence in its assessment, which includes assessment of ecological function of the SCI, and the conclusions of no AEOI*" (page 107, **REP-134**), see also the Applicant's position stated in response to ExA's first questions, response to question 2.22 and response to question 1.22, (**REP-169**)

statement explains that "*whilst it [fishing] should not form part of any in-combination assessment, Forewind's assessment has still incorporated fishing activity as part of the baseline in reaching its conclusion of no adverse effect on integrity. It is therefore not the case that fishing activity has not been considered*" (paragraph 1.3.52, **REP-218**).

- 3.13 The Applicant at the ISH on 14 October 2014 confirmed that its position as to whether fishing be treated as a 'plan or project' was put forward at Deadline IV Appendix 18 (**REP-218**) and that "*it is Forewind's view that there is no legal basis for consideration of fishing as a plan or project for in-combination assessments for the Dogger Bank SCI*" (paragraph 1.6, **REP-267**). The Applicant's view on this matter, having undertaken a review of the relevant legislation and policy, is set out in the Applicant's statement at Deadline 5, Appendix 2 (**REP-240**). This concludes that "*As required by the Directive, the Examining Authority's duty is limited to assessing, through review of the Appropriate Assessment, the likelihood of the integrity of the Dogger Bank SCI being affected. As offshore fishing activities on the Dogger Bank are not considered a plan or a project for the purposes of the Directive or the potential policy position there is no basis for such to have formed part of the in-combination assessment*" (paragraph 1.3.4, **REP-240**).
- 3.14 The Applicant's summary of its submissions and responses to issues raised at the ISH on 16 October 2014 notes that, "*The Marine Management Organisation confirmed it would defer to Natural England in relation to impacts on the Dogger Bank SCI but stated its view that fishing should not be treated as a 'plan or project' where there was currently no fisheries management in place; consequently it should be assessed as part of the cumulative baseline*" (paragraph 1.9, **REP-267**). The MMO's understanding of the interpretation of the Defra Guidance was provided in the MMO's letter dated 23 October 2014 (Section 3, **REP-287**) as "*Our understanding is that there is no specific reference to commercial fishing licences as being plans or projects in terms of Article 6(3) but Defra guidance advises that site assessments are to be done in a manner that is consistent with the provisions of Article 6(3) of the Habitats Directive*" (paragraph 3.1, **REP-287**).
- 3.15 NE subsequently provided an Interim Site Integrity Position Statement for the Dogger Bank SCI (Section 3, **REP-310**), which stated that "*The connection between fishing activity and the conservation objectives for the Dogger Bank SCI means that any meaningful impact assessment for the site cannot be undertaken without considering fishing activity. **It is considered that whilst ongoing fisheries activities should not be considered a plan/project unless they are a new activity, a Habitat Regulations Assessment (HRA) for a plan or project should consider human/ongoing activities and their implications to the conservation objective attributes of a protected site***" (NE's emphasis, paragraph 3.17, Section 3, **REP-310**). NE

acknowledged that *"This is a change in position from Natural England's advice previously provided for the Dogger Bank Creyke Beck examination following further internal discussions with Natural England's specialist with MMO and JNCC on the 30th October 2014"* (footnote 19, paragraph 3.17, section 3, **REP-310**).

- 3.16 NE's final position on fishing as a plan or project was confirmed to the ExA at the ISH on 2 December 2014, that *"Natural England has received a steer from Defra on the matter and that only new fishing practices should be considered as a plan or project. Natural England's final position is set out in our Dogger Bank SCI Site Integrity Position Statement"* (paragraph 1.21, Section 1, **REP-448**). NE's Final Site Integrity Position Statement for the Dogger Bank SCI is provided at Annex A of NE's Deadline VII submission (**REP-449**) and sets out NE's position on fishing activity and its management in the Dogger Bank SCI in Section 1.3, which repeats the advice previously provided by NE (paragraph 3.17, Section 3, **REP-310**), that only a new fishing activity should be considered a plan/project (paragraph 1.3.6, Section 1.3, Annex A, **REP-449**). NE's Final Site Integrity Position Statement for Dogger Bank SCI is taken in this RIES to supersede NE's previous advice regarding the Dogger Bank SCI, in particular, NE's position as stated in NE's Site Integrity Position Statement for the Dogger Bank SCI (**REP-132**) and NE's Interim Site Integrity Position Statement for the Dogger Bank SCI (Section 3, **REP-310**).
- 3.17 Following the ISH on 2 December 2014, TWT notified the ExA at Deadline VII that *"we were disappointed to hear from Natural England and the MMO that Defra have advised them that fishing does not need to be considered as a plan or project. This is a change in position from the Dogger Bank Creyke Beck application and indeed from Natural England's written representation for this application. It has been repeatedly quoted that it is Defra's 'strong preference' that fishing is considered a plan or project and it was our understanding that this was now accepted"* (**REP-400**). TWT stated that *"We are not in a position to be able to submit anything further for Deadline VII, however note the opportunity to comment on the RIES at Deadline VIII"* (**REP-400**, Deadline VII).
- 3.18 The Applicant's Dogger Bank SCI Position Statement at Deadline VII (**REP-405**) notes the change in NE's position on fisheries as a plan or project in NE's Deadline VI submission (**REP-310**) and considers the contribution of fishing and the proposed fisheries management measures and concludes that *"Forewind does not consider that the Dogger Bank Teesside A & B projects, alone and in- combination would hinder the implementation of fisheries management measures designed to enable recovery to favourable condition, either in the short term or long term"* (paragraphs 1.3.60-1.3.66, **REP-405**).
- 3.19 No Interested Party has identified to the ExA any specific fishing activities that should be considered as a 'plan or project' in the in combination assessment for the Dogger Bank SCI. No fishing

activities have been included in the list of other plans and projects considered in the Applicant's in combination assessment, summarised in the **Table in Annex 2** of this RIES.

- 3.20 SNH, RSPB, WDC and TWT have not raised any concerns in relation to the identification of other plans and projects included in the Applicant's in combination assessment.
- 3.21 The Applicant's screening assessment (**APP-048**) concluded that the application would have **no likely significant effect**, either alone or in combination with other projects or plans, on the qualifying features of the European sites; see **Column 2 of the Table at Annex 1** of this RIES.
- 3.22 The Applicant's conclusions in relation to these sites and their features **were not disputed** by any Interested Parties during the examination.
- 3.23 As a result of the screening assessment, the Applicant concluded that the project is **likely to give rise to significant effects**, either alone or in combination with other projects or plans, on the qualifying features of the European sites; see **Column 3 of the Table in Annex 1** of this RIES.
- 3.24 The Applicant's conclusion of potential likely significant effects on these European sites and their qualifying features **were not disputed** by any Interested Parties during the examination.

Summary of the HRA Screening outcome during the examination

- 3.25 A total of 198 European sites located within the UK were screened by the Applicant into their HRA assessment (see **Column 1 of Table in Annex 1** of this RIES). Of these sites, the Applicant concluded that there would be no likely significant effect on 41 European sites and their qualifying features (see **Column 2 of the Table in Annex 1** of this RIES). The Interested Parties did not dispute the Applicant's conclusion of no likely significant effects on these European sites and their qualifying features during the examination up to Deadline VII (11 December 2014).
- 3.26 The Applicant concluded likely significant effects on 157 European sites (paragraph 8.3.18 of **REP-048**) (see **Column 3 of the Table in Annex 1** of this RIES). The Interested Parties did not dispute the Applicant's conclusion for any of these European sites and their qualifying features. These 157 sites were therefore taken forward by the Applicant to assess the impact of the application on site integrity (see Section 4 of this RIES).

4.0 ADVERSE EFFECTS ON INTEGRITY

The Integrity Test

No Adverse Effects on Site Integrity (no AEOI)

- 4.1 The Applicant concluded that the application **will not** adversely affect the integrity of any of the 157 European sites and features listed in **Column 3 of the Table in Annex 1** for which LSE was determined, as described in paragraphs 3.25 and 3.26 of this RIES.
- 4.2 The Applicant's conclusions of no AEOI in relation to the sites listed in **Column 4 of the Table in Annex 1** were **not disputed** by any Interested Parties. This is reflected in NE's written representations (**REP-132**) and SoCG (**REP-079**), and RSPB's response to ExQ1 (**REP-166**) and SoCG (**REP-085**). SNH's position is set out in their response to ExQ1 (**REP-196**), and discussed in paragraphs 2.12 and 2.13 of this RIES.
- 4.3 However, the Applicant's conclusions of no AEOI in relation to the sites listed in **Column 5 of the Table in Annex 1** were **disputed** by certain Interested Parties during the course of the examination, in relation to certain qualifying features of those sites.
- 4.4 The disputed sites and qualifying features are as follows:
 - Dogger Bank SCI
 - Sandbanks which are slightly covered by sea water all the time
 - Flamborough Head and Bempton Cliffs SPA³⁵
 - Northern gannet
 - Black legged kittiwake
 - Common guillemot
 - Razorbill
 - Puffin
 - Flamborough and Filey Coast pSPA³⁵
 - Northern gannet
 - Black legged kittiwake
 - Common guillemot
 - Razorbill

³⁵ Flamborough and Filey Coast pSPA has superseded the previous designation of Flamborough Head and Bempton Cliffs SPA and the Applicant was instructed by NE to use the pSPA qualifying features as the basis of their assessment (section 3.2 of Annex E: Expert Report on offshore ornithology (**REP-132**)). However, NE also note that until the status of the pSPA boundaries have been confirmed, it is necessary, under Habitat Regulations, that both the original SPA and new pSPA boundaries are both considered in the assessment (section 3.2 of Annex E: Expert Report on offshore ornithology (**REP-132**)). In the Applicant's list of 157 sites for which they concluded no AEOI, only the Flamborough and Filey Coast pSPA was listed

- Puffin
- Farne Islands SPA
 - Black legged kittiwake
 - Common guillemot
 - Razorbill
 - Puffin
- Forth Islands SPA
 - Northern gannet
 - Black legged kittiwake
 - Common guillemot
 - Razorbill
 - Puffin
- Fowlsheugh SPA
 - Black legged kittiwake

4.5 In respect of the above sites and qualifying features, the Applicant's conclusion of no AEOI was disputed by NE³⁶, SNH³⁷ and RSPB³⁸. The Applicant's conclusion of no AEOI for the remaining qualifying features of these European sites (excluding Dogger Bank SCI which only has the one disputed qualifying feature), were not disputed by the Interested Parties^{36,37,38}. The information provided during the examination in relation to the disputed qualifying features of these sites, as identified in paragraph 4.4 above, is presented in the integrity matrices for these sites in **Annex 3** of this RIES.

Conservation Objectives

- 4.6 The conservation objectives for the European sites within the UK taken forward to consideration of adverse effects on site integrity are presented in sections 4.2, 5.2 and 6.8 of the Applicant's IfAA Report (**APP-049**):
- Section 4.2 presents conservation objectives for SAC Annex I Designated Habitats and supporting habitats of SPAs as listed in Table 4.1 of **APP-049**, including the Dogger Bank SCI at paragraph 4.2.2;
 - Section 5.2 presents conservation objectives for Annex II Designated Species (and their Sites as listed in Table 5.1 of **APP-049**); and

³⁶ NE's response to ExQ1 no. 2.13 (**REP-132**) and section 6.2 of their Written Representations (**REP-132**)

³⁷ SNH's response to ExQ1 no 2.4 (**REP-196**)

³⁸ RSPB's SoCG with the applicant (item 3-D-1, **REP-085**) and in their response to ExQ1 no 2.13 (**REP-166**)

- Section 6.8 (paragraph 6.8.6) of **APP-049** states *"In order to deal with the large number of features and SPAs requiring assessment, a generic set of conservation objectives that typically apply to the feature types (i.e. Article 4.1 or Article 4.2 populations) have been used as a reference against which to determine whether an adverse effect on integrity may arise"*. The generic conservation objectives are then listed. Site specific conservation objectives for five SPA sites (including those where the Applicant's conclusion of no AEOI is disputed) are not provided.
- 4.7 NE, in response to the ExA's request at the ISH on 2 December 2014, at Deadline VII, provided the conservation objectives for the three European sites which NE had raised representations on during the examination: the Dogger Bank SCI, the Farne Island SPA, Flamborough and Filey Coast pSPA (Section 5, **REP-448**). NE also clarified its advice in relation to the 'Seabird Assemblage' feature of the Farne Islands SPA (including Kittiwake, Razorbill, Guillemot and Puffin). NE explained that these additional '2001 SPA Review features', *"were known to be present on existing SPAs in numbers which meant they were eligible for inclusion as a new qualifying feature of those SPAs. While these additional features have been awaiting formal designation ('classification'), it has been Government policy to treat them as though they are fully designated SPA 'qualifying features'. These un-designated additional features have therefore been included in [NE's] SPA Conservation Objectives and in impact-assessments made under the Habitats Regulations 2010 ('HRAs')"* (paragraph 5.6, Section 5, **REP-448**). NE identified that this position for un-designated 2001 SPA Review features has subsequently changed following JNCC's clarification of the status of 'qualifying species on SPAs'³⁹ (paragraph 5.7, Section 5, **REP-448**). However, as the application was submitted before the change in JNCC's position, *"as a matter of consistency, best practice, and in the avoidance of doubt in the audit train for this project, Natural England continues to provide advice about the likely impacts on 2001 SPA review features in relation to this project"* (paragraph 5.8, Section 5, **REP-448**).
- 4.8 NE clarified that following approval from the Minister for the Defra for NE to initiate formal consultation on the extension of the Flamborough and Bempton Cliff SPA, at that stage the extension became a potential SPA⁴⁰ and was renamed Flamborough and Filey Coast pSPA. NE advised that *"the pSPA is based on a revised site boundary, revised interest features and new reference populations"* (paragraph 5.9, Section 5, **REP-448**). NE also advised that as the analysis of the feedback from the public consultation on the pSPA is not yet complete, the conservation objectives are not yet available (paragraph 5.12, Section 5, **REP-448**). However, see also

³⁹ A link to JNCC's clarification on qualifying species on SPAs is provided in paragraph 5.7, Section 5, **REP-448**

⁴⁰ In accordance with the guidance contained in footnote 26 of the NPPF (see paragraph 5.9. Section 5, **REP-448**)

paragraph 3.2.12 of NE's written representation Annex E: Expert Report on offshore ornithology (**REP-132**) which lists the conservation objectives for the pSPA⁴¹. NE did confirm that *"for East Anglia One Offshore Windfarm the conservation objectives were provided directly to DECC by request of the Secretary of State but until these are agreed they should not be circulated more widely as redundant version may otherwise remain in the public domain and incorrectly referred to causing further confusion"* (paragraph 5.12, Section 5, **REP-448**).

- 4.9 After the ExA requested the Applicant to provide conservation objectives for the Scottish SPAs at the natural environment ISH on the 2 December 2014 (**HR-035-HR-038**), the Applicant provided a response at paragraphs 1.4.21 – 1.4.22 of their Summary of Oral Case put at the hearing (**REP-422**), stating that *"Specific conservation objectives are not required for each individual Scottish SPA, however generic conservation objectives are provided for all Scottish SPAs within the Information for Appropriate Assessment report [REP-049] – see paragraph 6.8.7 – as defined by SNH"*. Paragraph 1.4.22 of **REP-422** presents the generic objectives.
- 4.10 Therefore, the site specific conservation objectives for the sites below, where certain Interested Parties have disputed the Applicant's conclusion of no AEOI, have not been provided to the ExA as part of the full suite of examination documents:
- Flamborough Head and Bempton Cliffs SPA⁴²;
 - Forth Islands SPA⁴³; and
 - Fowlsheugh SPA⁴⁴.

Alternatives and IROPI

- 4.11 The consideration of alternatives, imperative reasons of overriding public interest (IROPI) and compensatory measures are not considered in this RIES. These matters will be covered as necessary in the ExA's Recommendation Report.
- 4.12 During the ISH on the 2 December 2014, the ExA raised with both the Applicant and the Interested Parties, in particular NE, whether there was a need for the ExA to consider the application of alternatives and IROPI and compensatory measures under the HRA process, in relation to any of the features for which an adverse effect on integrity has been identified or which remains uncertain.
- 4.13 In response, NE referred to the information they intended to submit at Deadline VII on their final position on the potential effects on the

⁴¹ However, as the pSPA has not yet been formally, designated an SPA these are only draft conservation objectives

⁴² The conservation objectives for the Flamborough Head and Bempton Cliffs SPA are available from (accessed on 15/12/2014): <http://publications.naturalengland.org.uk/file/6140665175998464>

⁴³ The conservation objectives for the Forth Islands SPA are available from http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8500 (accessed on 15/12/2014)

⁴⁴ The conservation objectives for the Fowlsheugh SPA are available from: http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8505 (accessed on 15/12/2014)

application, alone and in combination with other plans and projects, on integrity of the Dogger Bank SCI. This would include NE's comments on consideration of alternatives, IROPI and compensatory measures in relation to the Dogger Bank SCI. This information was provided at Deadline VII (Section 1.7, Annex A, **REP-449**).

- 4.14 The Applicant advised the ExA that they would also provide information at Deadline VII in relation to consideration of alternatives and IROPI. This information was provided at Deadline VII (**REP-407**).

Annex 1 – Table showing the UK European sites identified by the Applicant and considered during the examination

Dogger Bank Teesside A & B Offshore Wind Farm
Report on the Implications for European Sites

Column 1: European Sites listed in the Applicant's HRA Report, which are located within the UK	Column 2: European Sites for which the Applicant concluded No LSE	Column 3: European Sites for which the Applicant concluded LSE	Column 4: European Sites for which the Applicant's conclusion of No AEIOI was not disputed	Column 5: European Sites for which the Applicant's conclusion of No AEIOI was disputed
Abberton Reservoir SPA		Abberton Reservoir SPA	Abberton Reservoir SPA	
Abberton Reservoir Ramsar		Abberton Reservoir Ramsar	Abberton Reservoir Ramsar	
Alde-Ore Estuary SPA		Alde-Ore Estuary SPA	Alde-Ore Estuary SPA	
Alde-Ore Estuary Ramsar		Alde-Ore Estuary Ramsar	Alde-Ore Estuary Ramsar	
Arun Valley SPA		Arun Valley SPA	Arun Valley SPA	
Arun Valley Ramsar		Arun Valley Ramsar	Arun Valley Ramsar	
Auskerry SPA	Auskerry SPA			
Avon Valley SPA		Avon Valley SPA	Avon Valley SPA	
Avon Valley Ramsar		Avon Valley Ramsar	Avon Valley Ramsar	
Beast Cliff - Whitby (Robin Hood's Bay SAC)	Beast Cliff - Whitby (Robin Hood's Bay SAC)			
Benacre to Easton Bavents SPA		Benacre to Easton Bavents SPA	Benacre to Easton Bavents SPA	
Benfleet and Southend Marshes SPA		Benfleet and Southend Marshes SPA	Benfleet and Southend Marshes SPA	
Benfleet and Southend Marshes Ramsar		Benfleet and Southend Marshes Ramsar	Benfleet and Southend Marshes Ramsar	
Berriedale and Langwell Waters SAC	Berriedale and Langwell Waters SAC			
Berwickshire and North Northumberland Coast SAC		Berwickshire and North Northumberland Coast SAC	Berwickshire and North Northumberland Coast SAC	
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA		Blackwater Estuary (Mid-Essex Coast Phase 4) SPA	Blackwater Estuary (Mid-Essex Coast Phase 4) SPA	
Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar		Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar	Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar	
Breydon Water SPA		Breydon Water SPA	Breydon Water SPA	
Breydon Water Ramsar		Breydon Water Ramsar	Breydon Water Ramsar	
Broadland SPA		Broadland SPA	Broadland SPA	
Broadland Ramsar		Broadland Ramsar	Broadland Ramsar	
Buchan Ness to Collieston		Buchan Ness to Collieston	Buchan Ness to Collieston	

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Coast SPA		Coast SPA	Coast SPA	
Caithness and Sutherland Peatlands SPA	Caithness and Sutherland Peatlands SPA			
Caithness and Sutherland Peatlands Ramsar	Caithness and Sutherland Peatlands Ramsar			
Caithness Lochs SPA	Caithness Lochs SPA			
Caithness Lochs Ramsar	Caithness Lochs Ramsar			
Calf of Eday SPA		Calf of Eday SPA	Calf of Eday SPA	
Cape Wrath SPA		Cape Wrath SPA	Cape Wrath SPA	
Chesil Beach and the Fleet SPA	Chesil Beach and the Fleet SPA			
Chesil Beach and the Fleet Ramsar	Chesil Beach and the Fleet Ramsar			
Chichester and Langstone Harbours SPA		Chichester and Langstone Harbours SPA	Chichester and Langstone Harbours SPA	
Chichester and Langstone Harbours Ramsar		Chichester and Langstone Harbours Ramsar	Chichester and Langstone Harbours Ramsar	
Colne Estuary (Mid-Essex Coast Phase 2) SPA		Colne Estuary (Mid-Essex Coast Phase 2) SPA	Colne Estuary (Mid-Essex Coast Phase 2) SPA	
Colne Estuary (Mid-Essex Coast Phase 2) Ramsar		Colne Estuary (Mid-Essex Coast Phase 2) Ramsar	Colne Estuary (Mid-Essex Coast Phase 2) Ramsar	
Copinsay SPA		Copinsay SPA	Copinsay SPA	
Coquet Island SPA		Coquet Island SPA	Coquet Island SPA	
Cromarty Firth SPA		Cromarty Firth SPA	Cromarty Firth SPA	
Cromarty Firth Ramsar		Cromarty Firth Ramsar	Cromarty Firth Ramsar	
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA	Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA			
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar		Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar	Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar	

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Deben Estuary SPA	Deben Estuary SPA			
Deben Estuary Ramsar	Deben Estuary Ramsar			
Dengie (Mid-Essex Coast Phase 1) SPA		Dengie (Mid-Essex Coast Phase 1) SPA	Dengie (Mid-Essex Coast Phase 1) SPA	
Dengie (Mid-Essex Coast Phase 1) Ramsar		Dengie (Mid-Essex Coast Phase 1) Ramsar	Dengie (Mid-Essex Coast Phase 1) Ramsar	
Dogger Bank c SCI		Dogger Bank SCI		Dogger Bank SCI
Dornoch Firth and Loch Fleet SPA		Dornoch Firth and Loch Fleet SPA	Dornoch Firth and Loch Fleet SPA	
Dornoch Firth and Loch Fleet Ramsar		Dornoch Firth and Loch Fleet Ramsar	Dornoch Firth and Loch Fleet Ramsar	
Dorset Heathlands SPA		Dorset Heathlands SPA	Dorset Heathlands SPA	
Dorset Heathlands Ramsar	Dorset Heathlands Ramsar			
Duddon Estuary SPA		Duddon Estuary SPA	Duddon Estuary SPA	
Duddon Estuary Ramsar		Duddon Estuary Ramsar	Duddon Estuary Ramsar	
Dungeness - Pett Level SPA		Dungeness - Pett Level SPA	Dungeness - Pett Level SPA	
Dungeness to Pett Level Ramsar		Dungeness to Pett Level Ramsar	Dungeness to Pett Level Ramsar	
East Caithness Cliffs SPA		East Caithness Cliffs SPA	East Caithness Cliffs SPA	
East Sanday Coast SPA		East Sanday Coast SPA	East Sanday Coast SPA	
East Sanday Coast Ramsar		East Sanday Coast Ramsar	East Sanday Coast Ramsar	
Exe Estuary SPA		Exe Estuary SPA	Exe Estuary SPA	
Exe Estuary Ramsar		Exe Estuary Ramsar	Exe Estuary Ramsar	
Fair Isle SPA		Fair Isle SPA	Fair Isle SPA	
Faray and Holm of Faray SAC		Faray and Holm of Faray SAC	Faray and Holm of Faray SAC	
Farne Islands SPA		Farne Islands SPA		Farne Islands SPA
Fetlar SPA		Fetlar SPA	Fetlar SPA	
Firth of Forth SPA		Firth of Forth SPA	Firth of Forth SPA	
Firth of Forth Ramsar		Firth of Forth Ramsar	Firth of Forth Ramsar	

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Firth of Tay and Eden Estuary SPA		Firth of Tay and Eden Estuary SPA	Firth of Tay and Eden Estuary SPA	
Firth of Tay and Eden Estuary Ramsar		Firth of Tay and Eden Estuary Ramsar	Firth of Tay and Eden Estuary Ramsar	
Flamborough and Filey Coast pSPA ¹		Flamborough and Filey Coast pSPA ¹		Flamborough and Filey Coast pSPA ¹
Flamborough Head SAC	Flamborough Head SAC			
Forth Islands SPA		Forth Islands SPA		Forth Islands SPA
Foula SPA		Foula SPA	Foula SPA	
Foulness (Mid-Essex Coast Phase 5) SPA		Foulness (Mid-Essex Coast Phase 5) SPA	Foulness (Mid-Essex Coast Phase 5) SPA	
Foulness (Mid-Essex Coast Phase 5) Ramsar		Foulness (Mid-Essex Coast Phase 5) Ramsar	Foulness (Mid-Essex Coast Phase 5) Ramsar	
Fowlsheugh SPA		Fowlsheugh SPA		Fowlsheugh SPA
Gibraltar Point SPA		Gibraltar Point SPA	Gibraltar Point SPA	
Gibraltar Point Ramsar		Gibraltar Point Ramsar	Gibraltar Point Ramsar	
Great Yarmouth North Denes SPA	Great Yarmouth North Denes SPA			
Haisborough, Hammond and Winterton cSAC	Haisborough, Hammond and Winterton cSAC			
Hamford Water SPA		Hamford Water SPA	Hamford Water SPA	
Hamford Water Ramsar		Hamford Water Ramsar	Hamford Water Ramsar	

¹ In July 2013, NE began formal consultation on the extension of the Flamborough Head and Bempton Cliffs SPA. At that stage the extension became a potential SPA and was renamed Flamborough and Filey Coast pSPA. The pSPA is based on a revised site boundary, revised interest features and new reference populations. During the pre-application stages of the Dogger Bank Teesside A & B application NE advised the Applicant of the proposed site alterations, and NE are of the view that they have been appropriately included in their assessments (Footnote 56 of NE/JNCC's Written Representations **REP-132**). Flamborough and Filey Coast pSPA has superseded the previous designation of Flamborough Head and Bempton Cliffs SPA and the Applicant was instructed by NE to use the pSPA qualifying features as the basis of their assessment (section 3.2 of Annex E: Expert Report on offshore ornithology (**REP-132**)). However, NE also note that until the status of the pSPA boundaries have been confirmed, it is necessary, under Habitat Regulations, that both the original SPA and new pSPA are both considered in the assessment (section 3.2 of Annex E: Expert Report on offshore ornithology (**REP-132**)).

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Hermaness, Saxa Vord and Valla Field SPA		Hermaness, Saxa Vord and Valla Field SPA	Hermaness, Saxa Vord and Valla Field SPA	
Holburn Lake and Moss SPA	Holburn Lake and Moss SPA			
Holburn Lake and Moss Ramsar		Holburn Lake and Moss Ramsar	Holburn Lake and Moss Ramsar	
Hornsea Mere SPA		Hornsea Mere SPA	Hornsea Mere SPA	
Hoy SPA		Hoy SPA	Hoy SPA	
Humber Estuary SAC		Humber Estuary SAC	Humber Estuary SAC	
Humber Estuary Ramsar		Humber Estuary Ramsar	Humber Estuary Ramsar	
Humber Flats, Marshes and Coast SPA		Humber Flats, Marshes and Coast SPA	Humber Flats, Marshes and Coast SPA	
Inner Dowsing, Race Bank and North Ridge cSAC	Inner Dowsing, Race Bank and North Ridge cSAC			
Inner Moray Firth SPA		Inner Moray Firth SPA	Inner Moray Firth SPA	
Inner Moray Firth Ramsar		Inner Moray Firth Ramsar	Inner Moray Firth Ramsar	
Isle of May SAC		Isle of May SAC	Isle of May SAC	
Lee Valley SPA		Lee Valley SPA	Lee Valley SPA	
Lee Valley Ramsar		Lee Valley Ramsar	Lee Valley Ramsar	
Leighton Moss SPA		Leighton Moss SPA	Leighton Moss SPA	
Leighton Moss Ramsar		Leighton Moss Ramsar	Leighton Moss Ramsar	
Lindisfarne SPA		Lindisfarne SPA	Lindisfarne SPA	
Lindisfarne Ramsar		Lindisfarne Ramsar	Lindisfarne Ramsar	
Loch of Strathbeg SPA		Loch of Strathbeg SPA	Loch of Strathbeg SPA	
Loch of Strathbeg Ramsar		Loch of Strathbeg Ramsar	Loch of Strathbeg Ramsar	
Lower Derwent Valley SPA		Lower Derwent Valley SPA	Lower Derwent Valley SPA	
Lower Derwent Valley Ramsar		Lower Derwent Valley Ramsar	Lower Derwent Valley Ramsar	
Marazion Marsh SPA		Marazion Marsh SPA	Marazion Marsh SPA	
Martin Mere SPA		Martin Mere SPA	Martin Mere SPA	
Martin Mere Ramsar		Martin Mere Ramsar	Martin Mere Ramsar	

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Marwick Head SPA		Marwick Head SPA	Marwick Head SPA	
Medway Estuary and Marshes SPA		Medway Estuary and Marshes SPA	Medway Estuary and Marshes SPA	
Medway Estuary and Marshes Ramsar		Medway Estuary and Marshes Ramsar	Medway Estuary and Marshes Ramsar	
Mersey Estuary SPA		Mersey Estuary SPA	Mersey Estuary SPA	
Mersey Estuary Ramsar		Mersey Estuary Ramsar	Mersey Estuary Ramsar	
Mersey Narrows and North Wirral Foreshore SPA		Mersey Narrows and North Wirral Foreshore SPA	Mersey Narrows and North Wirral Foreshore SPA	
Mersey Narrows and North Wirral Foreshore Ramsar		Mersey Narrows and North Wirral Foreshore Ramsar	Mersey Narrows and North Wirral Foreshore Ramsar	
Minsmere-Walberswick SPA		Minsmere-Walberswick SPA	Minsmere-Walberswick SPA	
Minsmere-Walberswick Ramsar		Minsmere-Walberswick Ramsar	Minsmere-Walberswick Ramsar	
Montrose Basin SPA		Montrose Basin SPA	Montrose Basin SPA	
Montrose Basin Ramsar		Montrose Basin Ramsar	Montrose Basin Ramsar	
Moray and Nairn Coast SPA		Moray and Nairn Coast SPA	Moray and Nairn Coast SPA	
Moray and Nairn Coast Ramsar		Moray and Nairn Coast Ramsar	Moray and Nairn Coast Ramsar	
Morecambe Bay SPA		Morecambe Bay SPA	Morecambe Bay SPA	
Morecambe Bay Ramsar		Morecambe Bay Ramsar	Morecambe Bay Ramsar	
Mousa SPA	Mousa SPA			
Nene Washes SPA		Nene Washes SPA	Nene Washes SPA	
Nene Washes Ramsar		Nene Washes Ramsar	Nene Washes Ramsar	
New Forest SPA		New Forest SPA	New Forest SPA	
North Caithness Cliffs SPA		North Caithness Cliffs SPA	North Caithness Cliffs SPA	
North Norfolk Coast SAC	North Norfolk Coast SAC			
North Norfolk Coast SPA		North Norfolk Coast SPA	North Norfolk Coast SPA	
North Norfolk Coast Ramsar		North Norfolk Coast Ramsar	North Norfolk Coast Ramsar	
North Norfolk Sandbanks and Saturn Reef cSAC	North Norfolk Sandbanks and Saturn Reef cSAC			

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Northumbria Coast SPA		Northumbria Coast SPA	Northumbria Coast SPA	
Northumbria Coast Ramsar		Northumbria Coast Ramsar	Northumbria Coast Ramsar	
Noss SPA		Noss SPA	Noss SPA	
Orkney Mainland Moors SPA		Orkney Mainland Moors SPA	Orkney Mainland Moors SPA	
Otterswick and Graveland SPA	Otterswick and Graveland SPA			
Ouse Washes SPA		Ouse Washes SPA	Ouse Washes SPA	
Ouse Washes Ramsar		Ouse Washes Ramsar	Ouse Washes Ramsar	
Outer Thames Estuary SPA	Outer Thames Estuary SPA			
Pagham Harbour SPA		Pagham Harbour SPA	Pagham Harbour SPA	
Pagham Harbour Ramsar		Pagham Harbour Ramsar	Pagham Harbour Ramsar	
Papa Stour SPA	Papa Stour SPA			
Papa Westray (North Hill and Holm) SPA		Papa Westray (North Hill and Holm) SPA	Papa Westray (North Hill and Holm) SPA	
Pentland Firth Islands SPA	Pentland Firth Islands SPA			
Poole Harbour SPA		Poole Harbour SPA	Poole Harbour SPA	
Poole Harbour Ramsar		Poole Harbour Ramsar	Poole Harbour Ramsar	
Ramna Stacks and Gruney SPA	Ramna Stacks and Gruney SPA			
Ribble and Alt Estuaries SPA		Ribble and Alt Estuaries SPA	Ribble and Alt Estuaries SPA	
Ribble and Alt Estuaries Ramsar		Ribble and Alt Estuaries Ramsar	Ribble and Alt Estuaries Ramsar	
River Derwent SAC	River Derwent SAC			
River Oykel SAC	River Oykel SAC			
River South Esk SAC	River South Esk SAC			
River Spey SAC	River Spey SAC			
River Tay SAC	River Tay SAC			
River Teith SAC	River Teith SAC			
River Thurso SAC	River Thurso SAC			
River Tweed SAC	River Tweed SAC			
Ronas Hill – North Roe and	Ronas Hill – North Roe and			

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Tingon SPA	Tingon SPA			
Ronas Hill - North Roe and Tingon Ramsar	Ronas Hill - North Roe and Tingon Ramsar			
Rousay SPA		Rousay SPA	Rousay SPA	
Rutland Water SPA		Rutland Water SPA	Rutland Water SPA	
Rutland Water Ramsar		Rutland Water Ramsar	Rutland Water Ramsar	
Salisbury Plain SPA		Salisbury Plain SPA	Salisbury Plain SPA	
Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC	Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC			
Severn Estuary SPA		Severn Estuary SPA	Severn Estuary SPA	
Severn Estuary Ramsar		Severn Estuary Ramsar	Severn Estuary Ramsar	
Solent and Southampton Water SPA		Solent and Southampton Water SPA	Solent and Southampton Water SPA	
Solent and Southampton Water Ramsar		Solent and Southampton Water Ramsar	Solent and Southampton Water Ramsar	
Somerset Levels and Moors SPA		Somerset Levels and Moors SPA	Somerset Levels and Moors SPA	
Somerset Levels and Moors Ramsar		Somerset Levels and Moors Ramsar	Somerset Levels and Moors Ramsar	
South West London Waterbodies SPA		South West London Waterbodies SPA	South West London Waterbodies SPA	
South West London Waterbodies Ramsar		South West London Waterbodies Ramsar	South West London Waterbodies Ramsar	
St Abb's Head to Fast Castle SPA		St Abb's Head to Fast Castle SPA	St Abb's Head to Fast Castle SPA	
Stodmarsh SPA		Stodmarsh SPA	Stodmarsh SPA	
Stodmarsh Ramsar		Stodmarsh Ramsar	Stodmarsh Ramsar	
Stour and Orwell Estuaries SPA		Stour and Orwell Estuaries SPA	Stour and Orwell Estuaries SPA	
Stour and Orwell Estuaries		Stour and Orwell Estuaries	Stour and Orwell Estuaries	

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Ramsar		Ramsar	Ramsar	
Sule Skerry and Sule Stack SPA		Sule Skerry and Sule Stack SPA	Sule Skerry and Sule Stack SPA	
Sumburgh Head SPA		Sumburgh Head SPA	Sumburgh Head SPA	
Switha SPA	Switha SPA			
Teesmouth and Cleveland Coast SPA		Teesmouth and Cleveland Coast SPA	Teesmouth and Cleveland Coast SPA	
Teesmouth and Cleveland Coast Ramsar		Teesmouth and Cleveland Coast Ramsar	Teesmouth and Cleveland Coast Ramsar	
Thames Estuary and Marshes SPA		Thames Estuary and Marshes SPA	Thames Estuary and Marshes SPA	
Thames Estuary and Marshes Ramsar		Thames Estuary and Marshes Ramsar	Thames Estuary and Marshes Ramsar	
Thanet Coast and Sandwich Bay SPA		Thanet Coast and Sandwich Bay SPA	Thanet Coast and Sandwich Bay SPA	
Thanet Coast and Sandwich Bay Ramsar		Thanet Coast and Sandwich Bay Ramsar	Thanet Coast and Sandwich Bay Ramsar	
The Dee Estuary SPA		The Dee Estuary SPA	The Dee Estuary SPA	
The Dee Estuary Ramsar		The Dee Estuary Ramsar	The Dee Estuary Ramsar	
The River Dee SAC	The River Dee SAC			
The Swale SPA		The Swale SPA	The Swale SPA	
The Swale Ramsar		The Swale Ramsar	The Swale Ramsar	
The Wash SPA		The Wash SPA	The Wash SPA	
The Wash Ramsar		The Wash Ramsar	The Wash Ramsar	
The Wash and North Norfolk Coast SAC	The Wash and North Norfolk Coast SAC			
Troup, Pennan and Lion's Heads SPA		Troup, Pennan and Lion's Heads SPA	Troup, Pennan and Lion's Heads SPA	
Tweed Estuary SAC	Tweed Estuary SAC			
Upper Solway Flats and Marshes SPA		Upper Solway Flats and Marshes SPA	Upper Solway Flats and Marshes SPA	

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Upper Solway Flats and Marshes Ramsar		Upper Solway Flats and Marshes Ramsar	Upper Solway Flats and Marshes Ramsar	
West Westray SPA		West Westray SPA	West Westray SPA	
Ythan Estuary, Sands of Forvie and Meikle Loch SPA		Ythan Estuary, Sands of Forvie and Meikle Loch SPA	Ythan Estuary, Sands of Forvie and Meikle Loch SPA	
Ythan Estuary and Meikle Loch Ramsar		Ythan Estuary and Meikle Loch Ramsar	Ythan Estuary and Meikle Loch Ramsar	

Annex 2 – Table showing the projects included in the Applicant’s in combination assessment

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Project Type	Project Name
Aggregate Extraction Areas	Area 400
	Area 439
	Area 448 (now Area 514/1)
	Area 449 (now Area 514/3)
	Area 454 (now Area 512)
	Area 466/1
	Area 483
	Area 484
	Area 485/1
	Area 485/2
	Area 492
	Area 493
	Area 494
	Area 495/1
	Area 495/2
	Area 506
Cables and Pipelines	Breagh Pipeline
	Dudgeon R2 ¹
	Galloper ¹
	Greater Gabbard ¹
	Humber Gateway ¹
	Kentish Flats extension ¹
	Lincs ¹
	London Array II ¹
	R3 wind farm projects (east coast, phase 1) ¹
	Race Bank ¹
	Scottish Territorial water sites (east coast) ¹
	Teesside Offshore Windfarm ¹
	Triton Knoll ¹
Westermost Rough ¹	
Offshore Wind	Beatrice

¹ This project is not listed in Table 3.7 in the Applicant's IfAA Report (APP-049), but is listed in Table 7.12 (projects screened in to the in-combination assessment for marine mammals (grey seal and harbour porpoise)), separately from the associated wind farm

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Farms ²	Blyth Demonstration Site (NaREC)
	Breeveertien II
	Dogger Bank Creyke Beck A & B
	Dogger Bank Teesside C & D
	Dudgeon
	East Anglia ONE
	East Anglia THREE
	East Anglia FOUR
	European Offshore Wind Development Centre (EOWDC) / Aberdeen Offshore Wind Farm
	Firth of Forth Alpha
	Firth of Forth Bravo
	Galloper
	Greater Gabbard
	Gunfleet Sands I and II ²
	Hornsea Project One
	Hornsea Project Two
	Humber Gateway
	Inch Cape
	Kentish Flats Extension ²
	Lincs
	London Array II
	Lynn and Inner Dowsing ²
	Moray Firth (Telford, Stevenson and MacColl – offshore wind farm)
	Navitus Bay ³
Neath na Gaoithe	
Bürger-windpark Butendiek (Germany)	
Race Bank	
Scroby Sands ²	
Sheringham Shoal	

² Table 3 of annex 2 to the Applicant's SoCG with NE (**REP-080**), lists Blyth, Gunfleet Sands, Kentish Flats, Lynn and Inner Dowsing and Scroby Sands as projects excluded from the in combination assessment. NE defines the list of projects to be considered in Tiers 1-5 at paragraph of their relevant representation (**REP-041**). However, as part of their deadline IV submission, the Applicant submitted updated in combination assessment tables (**REP-228**) which included the aforementioned projects

³ Not included as part of the Applicant's IfAA Report (**APP-049**), but paragraph 1.1.3 of the Applicant's updated in combination assessment tables submitted as Appendix 25 of their Deadline IV submission (**REP-228**) refers to the inclusion of the "Navitus Bay project, the application for which was submitted post Dogger Bank Teesside A & B and for which information on impacts such as collision mortality are now available".

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	Teesside Offshore Wind Farm
	Thanet
	Triton Knoll
	Westermost Rough
Oil and Gas Facilities	Cygnus Gas Field Development (Alpha and Bravo projects)
	Ensign
	Rochelle
Tidal projects	Cantick Head
	Westray South
Wave Energy projects	Brough Head (Aquamarine Power)
	Costa Head
	Inner Sound

Annex 3 – HRA Stage 2 Matrices: Adverse Effect On Integrity

This Annex of the RIES identifies the European sites and features for which the Applicant's conclusions with regards to adverse effects on integrity **were disputed** by certain Interested Parties. Therefore revised integrity matrices have been produced by the ExA.

Key to Matrices

- ✓ Adverse effect on integrity cannot be excluded
- ✗ Adverse effect on integrity can be excluded
- ? No clear agreement whether adverse effect on integrity can be excluded
- C Construction
- O Operation
- D Decommissioning

Information supporting the conclusions is detailed in the notes for each table with reference to relevant supporting documentation.

Where an impact is not considered relevant for a feature of a European site, the cell in the matrix is formatted as follows:

n/a

Stage 2 Matrix 1: Dogger Bank SCI¹

Site Code: UK0030352

Distance to project (offshore wind farm and part of Export Cable Corridor): 0km²

European site feature	Adverse effect on integrity					
	Physical Effects ³ (project alone)			In combination Effects ⁴		
	C	O	D	C	O	D
Sandbanks which are slightly covered by sea water all the time	x _{a⁵b}	x _{a⁵b}	? _{a⁵c}	x _{d⁶e} ✓ _{d⁶f}	x _{d⁶e} ✓ _{d⁶f}	x _{d⁶e} ? _{d⁶g}

¹ Dogger Bank is currently both a cSAC and a SCI (following approval as a Site of Community Importance (SCI) by the European Commission (EC)) and this will be the case until the site has been formally designated as a SAC by UK Government (NE's written representation (**REP-041**, footnote 2))

² This distance is taken from the Applicant's integrity matrix for the Dogger Bank SCI provided at Deadline VII (**REP-408**)

³ The physical effects on the Dogger Bank SCI include the potential impacts on the SCI identified of concern by NE which are: habitat loss; habitat introduction; changes in topography; changes in surface sediments and changes in water quality and potential effects on benthic communities (paragraph 4.36 of NE's Relevant Representation (**REP-041**) and NE's Final Site Integrity Position Statement for the Dogger Bank SCI (Section 1.4, Annex A, **REP-449**))

⁴ The outcome of the in combination effects assessment depends upon the 'other plans and projects' included in the in combination assessment. NE has identified in its Final Integrity Position Statement for the Dogger Bank SCI (**REP-449**) a number of different scenarios considered in the in combination assessment. The different Notes (**Note (d)**, (**e**), (**f**) and (**g**)) presented for the in combination effects assessment, reflecting the different scenarios identified by NE when commenting on the Applicant's in combination assessment

⁵ **Note (a)** records the general information which is relevant to the effects of the Dogger Bank Teesside A and B projects considered during the construction, operation, and decommissioning phases. The position reached by NE/JNCC and the Applicant at Deadline VII is recorded in **Note (b)** for the construction and operational phase and **Note (c)** for the decommissioning phase

⁶ **Note (d)** records the general information which is relevant to the effects of the Dogger Bank Teesside A and B projects considered in combination, during the construction, operation, and decommissioning phases. The position reached by NE/JNCC and the Applicant at Deadline VII is recorded in **Notes (e) and (f)** for the construction and operational phase and **Note (g)** for the decommissioning phase

Notes:

a. **Effect on site integrity from the Dogger Bank Teesside A & B projects alone**

Information on the effects of the Dogger Bank Teesside A and B project (the application) on the physical structure, processes and benthic communities of the Dogger Bank SCI is presented in the Applicant's HRA Report (Section 4.6 in Appendix B (**APP-049**)). The Applicant's conclusions on the integrity of the Dogger Bank SCI with respect to the achievement of its conservation objectives (identified in Section 4.9 in Appendix B of the Applicant's HRA Report (**APP-049**)) for the construction and decommissioning phase for the application alone are presented in the Applicant's HRA Report (paragraph 4.9.3 for construction and paragraph 4.9.5 for decommissioning in Appendix B (**APP-049**)). The Applicant's consideration of the construction and decommissioning phase impacts of the application with regard to the individual conservation objectives are examined and the findings are presented in the Applicant's HRA Report (Table 4.22 for construction and Table 4.24 for decommissioning in Appendix B (**APP-049**)). The Applicant's HRA Report concludes that there would not be an adverse effect on the integrity of the Dogger Bank SCI as a result of the construction and decommissioning of the application (paragraphs 4.9.3 (construction) and 4.9.5 (decommissioning) in the Applicant's HRA Report, Appendix B (**APP-049**)).

Information on the effects of the operation of the application on the physical structure, processes and benthic communities of the Dogger Bank SCI is presented in the Applicant's HRA Report (Section 4.7 in Appendix B (**APP-049**)). The Applicant's conclusions on the integrity of the Dogger Bank SCI with respect to the achievement of its conservation objectives for the operational phase for Dogger Bank SCI alone is presented in the Applicant's HRA Report (paragraph 4.9.4 in Appendix B (**APP-049**)). The Applicant's consideration of the operational phase impacts of the application with regard to the individual conservation objectives are examined and the findings presented in the Applicant's HRA Report (Table 4.23 in Appendix B (**APP-049**)). The Applicant's HRA Report concludes that there would not be an adverse effect on the integrity of the Dogger Bank SCI as a result of the operation of the application (paragraphs 4.9.4 in the Applicant's HRA Report, Appendix B (**APP-049**)).

NE advised the ExA in NE's relevant representation that "*on the basis of information submitted, Natural England is not satisfied that it can be concluded beyond all reasonable scientific doubt that the project would not have an adverse effect on the integrity of the: Dogger Bank SCI*" (paragraph 3.1, **REP-041**). NE referred the ExA to their previous position statement on the impacts to site integrity of the Dogger Bank SCI that was provided during the Dogger Bank Creyke Beck examination (paragraph 4.32, **REP-041**) and summarised NE's position regarding the potential impacts on the Dogger Bank SCI from the Dogger Bank Creyke Beck project alone and in combination (paragraphs 4.33 – 4.35, **REP-041**). NE confirmed to the ExA that at that time, their position on the application mirrors their current position on the Dogger Bank Creyke Beck project (paragraph 4.36, **REP-041**). NE identified to the ExA that at that

time, NE's outstanding concerns regarding the effects of the application on the Dogger Bank SCI are largely based on the eventual nature of the disposal mounds. The potential impacts of concern are: habitat loss; habitat introduction; changes in topography; and changes in surface sediments (paragraph 4.36, **REP-041**). This position is reflected in the SoCG between the Applicant and NE (offshore) which records that *"Natural England cannot agree to the statement 'The construction, operation and decommissioning of Dogger Bank Teesside A & B when assessed alone or in combination will not compromise the conservation objectives or have an adverse impact on the site integrity of Dogger Bank SCI'"* (paragraph 5.2.6, **REP-079**).

NE and JNCC's⁷ position at Deadline VII

During the course of the examination, NE provided a Site Integrity Position Statement for the Dogger Bank SCI, developed through discussions with JNCC, in Annex D of NE's written presentation (**REP-132**). NE subsequently provided an Interim Site Integrity Position Statement for the Dogger Bank SCI (Section 3, **REP-310**). At the ISH on 2 December 2014, NE described its final position on the site integrity of the Dogger Bank SCI (**REP-448**) and explained that NE's Final Dogger Bank SCI Site Integrity Position Statement would be provided at Deadline VII. NE's Final Site Integrity Position Statement for Dogger Bank SCI is provided at Annex A of NE's Deadline VII submission (**REP-449**). NE's Final Site Integrity Position Statement for Dogger Bank SCI is taken in this RIES to supersede NE's previous advice regarding the Dogger Bank SCI, in particular, NE's position as stated in NE's Site Integrity Position Statement for the Dogger Bank SCI (**REP-132**) and NE's Interim Site Integrity Position Statement for the Dogger Bank SCI (Section 3, **REP-310**). Therefore, when referring to NE's advice on the Dogger Bank SCI, further reference is this matrix is only made to NE's Final Integrity Position Statement for the Dogger Bank SCI provided at Deadline VII (**REP-449**) and NE's position at the ISH on 2 December 2014 (**REP-448**).

Section 1.1 of NE's Final Integrity Position Statement for the Dogger Bank SCI summarises the information that has been provided by the Applicant about potential effects on the site integrity of the Dogger Bank SCI and the key points discussed between the Applicant and NE/JNCC during the examination and advises that *"the current status of the Dogger Bank SCI is a key consideration in formulating our advice"* (paragraph 1.1.5, Annex A, **REP-449**). Information

⁷ NE informed the ExA that pursuant to an authorisation made on the 9th December 2013 by the JNCC under paragraph 17(c) of Schedule 4 to the Natural Environment and Rural Communities Act 2006, NE is authorised to exercise the JNCC's functions as a statutory consultee in respect of applications for offshore renewable energy installations in offshore waters (0-200nm) adjacent to England. This application was included in that authorisation and therefore NE will be providing statutory advice in respect of that delegated authority. However, JNCC retains responsibility as the statutory advisors for European Protected sites that are located outside the territorial sea and UK internal waters (i.e. more than 12 nautical miles offshore), in this instance the Dogger Bank SCI and as such continues to provide advice to NE on the significance of any potential impacts on interest features of the site (paragraph 1.3, **REP-041**). This delegated authority was confirmed by NE in its written representation (paragraph 2.2.1, **REP-132**).

about the current status of the SCI is provided in Section 1.2 of NE's Final Integrity Position Statement for the Dogger Bank SCI, which advises that *"The Dogger Bank SCI is currently considered to be in unfavourable condition, primarily as a result of impacts from fishing activity. Hence, the conservation objective is to restore (rather than maintain) the favourable condition of the site"* (paragraph 1.2.3, Annex A, **REP-449**). Therefore, NE advises that *"As a result, fisheries management measures are being developed for the Dogger Bank SCI under Article 6(ii) of the Habitats Directive (and also for contiguous European member states' SCIs)"* (paragraph 1.3.1, Annex A, **REP-449**). Information about the proposed management of fishing activity in the SCI is provided by NE in Section 1.3 of NE's Final Integrity Position Statement for the Dogger Bank SCI and is stated to include *"an agreed updated position between Natural England and JNCC on the consideration of fisheries, which now reflects the position of the MMO"* (paragraph 1.1.5, Annex A, **REP-449**). Information on the characterisation of fishing (trawl) impacts on the Dogger SCI has been provided by NE (Section 4, **REP-310**). NE advises that *"as the site is considered to be in unfavourable condition and impacts from ongoing fisheries are influencing the ability of the site to be restored to a more natural state; we need to have greater certainty that the Dogger Bank Teesside A and B projects, alone and in-combination will not further hinder recovery to favourable condition and thus result in an adverse effect on integrity. A less precautionary approach to our advice may be taken if and when the above fisheries management measures are in place and there is sufficient level of confidence that the site is moving towards favourable conservation status"* (paragraph 1.3.7, Annex A, **REP-449**).

NE's Final Integrity Position Statement for the Dogger Bank SCI states that NE and JNCC's position has been informed by previous case law considered by NE and JNCC, in particular the CJEU *Sweetman* Judgment⁸ in *"reference to 'lasting preservation of constitutive characteristics' of a designated Annex I habitat"* (paragraph 1.4.1, Section 1.4, Annex A of **REP-449**). NE advises that when introducing the term 'lasting preservation of constitutive characteristics', the CJEU did so with reference to the Advocate General's Opinion⁹, which talks about *"the notion of integrity which is understood as the 'continued wholeness and soundness of the constitutive characteristics of the site concerned'. The integrity must be of the site and maintaining the habitat (or restoring it) to favourable conservation status. Therefore we should be concerned with the designated characteristics of the site and the conservation objectives for those characteristics"* (paragraph 1.4.2, Section 1.4, Annex A of **REP-449**). NE and JNCC's consideration of the *Sweetman* Judgment is explained in paragraphs 1.4.1 to 1.4.3, Section 1.4 of NE's Final Integrity Position Statement for the

⁸ A link to the *Sweetman* Judgment is provided at footnote 8, paragraph 1.4.1, Annex A of NE's 'FINAL Site Integrity Position Statement for the Dogger Bank SCI' (**REP-449**)

⁹ In particular, paragraphs 54 to 56 of the Advocate General's Opinion. A link to this Opinion is provided in footnote 9, paragraph 1.4.2, of NE's Final Integrity Position Statement for the Dogger Bank SCI (**REP-449**)

Dogger Bank SCI (**REP-449**), with NE and JNCC stating that *“whether an activity hinders the ‘lasting preservation of the constitutive characteristics’ will turn on the facts of the case and the application of judgement”* (paragraph 1.4.3, **REP-449**).

NE and JNCC’s position on the potential adverse effects on the integrity of the Dogger Bank SCI, in relation to effects from the Dogger Bank Teesside A and B project alone during construction, operation and decommissioning are considered below in this matrix at **Notes (b)** (construction and operation) and **(c)** (decommissioning).

The Applicant’s position at Deadline VII

At Deadline VII, the Applicant provided its position on the impacts of the Dogger Bank Teesside A & B project on the site integrity of the Dogger Bank SCI with reference to the advice and comments provided by NE and the JNCC (**REP-405**). The Applicant’s Dogger Bank SCI Position Statement (**REP-405**) is stated to set out, in relation to the attributes of the SCI (as applicable to the conservation status of the SCI and the conservation objective), the Applicant’s position on SCI integrity taking into account discussions with NE subsequent to Deadline VI (paragraph 1.3.3, **REP-405**). The Applicant’s position statement provided at Deadline VII (**REP-405**) is taken in this RIES to supersede the Applicant’s previous position regarding the Dogger Bank SCI, in particular, the Applicant’s Dogger Bank SCI Site Integrity Position Paper (**REP-218**). Therefore, when referring to the Applicant’s advice on the Dogger Bank SCI, further reference in this matrix is only made to the Applicant’s Dogger Bank SCI Position Statement (**REP-405**) and the Applicant’s position at the ISH on 2 December 2014 (**REP-422**).

The Applicant explains that following its position at Deadline VI (**REP-218**), the Applicant has engaged with NE and JNCC to clarify further the assessment work undertaken and provide additional information to facilitate a determination outcome for the Dogger Bank SCI. These discussions are summarised in Section 1.2 in the Applicant’s Dogger Bank SCI Position Statement (**REP-405**).

At Deadline VII, the Applicant explains that as a result of the discussions between the Applicant, NE and JNCC, *“it is clear that there are a number of areas where Forewind is in agreement with Natural England and also where Forewind takes a differing view. Forewind agrees with Natural England’s conclusion of no adverse effect on integrity for Dogger Bank Teesside A & B alone and Dogger Bank Teesside A & B in-combination with Dogger Bank Creyke and the Cygnus*

Oil & Gas field. However Forewind does not agree with Natural England's conclusions of not being able to conclude beyond reasonable scientific doubt no adverse effect on integrity for the in-combination assessments which include Dogger Bank C & D and aggregates projects" (paragraph 1.3.2, REP-405).

The Applicant's position on the potential adverse effects on the integrity of the Dogger Bank SCI, in relation to effects from the Dogger Bank Teesside A and B project alone during construction, operation and decommissioning are considered below in this matrix at **Notes (b)** (construction and operation) **and (c)** (decommissioning).

b. Effect on site integrity from the Dogger Bank Teesside A & B projects alone – during the construction and operational phases

NE's and JNCC's position⁷ at Deadline VII

NE advises that NE and JNCC, having taken the *Sweetman* Judgment into consideration¹⁰, have considered the effect on site integrity from the Dogger Bank Teesside A & B projects alone during construction and operation, in relation to the following scenarios¹¹, in Section 1.4 of NE's Final Integrity Position Statement for the Dogger Bank SCI:

- Without mitigation; and
- With mitigation.

NE advises that *"the scale of the potential impacts are different between the two windfarms that form the 'project' [this is assumed to mean Dogger Bank Teesside A and B], but based on the further information provided by the Applicant we do not believe that these are significantly different to separate out advice between windfarm A and B"* (paragraph 1.4.8, Section 1.4, Annex A, **REP-449**).

The effects of the application alone on the integrity of the Dogger Bank SCI (without mitigation)

¹⁰ NE and JNCC's consideration of the *Sweetman* judgment is explained in paragraphs 1.4.1 to 1.4.3, Section 1.4 of NE's Final Integrity Position Statement for the Dogger Bank SCI (**REP-449**). This is summarised in **Note (a)** of this matrix, see above

¹¹ These scenarios are identified by NE in paragraph 1.1.4, of NE's Final Site Integrity Position Statement for the Dogger Bank SCI (Annex A, **REP-449**)

NE advises that *“Without mitigation (integral to the project) to render the impacts reparable (e.g. by removal of all infrastructure on decommissioning), Natural England and JNCC cannot advise beyond all reasonable scientific doubt that there would not be an adverse effect on the integrity of the site from the Teesside A & B projects alone. This is on the basis that the effects to conservation attributes...would prevent restoration of the site to favourable condition”* (paragraph 1.4.5, see also paragraphs 1.4.9-1.4.49, Section 1.4, Annex A of **REP-449**). This is summarised by NE as impacts that constitute *‘Lasting irreparable loss’*” (paragraph 1.4.4, Section 1.4, Annex A of **REP-449**), reflecting the wording used in the *Sweetman* Judgment (paragraph 46 of the Judgment, **REP-406**).

The effects of the application alone on the integrity of the Dogger Bank SCI (with mitigation)

NE advises that *“With mitigation (integral to the project) in place to render the impacts reparable, Natural England and JNCC consider that there would be no adverse effect on site integrity arising from the Dogger Bank Teesside A & B projects alone. This is on the understanding that effects to the conservation attributes...would be temporary with recovery of ecology occurring within months/few years after decommissioning, therefore allowing recovery to favourable conservation status to occur”* (paragraph 1.4.6, see also paragraphs 1.4.9-1.4.49, Section 1.4, Annex A of **REP-449**). This is summarised by NE as impacts that *“may be considered ‘Lasting (for the duration of the project), but temporary (reparable effect)’”* (paragraph 1.4.4, Section 1.4, Annex A of **REP-449**).

NE’s Final Integrity Position Statement for the Dogger Bank SCI (Section 1.4, Annex A, **REP-449**), identifies the qualifications that NE considers the ExA and the Secretary of State need to be aware of when considering the conclusion of no adverse effect on site integrity from the Dogger Bank Teesside A & B projects alone on the basis that the impacts of the project constitute *“a lasting but reparable disturbance”* (paragraph 1.4.8, **REP-449**). NE has provided in Section 1.4 of NE’s Final Integrity Position Statement for the Dogger Bank SCI, advice on this effect of the application alone, with mitigation, on the conservation objective attributes of the Dogger Bank SCI in relation to:

- habitat loss impacting the extent of the site¹² (reported in paragraphs 1.4.9 to 1.4.13, **REP-449**);

¹² NE advised at Deadline VII that *“Natural England and JNCC do not believe that any further mitigation measures are required at this time to reduce the effect of habitat loss on the conservation objective attribute ‘extent’”* (NE’s emphasis, paragraph 1.4.13, Section 1.4, Annex A, **REP-449**). This is based on the conditions and requirements identified by NE, in Section 1.4 of **REP-449** (in particular, paragraphs 1.4.10 and 1.4.11), being in place

- Changes in topography and interaction with physical processes¹³ (reported in paragraphs 1.4.14 to 1.4.21, **REP-449**);
- 'Habitat' introduction impacting benthic communities of the site¹⁴ (reported in paragraphs 1.4.22 to 1.4.25, **REP-449**);
- Changes in surface sediments and benthic communities¹⁵ (reported in paragraphs 1.4.26 to 1.4.39, **REP-449**); and
- Changes in water quality and potential effects on benthic communities¹⁶ (reported in paragraphs 1.4.40 to 1.4.41, **REP-449**).

At the ISH on 2 December 2014, NE when describing its final position on the site integrity of the Dogger Bank SCI (provided at Annex A, **REP-449**), NE introduced to the ExA the concept of a 'traffic light approach'¹⁷, which if implemented, assists NE to advise no Adverse Effect on Site Integrity under some scenarios (paragraph 1.17, Section

¹³ NE advised at Deadline VII that *"Natural England and JNCC do not believe that any further mitigation measures are required at this time to reduce the effect of changes in topography on the conservation objective attribute 'physical structure'"* (NE's emphasis, paragraph 1.4.21, Section 1.4, Annex A, **REP-449**). This is based on the conditions and requirements identified by NE, in Section 1.4 of **REP-449** (in particular, paragraphs 1.4.18-1.4.20), being in place

¹⁴ NE advised at Deadline VII that *"Natural England and JNCC do not believe that any further mitigation measures are required at this time to reduce the effect of habitat introduction on the conservation objective attribute 'community structure'"* (NE's emphasis, paragraph 1.4.25, Section 1.4, Annex A, **REP-449**). This is based on the conditions and requirements identified by NE, in Section 1.4 of **REP-449** (in particular, paragraphs 1.4.23-1.4.24), being in place

¹⁵ NE advised at Deadline VII that *"Natural England and JNCC do not believe that any further mitigation measures are required at this time to reduce the effect of changes to surface sediments on the conservation objective attribute 'community structure'"* (NE's emphasis, paragraph 1.4.39, Section 1.4, Annex A, **REP-449**). This is based on the conditions identified by NE, in Section 1.4 of **REP-449** (in particular, paragraph 1.4.38), being in place and subject to the traffic light system being agreed pre-construction (see **footnote 17** below)

¹⁶ NE advised at Deadline VII that *"We would like to highlight to the Examining Authority and the Secretary of State that the increase in suspended sediment concentrations above background levels may have negative effect on filter-feeding species and consequently on the overall benthic community composition. However, these effects will be temporary in nature, and recovery will be short term. Based on this, Natural England and JNCC can agree that no mitigation measures are required to reduce the effect of changes in water quality on the conservation objective attribute 'community structure'"* (NE's emphasis, paragraph 1.4.41, Section 1.4, Annex A, **REP-449**)

¹⁷ A footnote to NE's Written Summary of the Oral Case put forward by Natural England during the ISH on 2 December 2014, records that NE has since agreed with the Applicant that the 'traffic light approach' should be renamed as the 'Disposal Scenario Statement' (Footnote 1, paragraph 1.17, Section 1, **REP-448**). This approach is stated by NE to have been developed in response to a technical note on wind turbine installation spoil material scenarios submitted to NE by the Applicant in a post-deadline VI email, which the Applicant intends to submit to the ExA at Deadline VII (paragraph 1.17, Section 1, **REP-448**). NE's full advice in response to Applicant's technical note is stated to have been captured in NE's Dogger Bank SCI Site Integrity Position Statement at paragraphs 1.4.32 – 1.4.38 (**REP-449**)

1, **REP-448**). In NE's Final Integrity Position Statement for the Dogger Bank SCI provided at Deadline VII, NE advises that following discussion with the Applicant, as it was the Applicant's preference for depositing drill arisings within 'identified' disposal areas, within the order limits, at the time of installation and only when certain 'parameters' are met, NE asked the Applicant to identify several realistic scenarios in relation to potential production of drill arisings, with the intention to agree a traffic light system with the SNCBs that would identify what would happen to the drill arisings for each scenario (paragraphs 1.4.31 and 1.4.32, Section 1.4, Annex A, **REP-449**). NE's conclusions for the six scenarios identified by the Applicant are¹⁸:

1. Driven Steel Monopiles – no drill arisings (GREEN - no further mitigation measures required)
2. Gravity Bases – no preparation mounds (GREEN- no further mitigation measures required)
3. Driven steel monopiles that are drilled where there is an area of resistance – small amount of drill arisings (AMBER - Further conditions are required to manage the potential impact)
4. Seabed preparation for gravity based foundations – moving 0.75m of sand from top of sandwaves to the side (GREEN - no further mitigation measures required)
5. Drilled Steel monopiles - assume 100% of turbines (RED - Further mitigation measures are required)
6. Drilled concrete monopiles – assume 100% of turbines (RED - Further mitigation measures are required)

NE advises that *"Of the six scenarios we only believe that conditions and mitigation measures are required for scenario 3, 5 and 6"* (paragraph 1.4.34, Section 1.4, Annex A, **REP-449**). NE's advice for Scenario 3 is provided in paragraph 1.4.35 and NE's advice for Scenarios 5 and 6 are provided in paragraphs 1.4.36 and 1.4.37 (Section 1.4, Annex A, **REP-449**). NE advised at the ISH on 2 December 2014, that *"if the traffic light approach is to be implemented, all red and some amber scenarios (based on pre-construction discussions) would require the Applicant to identify suitable disposal locations within the disposal area in order to deposit clay rich spoil. This should be set out in the DMLs. [NE] also confirmed that Natural England considers that suitable disposal areas are available and present within the Order Limits"* (paragraph 1.17, Section 1, **REP-448**).

NE advised at Deadline VII that ***"Natural England and JNCC do not believe that any further mitigation measures are required at this time to reduce the effect of changes to surface sediments on the***

¹⁸ NE identifies these six scenarios in paragraph 1.4.33, Section 1.4, Annex A, **REP-449**

conservation objective attribute ‘community structure’” (NE’s emphasis, paragraph 1.4.39, Section 1.4, Annex A, **REP-449**). This is based on the conditions identified by NE, in Section 1.4 of **REP-449** (in particular, paragraph 1.4.38), being in place and subject to the traffic light system (now renamed the ‘Disposal Scenario Statement’) ¹⁷ being agreed pre-construction.

NE and JNCC’s conclusion – effects on the integrity of the SCI project alone (with mitigation)

At the ISH on 3 December 2014, NE advised the ExA that *“Natural England’s position on the Dogger Bank SCI site integrity will only be realised if a number of conditions are secured”* within the DMLs (paragraph 1.26, Section 1, **REP-448**). The conditions which NE advised the ExA should be included within the DMLs are identified in NE’s Written Summary of the Oral Case put forward by Natural England during the ISH on 3 December 2014 (paragraphs 1.26-1.28, Section 1, **REP-448**). NE has requested that these conditions are included in Version 6 of the DCO/DML at Deadline VII, as *“These conditions secure mitigation that facilitate Natural England’s position on the Site Integrity of the Dogger Bank SCI. Monitoring conditions and statements within the In Principle Monitoring Plan (IPMP) also allow conclusions within the Project’s Application to be tested”* (paragraph 2.1, Section 2, **REP-448**). The DML revisions which are stated to have been agreed between the Applicant and NE, working from version 5 of the draft DCO, are set out in Section 2 of NE’s Deadline VII submission (**REP-448**). The IPMP revisions which are stated to have been agreed between the Applicant and NE, working from the draft IPMP submitted at Deadline V, are set out in Section 2 of NE’s Deadline VII submission (paragraph 2.3, **REP-448**). NE states that these agreed revisions to the IPMP will be incorporated in the Final IPMP submitted by the Applicant at Deadline VII (paragraph 2.3, **REP-448**). The Applicant’s version 6 of the draft DCO was provided at Deadline VII (**REP-426, REP-427, REP-428**). The Applicant’s Offshore IPMP was provided at Deadline VII (**REP-432**).

NE advised at Deadline VII that *“Natural England and JNCC advise that we do not believe that there will be an adverse effect on site integrity of the Dogger Bank SCI from the Teesside A & B projects alone. This advice is based upon the agreement with the Applicant to remove all infrastructure at the time of decommissioning, which would allow continued wholeness and soundness of the constitutive characteristic of the site”* (paragraph 1.4.42, Section 1.4,

Annex A, **REP-449**). This wording reflects the reference by NE and JNCC to the CJEU *Sweetman* Judgment¹⁹ and the CJEU's reference to the Advocate General's Opinion²⁰, which talks about *"the notion of integrity which is understood as the 'continued wholeness and soundness of the constitutive characteristics of the site concerned'. The integrity must be of the site and maintaining the habitat (or restoring it) to favourable conservation status. Therefore we should be concerned with the designated characteristics of the site and the conservation objectives for those characteristics"* (paragraph 1.4.2, Section 1.4, Annex A of **REP-449**). NE and JNCC's conclusion is based on the removal of all infrastructure and mitigation measures required in relation to potential creation of disposal mounds to remove any adverse effect, being secured through conditions within the DMLs. Section 1.4.44 of NE's 'FINAL Site Integrity Position Statement for the Dogger Bank SCI' (Annex A, **REP-449**), identifies agreed DML condition revisions, that *"will to be included in the Version 6 of DCO/DML at Deadline VII to secure mitigation measures to remove any adverse effect and monitoring"*. The Applicant's version 6 of the draft DCO was provided at Deadline VII (**REP-426, REP-427, REP-428**).

The Applicant's position at Deadline VII

Section 1.2 in the Applicant's Dogger Bank SCI Position Statement (**REP-405**), summaries the Applicant's understanding of NE and JNCC's position, up to the ISH on 2 December 2014 and identifies the information that the Applicant has provided, including the Submission of a Disposal Scenario Statement²¹ (see Deadline VII Appendix 11, **REP-413**) which details a possible range of build scenarios that result in differing volumes of spoil, and the changes the Applicant has made to the conditions in the DLMS²², which the Applicant describes as resulting in NE/JNCC's final

¹⁹ A link to the *Sweetman* Judgment is provided at footnote 8, paragraph 1.4.1, Annex A of NE's 'FINAL Site Integrity Position Statement for the Dogger Bank SCI' (**REP-449**)

²⁰ In particular, paragraphs 54 to 56 of the Advocate General's Opinion. A link to this Opinion is provided in footnote 9, paragraph 1.4.2, of NE's Final Integrity Position Statement for the Dogger Bank SCI (**REP-449**)

²¹ NE introduced this concept to the ExA at the ISH on 2 December 2014 as a 'traffic light approach', which if implemented, assists NE to advise no Adverse Effect on Site Integrity under some scenarios (paragraph 1.17, Section 1, **REP-448**). NE asked the Applicant to identify several realistic scenarios in relation to potential production of drill arisings, with the intention to agree a traffic light system with the SNCBs that would identify what would happen to the drill arisings for each scenario (paragraphs 1.4.31 and 1.4.32, Section 1.4, Annex A, **REP-449**). NE's conclusions for the six scenarios identified by the Applicant are presented in Section 1.4, Annex A, **REP-449** and are summarised above under NE and JNCC's position at Deadline VII (see **Note (b)**)

²² These changes are identified by the Applicant in paragraph 1.2.12 (**REP-405**)

position on the Dogger Bank SCI (**REP-449**). NE and JNCC's position on the Applicant's Disposal Scenario Statement is summarised above under 'NE and JNCC's position at Deadline VII' (see **Note (b)** above).

The Applicant's Dogger Bank SCI Position Statement records that *"With the implementation of appropriate mitigation measures Natural England and JNCC have concluded that habitat loss associated with the project would be temporary (but long term). While extent would therefore be reduced during the lifetime of the project, with decommissioning and recovery of benthic communities following this (to be acknowledged in the In Principle Monitoring Plan (IPMP)), no permanent reduction in site extent after decommissioning would arise"* (paragraph 1.3.5, **REP-405**). The Applicant agrees with NE and JNCC's position that the Dogger Bank Teesside A and B project alone would not have an adverse effect upon the integrity of the Dogger Bank SCI (paragraph 1.3.67, **REP-405**).

The Applicant's Dogger Bank SCI Position Statement at Deadline VII (**REP-405**), records that *"Forewind is committed to removing the source of the long-term temporary habitat loss during decommissioning, unless it is preferable to preserve the marine habitat that has been established over the life of the wind farm (and in the case of the Dogger Bank SCI, should it be representative of the current protected features"* (paragraph 1.3.56, **REP-405**). The Applicant has provided examples of the measures to reduce the use of hard substrate (for example, the Intelligent Scour and Cable Protection Management Plan) and to utilise cable protection measures and foundations that can be removed (or cut to below the seabed). The commitments are proposed to be secured through DMLs 1&2 condition 16(1)(c)(ix) and DMLs 3&4 condition 12(1)(c)(ix), and DMLs 1&2 condition 16(1)(c)(ii) and DMLs 3&4 condition 12(1)(c)(ii), respectively (paragraph 1.3.57, **REP-405**).

The Applicant's Dogger Bank SCI Position Statement at Deadline VII (**REP-405**), also records that *"Forewind has also set out commitments relating to adaptive monitoring of benthic communities (forming part of the Annex I habitat of the SCI) post-construction, and disposal mounds that would arise from foundation installation"* (paragraph 1.3.58, **REP-405**). Monitoring would be secured through appropriate conditions attached to DMLs (see DMLs 1&2 condition 23(2)(e) and DMLs 3&4 condition 19(2)(e)) and further acknowledged in the IPMP (submitted at Deadline VII (**REP-432**)). The Applicant states that *"This would provide an adaptive management approach, offering further comfort to the conclusions drawn on site integrity and on the specific issue of recovery following long-term temporary habitat loss"* (paragraph 1.3.59, **REP-405**).

The Applicant's version 6 of the draft DCO was provided at Deadline VII (**REP-426, REP-427, REP-428**). The Applicant's Offshore IPMP was provided at Deadline VII (**REP-432**).

The MMO's position at Deadline VII

At Deadline VII the MMO provided the ExA with the MMO's comments on the draft DCO (Rev V) and DML, identifying that *"The MMO is currently in discussion with the applicant and Natural England (NE) regarding the In-Principle Monitoring Plan to ensure that it is fit for purpose and adequately reflects the required monitoring. We will continue to liaise with the applicant and NE and provide an updated position to the panel at deadline VIII once we have had time to review any drafts submitted by the applicant"* (Appendix 3, MMO Comments on Monitoring Proposals (**REP-451**)). The MMO notes that it received an updated draft copy of the IPMP from the Applicant on 8 December 2014 (Appendix 2, Table 2, **REP-451**).

The updated provided by the MMO at Deadline VII also notes that *"The applicant has now requested that a disposal site be assigned to the development, to allow for any dredged or drill arisings material to be disposed of within the development boundaries, and have included within this document a "disposal scenario" which is a traffic light system adapted for use to indicate the level of possible contaminants and their potential to impact the environment. We are currently reviewing the documentation provided by the applicant in support of their proposals with our technical advisors the Centre for Environment Fisheries and Aquaculture Science (Cefas). We will provide an updated position on disposal site allocation once we have fully reviewed the applicants (sic) request"* (Appendix 3, MMO Comments on Monitoring Proposals (**REP-451**)). NE and JNCC's position on the Applicant's Disposal Scenario Statement is summarised above under 'NE and JNCC's position at Deadline VII' (see **Note (b)** above). The Applicant's position on the Disposal Scenario Statement is summarised above under 'The Applicant's position at Deadline VII' (see **Note (b)** above).

c. Effect on site integrity from the Dogger Bank Teesside A & B projects alone – during the decommissioning phase

NE's and JNCC's position⁷ at Deadline VII

NE and JNCC's position on site integrity of the Dogger Bank SCI from the Teesside A and B projects alone during construction and operation is set out in Section 1.4 of NE's Final Integrity Position Statement for the Dogger Bank SCI (in particular, paragraph 1.4.42, Annex A, **REP-449**) and is summarised above in **Note (b)** of this matrix.

However, in relation to potential effects on the integrity of the Dogger Bank SCI during decommissioning from the project alone, NE advises that *"Natural England would like to highlight that this conclusion does not take into consideration any impacts associated with the decommissioning process"* (NB, paragraph 1.4.43, Annex A, **REP-449**). Therefore, it is unclear whether NE and JNCC can advise that they do not believe that there will be an adverse effect on site integrity of the Dogger Bank SCI from the Teesside A & B projects alone, during decommissioning.

The Applicant's position at Deadline VII

When considering the effects of the decommissioning phase the Applicant's HRA states that these *"are the same, albeit smaller in magnitude and intensity, to those described and assessed for the construction phase and...would be temporary"* (paragraph 4.9.5, Applicant's HRA Report, Appendix B (**APP-049**)). The Applicant's HRA Report concludes that there would not be an adverse effect on the integrity of the Dogger Bank SCI as a result of the decommissioning of the application (paragraph 4.9.5 in the Applicant's HRA Report, Appendix B (**APP-049**)).

The Applicant's Dogger Bank SCI Position Statement records that *"With the implementation of appropriate mitigation measures Natural England and JNCC have concluded that habitat loss associated with the project would be temporary (but long term). While extent would therefore be reduced during the lifetime of the project, with decommissioning and recovery of benthic communities following this (to be acknowledged in the In Principle Monitoring Plan (IPMP)), no permanent reduction in site extent after decommissioning would arise"* (paragraph 1.3.5, **REP-405**). The Applicant agrees with NE and JNCC's position that the Dogger Bank Teesside A and B project alone would not have an adverse effect upon the integrity of the Dogger Bank SCI (paragraph 1.3.67, **REP-405**). Although it is not explicitly stated in the Applicant's Dogger Bank SCI Position Statement, it has been assumed for the purposes of this RIES, that the Applicant is of the view that the application will not have an adverse effect on the site integrity of the Dogger Bank SCI alone, during decommissioning.

d. **Effect on site integrity from the Dogger Bank Teesside A & B projects in combination**

The Applicant's conclusions on the integrity of the Dogger Bank SCI with respect to the achievement of its conservation objectives for the application in combination with other projects are presented in the Applicant's HRA Report (Section 7.3 in Appendix B (**APP-049**)). Potential in combination effects of other projects on the Dogger Bank SCI during construction, operation and decommissioning are identified in Table 7.3 in the Applicant's HRA Report (Appendix B, **APP-049**). The Applicant's HRA Report concludes that the favourable condition target aimed at (restoring the sandbanks feature) would not be compromised and that there would not be an adverse effect on the integrity of the Dogger Bank SCI as a result of application in combination with other plans and projects (paragraph 7.3.43, Appendix B (**APP-049**)). The Applicant's justification for this conclusion is summarised in the Applicant's HRA Report at paragraph 7.3.42 and Table 7.10 (Appendix B, **APP-049**).

NE advised the ExA in NE's relevant representation that *"on the basis of information submitted, Natural England is not satisfied that it can be concluded beyond all reasonable scientific doubt that the project would not have an adverse effect on the integrity of the: Dogger Bank SCI"* (paragraph 3.1, **REP-041**). NE referred the ExA to their previous position statement on the impacts to site integrity of the Dogger Bank SCI that was provided during the Dogger Bank Creyke Beck examination (paragraph 4.32, **REP-041**) and summarised NE's position regarding the potential impacts on the Dogger Bank SCI from the Dogger Bank Creyke Beck project alone and in combination (paragraphs 4.33 – 4.35, **REP-041**). NE confirmed to the ExA that at that time, their position on the application mirrors their current position on the Dogger Bank Creyke Beck project (paragraph 4.36, **REP-041**). NE identified to the ExA that at that time, NE's outstanding concerns regarding the effects of the application on the Dogger Bank SCI are largely based on the eventual nature of the disposal mounds. The potential impacts of concern are: habitat loss; habitat introduction; changes in topography; and changes in surface sediments (paragraph 4.36, **REP-041**). This position is reflected in the SoCG between the Applicant and NE (offshore) which records that *"Natural England cannot agree to the statement 'The construction, operation and decommissioning of Dogger Bank Teesside A & B when assessed alone or in combination will not compromise the conservation objectives or have an adverse impact on the site integrity of Dogger Bank SCI"* (paragraph 5.2.6, **REP-079**).

NE's and JNCC's position⁷ at Deadline VII

During the course of the examination, NE provided a Site Integrity Position Statement for the Dogger Bank SCI, developed through discussions with JNCC, in Annex D of NE's written presentation (**REP-132**). NE subsequently provided an Interim Site Integrity Position Statement for the Dogger Bank SCI (Section 3, **REP-310**). At the ISH on 2 December 2014, NE described its final position on the site integrity of the Dogger Bank SCI (**REP-448**) and explained

that NE's Final Dogger Bank SCI Site Integrity Position Statement would be provided at Deadline VII. NE's Final Site Integrity Position Statement for Dogger Bank SCI is provided at Annex A of NE's Deadline VII submission (**REP-449**). NE's Final Site Integrity Position Statement for Dogger Bank SCI is taken in this RIES to supersede NE's previous advice regarding the Dogger Bank SCI, in particular, NE's position as stated in NE's Site Integrity Position Statement for the Dogger Bank SCI (**REP-132**) and NE's Interim Site Integrity Position Statement for the Dogger Bank SCI (Section 3, **REP-310**). Therefore, when referring to NE's advice on the Dogger Bank SCI, further reference is this matrix is only made to NE's Final Integrity Position Statement for the Dogger Bank SCI provided at Deadline VII (**REP-449**) and NE's position at the ISH on 2 December 2014 (**REP-448**).

NE advises that NE and JNCC having taken the *Sweetman* Judgment into consideration²³ have considered the effect on site integrity from the Dogger Bank Teesside A & B projects in combination other plans and projects in relation to the following scenarios²⁴:

- Construction and operation of the Dogger Bank Teesside A & B project in combination with the Creyke Beck projects, oil and gas industry development²⁵ only (**see Note (e) of this matrix**);
- Construction and operation of the Dogger Bank Teesside A & B project in combination with the Creyke Beck projects, oil and gas industry development and aggregate extraction²⁶ only (but excluding Teesside C and D offshore wind farm projects) (**see Note (f) of this matrix**); and
- Construction and operation of the Dogger Bank Creyke Beck projects, Teesside A & B project in combination with oil and gas industry development²⁷, aggregate extraction²⁸, and Teesside C and D projects only (**see Note (f) of this matrix**).

²³ NE and JNCC's consideration of the *Sweetman* judgement is explained in paragraphs 1.4.1 to 1.4.3, Section 1.4 of NE's Final Integrity Position Statement for the Dogger Bank SCI (**REP-449**). This is summarised in **Note (a)** of this matrix, see above.

²⁴ These scenarios are identified by NE in paragraph 1.1.4, of NE's Final Site Integrity Position Statement for the Dogger Bank SCI (Annex A, **REP-449**)

²⁵ GDF Suez Cygnus Field Development Project, identified by NE in footnote 4, paragraph 1.1.4, of NE's Final Site Integrity Position Statement for the Dogger Bank SCI (Annex A, **REP-449**)

²⁶ Licence areas 466 and 485 1&2, identified by NE in footnote 5, paragraph 1.1.4, of NE's Final Site Integrity Position Statement for the Dogger Bank SCI (Annex A, **REP-449**)

²⁷ GDF Suez Cygnus Field Development Project, identified by NE in footnote 4, paragraph 1.1.4, of NE's Final Site Integrity Position Statement for the Dogger Bank SCI (Annex A, **REP-449**)

²⁸ Licence areas 466 and 485 1&2, identified by NE in footnote 5, paragraph 1.1.4, of NE's Final Site Integrity Position Statement for the Dogger Bank SCI (Annex A, **REP-449**)

NE advises that *“the scale of the potential impacts are different between the two windfarms that form the ‘project’ [this is assumed to mean Dogger Bank Teesside A and B], but based on the further information provided by the Applicant we do not believe that these are significantly different to separate out advice between windfarm A and B”* (paragraph 1.4.8, Section 1.4, Annex A, **REP-449**).

The Applicant’s position at Deadline VII

At Deadline VII, the Applicant provided its position on the impacts of the Dogger Bank Teesside A & B project on the site integrity of the Dogger Bank SCI with reference to the advice and comments provided by NE and the JNCC (**REP-405**). The Applicant’s Dogger Bank SCI Position Statement (**REP-405**) is stated to set out, in relation to the attributes of the SCI (as applicable to the conservation status of the SCI and the conservation objective), the Applicant’s position on SCI integrity taking into account discussions with NE subsequent to Deadline VI (paragraph 1.3.3, **REP-405**). The Applicant’s position statement provided at Deadline VII (**REP-405**) is taken in this RIES to supersede the Applicant’s previous position regarding the Dogger Bank SCI, in particular, the Applicant’s Dogger Bank SCI Site Integrity Position Paper (**REP-218**). Therefore, when referring to the Applicant’s advice on the Dogger Bank SCI, further reference is this matrix is only made to the Applicant’s Dogger Bank SCI Position Statement (**REP-405**) and the Applicant’s position at the ISH on 2 December 2014 (**REP-422**).

The Applicant’s Dogger Bank SCI Position Statement at Deadline VII (**REP-405**), concludes that the Applicant *“considers that the Dogger Bank Teesside A & B project, alone and in-combination with other projects, would not have an adverse effect upon the integrity of the Dogger Bank SCI as the conservation objective to restore the sandbank feature of the SCI would not be compromised. This view is based upon the comprehensive assessment work that Forewind has undertaken, which demonstrates that the effects of the project on the fundamental processes that maintain the ecological function of the site are localised to the immediate area of the project infrastructure and that significant impacts at the scale of the SCI would not arise”* (paragraph 1.3.67, **REP-405**).

In respect of ecological function, the effects of the project on the Dogger Bank SCI are set out in Chapter 12 of the ES (**APP-097**) and sections 4.2 and 7.3 (in combination) of the Information for Appropriate Assessment Report (HRA Annex B (**APP-047**)). The assessment as presented in the Applicant’s HRA concludes that the Dogger Bank Teesside A & B project alone and in combination with other plans and projects, *“would not have an adverse effect on the integrity of the Dogger Bank SCI primarily due to the very small-scale and localised effects that would arise in relation to the key physical and ecological processes that characterise and maintain the function of Dogger Bank”* (paragraph 1.3.17, **REP-405**). The Applicant’s Dogger Bank SCI Position Statement provide a brief summary of the conclusions of the assessment in relation to the main functional attributes of the Dogger Bank system and how these relate to the

conservation objectives applicable to the SCI, which includes consideration of: 'environmental quality is restored'; 'maintain natural environmental processes and extent'; and "'Restore the physical structure", "diversity", "community structure" and "typical species"' (see paragraphs 1.3.18 – 1.3.55, **REP-405**).

Whilst the Applicant refers to the concerns raised by NE and JNCC that the in combination loss of habitat from within the SCI may approach a threshold value at which an adverse effect on integrity has been determined for other such projects, the Applicant considers that *"in respect of the Dogger Bank Teesside A & B project, this is not the case. The very small loss (0.22%) in-combination with other projects would be of a temporary, but long-term, nature and would not affect the functional attributes of the SCI"* (paragraph 1.3.68, **REP-405**). Table 1 in the Applicant's Dogger Bank SCI Position Statement at Deadline VII (**REP-405**) sets out the predicted habitat loss for the Dogger Bank Teesside A & B project in combination with other plans and projects and identifies how the figure of 0.22% of the Annex I habitat within the SCI that would be subject to potential loss, has been determined by the Applicant. The Applicant's Dogger Bank SCI Position Statement includes consideration of predicted habitat loss in the context of other projects (paragraphs 1.3.14 – 1.3.16, **REP-405**). NE and JNCC's concerns regarding thresholds for the degree of effect that would constitute an adverse effect on site integrity are explained in NE's Final Site Integrity Position Statement for the Dogger Bank SCI (in particular, paragraphs 1.6.6.2 to 1.6.6.3, **REP-449**).

The Applicant's position in relation to each of the in combination scenarios identified above by NE and JNCC's at Deadline VII is considered in the following Notes in this matrix (**Notes (e) and (f)**).

e. Effect on site integrity from the Dogger Bank Teesside A & B projects in combination Creyke Beck A & B and Cygnus field development (excluding aggregates and Dogger Bank Teesside C & D) – during the construction and operational phases

NE's and JNCC's position⁷ at Deadline VII

The effect on site integrity from the Dogger Bank Teesside A and B projects in combination with the Creyke Beck A and B and Cygnus field developments is considered in Section 1.5 in NE's Final Integrity Position Statement for the Dogger Bank SCI (**Annex A, REP-449**).

NE advised that in relation to the Dogger Bank Creyke Beck (A & B) Project *"Natural England and JNCC advised no adverse effect on integrity for the Creyke Beck project alone, but raised uncertainty about the significance of the effects on the interest features of the Dogger Bank SCI from the Dogger Bank Teesside A & B projects in combination with the Dogger Bank Creyke Beck Project"* (paragraph 1.5.1, Section 1.5, Annex A, **REP-449**).

NE advised that in relation to the Cygnus field development *“JNCC has been providing ongoing advice to DECC regarding the Cygnus development, which is located within the SCI. JNCC currently do not believe that there will be an adverse effect on integrity from the project when considered alone. But JNCC recently advised DECC to update the Determination of Likely Significant Effect/ Appropriate Assessment for the Cygnus Field Development in light of the Teesside A and B projects and in-combination with other plans/projects such as aggregates”* (paragraph 1.5.2, Section 1.5, Annex A, **REP-449**)²⁹.

NE's advised at Deadline VII that *“in light of the re-assessments for Dogger Bank Teesside A & B for cable protection and the mitigation measures set out in this position statement (secured in the DML), **we believe that the in-combination impacts of both OWFs** [assumed to mean Dogger Bank Creyke Beck and Dogger Bank Teesside A and B] and Cygnus field development would not have adverse effect on integrity”* (paragraph 1.5.3, Section 1.5, Annex A, **REP-449**). NE states after this conclusion that *“It is noted though that as the impacts are now less than previously reported in the ES and HRA we advise the Applicant to submit revised in-combination figures to inform RIES”* (paragraph 1.5.3, Section 1.5, Annex A, **REP-449**).

The Applicant's position at Deadline VII

The Applicant's Dogger Bank SCI Position Statement at Deadline VII (**REP-405**), records that *“Forewind agrees with Natural England's and JNCC conclusion of no adverse effect on integrity for Dogger Bank Teesside A & B alone and Dogger Bank Teesside A & B in-combination with Dogger Bank Creyke Beck and the Cygnus Oil & Gas field”* (paragraph 1.3.69, **REP-405**).

- f. Effect on site integrity from the Dogger Bank Teesside A & B Projects in combination with all other anthropogenic activities³⁰ (excluding Dogger Bank Teesside C & D) – during the construction and operational phases**

NE's and JNCC's position⁷ at Deadline VII

²⁹ NE's previous advice on the potential in combination effect with the Cygnus field development is provided in NE's submission at Deadline IV on 23 Sept 2014 at “Annex C: Natural England's review of Appendix 1 of the Applicant's response to question 2.22 of the Examining Authority's First Written Questions” (**REP-132**)

³⁰ NE and JNCC's reference to 'All other anthropogenic activities' appears to include Dogger Bank Creyke Beck, Cygnus field development and aggregate industries (in particular, aggregate extraction at areas 466 and 485 1&2 (see paragraph 1.6.1, Section 1.6, Annex A, **REP-449**))

The effect on site integrity from the Dogger Bank Teesside A and B projects in combination with the Creyke Beck A and B and Cygnus field developments is considered in Section 1.5 in NE's Final Integrity Position Statement for the Dogger Bank SCI (**Annex A, REP-449**) (see **Note (e) above**). The effect on site integrity from the Dogger Bank Teesside A and B projects in combination with aggregate activities (excluding Dogger Bank Teesside C & D) is considered in Section 1.6 in NE's Final Integrity Position Statement for the Dogger Bank SCI (**Annex A, REP-449**).

NE advises that *"Advice has recently been sought from JNCC (in-consultation with Natural England) regarding proposed aggregate dredging within the Dogger Bank SCI. The advice stated that it was considered that the operations proposed at both of the sites (application area 466 and area 485 1&2 on the Dogger Bank SCI) would be likely to have a significant effect on the sandbank feature, and that an appropriate assessment would be required"* (paragraph 1.6.2, Section 1.6, Annex A, **REP-449**). Information about the proposed extraction areas is provided in Section 1.6 of NE's final site integrity position statement, in particular paragraph 1.6.3 (Annex A, **REP-449**).

NE advises that *"Based on the restoration conservation objective of the Dogger Bank SCI the advice provided by JNCC to the MMO (20 October 2014) focused on those conservation objective attributes considered most likely to result in an adverse effect on site integrity: extent and physical structure. If conditions are adhered to ensuring a minimum depth of aggregate resource remained (0.5 metres) JNCC believes it is unlikely to be an adverse effect on site integrity through the loss of extent. However JNCC advised that the effects on the physical structure associated with the removal of material through aggregate extraction were considered to be lasting and would result in irreparable loss with limited ability for recovery due to the limited sediment transport within the site. Dogger Bank is a glacial relict feature rather than an active sandbank system and is thought to function as a closed system, with little or no transport of sediment into or out of the bank. As such it is considered that this lasting irreparable loss of part of the structure may constitute an adverse effect on site integrity"* (paragraph 1.6.4, Section 1.6, Annex A, **REP-449**).

NE advises that *"However, an Appropriate Assessment by the competent authority is required to consider the potential for Adverse Effect on Site Integrity on interest features of the Dogger Bank SCI. Until the AA has been undertaken and a conclusion reached by the regulator then this aggregates extraction application is included in the in-combination assessment for Teesside A & B"* (paragraph 1.6.5, Section 1.6, Annex A, **REP-449**). NE advises that *"When*

*considering the above advice provided for the aggregate extraction areas 466 and 485 1/2 against the impacts anticipated for the Dogger Bank Teesside A & B projects the main differences between the two plans or projects are: the lasting irreparable loss of sandbank structure through removal of sediment from the site, compared to the lasting temporary impacts to extent and sediment composition caused by the Dogger Bank Teesside A & B projects” (paragraph 1.6.6, Section 1.6, Annex A, **REP-449**).*

NE and JNCC advise at Deadline VII that *“In summary the nature of the aggregate extraction application (as it stands) will result in an irreparable loss of structure and therefore JNCC are advising that it cannot be said beyond reasonable scientific doubt there will be no adverse effect on integrity. In comparison we believe the anticipated effects from the Dogger Bank Teesside A & B projects are lasting, but reparable allowing the site to recover at the time of decommissioning because the volume of the sandbank will not have altered” (paragraph 1.6.6.1, Section 1.6, Annex A, **REP-449**).*

NE and JNCC conclude at Deadline VII that *“Therefore notwithstanding the uncertainty about combining lasting irreparable losses and lasting temporary effects on the extent and structure of the interest features of the Dogger Bank SCI from the Dogger Bank Teesside A & B projects in combination with the Dogger Bank Creyke Beck A & B, oil and gas industry development and aggregate extraction areas (not considering Dogger Bank C & D projects) **Natural England and JNCC believe that it cannot be said beyond reasonable scientific doubt there will be no adverse effect on integrity when the aggregate application is included in the in-combination assessment”** (NE’s emphasis, paragraph 1.6.7, Section 1.6, Annex A, **REP-449**). NE and JNCC’s concerns regarding thresholds for the degree of effect that would constitute an adverse effect on site integrity are explained in NE’s Final Site Integrity Position Statement for the Dogger Bank SCI (in particular, paragraphs 1.6.6.2 to 1.6.6.3, **REP-449**).*

At the ISH on 2 December 2014, NE described its final position on the site integrity of the Dogger Bank SCI, which is provided in NE’s final Dogger Bank SCI Site Integrity Position Statement, provided at Deadline VII (Annex A, **REP-448**). NE advised the ExA at the ISH on 2 December 2014 that *“provided that the appropriate mitigation is secured for Dogger Bank Teesside A & B, the biggest contribution to an in-combination adverse impact to site integrity comes from the aggregate extraction plans within the Dogger Bank SCI. As the major contributor to the in-combination impact on the Dogger Bank SCI, Natural England believes the onus is on the Aggregates project to adopt mitigation and compensatory measures to reduce the adverse effect on integrity down to an acceptable level or provide*

appropriate compensation" (paragraph 1.20, Section 1, **REP-448**). This advice is reflected in the information provided about IROPI and Compensatory Measures under Article 6.4 of the Habitats Directive, provided in Section 1.7 of NE's Final Integrity Position Statement for the Dogger Bank SCI (**Annex A, REP-449**).

The Applicant's position at Deadline VII

The Applicant's Dogger Bank SCI Position Statement at Deadline VII (**REP-405**), records that *"Forewind does not agree with Natural England's conclusions of not being able to conclude beyond reasonable scientific doubt no adverse effect on integrity for the in-combination assessment, which includes Dogger Bank C & D and aggregates projects"* (paragraph 1.3.70, **REP-405**).

The Applicant's explanation for this disagreement with NE and JNCC's conclusion is that *"In respect of the in-combination impact with the proposed aggregate extraction projects on the structural morphology of the SCI, Forewind contends that a conclusion of no adverse effect on integrity can be reached, as no in-combination impact on sandbank morphology attribute would arise. This conclusion is based on the main differences between the two sets of projects. The aggregate extraction applications (as they stand) would prevent recovery due to loss of sandbank structure. This permanent loss of feature can be compared to the long-term but reparable disturbance anticipated for the Dogger Bank Teesside A & B project, Dogger Bank Creyke Beck, Dogger Bank Teesside C & D projects and the Cygnus Field development, which should allow recovery of the site at the time of decommissioning as the composition volume of sandbank will subsequently not have altered"* (paragraph 1.3.72, **REP-405**). The Applicant's consideration of the effect that the inclusion of aggregates would have on the in combination assessment for the application is provided in paragraphs 1.3.7 to 1.3.8 (**REP-405**).

Effect on site integrity from the Dogger Bank Teesside A & B projects in combination with all other anthropogenic³¹ activities (including Dogger Bank Teesside C & D) – during the construction and operational phases

³¹ 'All other anthropogenic activities' appear to include Dogger Bank Creyke Beck, Cygnus field development and aggregate industries (in particular, aggregate extraction at areas 466 and 485 1&2 (see paragraph 1.6.1, Section 1.6, Annex A, **REP-449**))

NE's and JNCC's position⁷ at Deadline VII

The effect on site integrity from the Dogger Bank Teesside A and B projects in combination with the Creyke Beck A and B and Cygnus field developments is considered in Section 1.5 in NE's Final Integrity Position Statement for the Dogger Bank SCI (Annex A, **REP-449**) (see **Note (e) above**). The effect on site integrity from the Dogger Bank Teesside A and B projects in combination with aggregate activities (excluding Dogger Bank Teesside C & D) is considered in Section 1.6 in NE's Final Integrity Position Statement for the Dogger Bank SCI (Annex A, **REP-449**) (see **Note (f) above**). The effect on site integrity from the Dogger Bank Teesside A and B projects in combination with anthropogenic activities, including Dogger Bank Teesside C & D is considered in Section 1.8 in NE's Final Integrity Position Statement for the Dogger Bank SCI (Annex A, **REP-449**).

NE advises in NE's Final Integrity Position Statement for the Dogger Bank SCI that *"Whilst Natural England and JNCC acknowledge that in principle the Applicant commits to the decommissioning of Teesside C & D projects, the data required to inform the assessment and scale of any impacts and subsequent mitigation measures are currently unavailable"* (paragraph 1.8.1, Section 1.8, Annex A, **REP-449**).

NE advises at Deadline VII that *"Therefore with the addition of this project to those already included in the in-combination assessment Natural England and JNCC cannot advise beyond reasonable scientific doubt that there would be no adverse effect of integrity to the Dogger Bank SCI when considering the Dogger Bank Teesside A & B projects in combination with oil and gas industry development, aggregate extraction areas and Dogger Bank C & D projects"* (paragraph 1.8.1, Section 1.8, Annex A, **REP-449**).

The Applicant's position at Deadline VII

The Applicant's Dogger Bank SCI Position Statement at Deadline VII (**REP-405**), records that *"Forewind does not agree with Natural England's conclusions of not being able to conclude beyond reasonable scientific doubt no adverse effect on integrity for the in-combination assessment, which includes Dogger Bank C & D and aggregates projects"* (paragraph 1.3.70, **REP-405**).

The Applicant's explanation for this disagreement with NE and JNCC's conclusion is that *"Forewind considers that development within the Dogger Bank Teesside C & D project areas would lead to potential impacts similar to those that have been assessed for Dogger Bank Teesside A & B and Dogger Bank Creyke Beck. Design, layout, installation techniques and requirements / methods for scour and cable protection for the Dogger Bank Teesside C & D project will be similar to those that have already been advanced and assessed for the Dogger Bank Teesside A & B project. Given similar substrate conditions, installation methods and approaches to the removal of seabed infrastructure, as advanced for Dogger Bank Teesside A & B, Forewind would also commit to removing installed infrastructure of the Dogger Bank Teesside C & D project, when this project is developed further. As such, impacts associated with Teesside C & D would be of a similar long-term, but temporary, nature and full recovery of affected areas would be expected. Thus, the conservation objective to restore the sandbank feature of the SCI would not be compromised"* (paragraph 1.3.71, **REP-405**). The Applicant's consideration of the effect that the inclusion of Dogger Bank Teesside C & D would have on the in combination assessment for the application is provided in paragraphs 1.3.9 to 1.3.13 (**REP-405**).

g. **Effect on site integrity from the Dogger Bank Teesside A & B Projects in combination – during the Decommissioning phase**

NE's and JNCC's position⁷

It is unclear from NE's Final Integrity Position Statement for the Dogger Bank SCI (**REP-449**), whether NE and JNCC can advise that they do not believe that there will be an adverse effect on site integrity of the Dogger Bank SCI from the Teesside A & B projects in combination with other plans and projects, during decommissioning.

The Applicant's position

The Applicant's conclusions on the integrity of the Dogger Bank SCI with respect to the achievement of its conservation objectives for the application in combination with other projects are presented in the Applicant's HRA Report (Section 7.3 in Appendix B (**APP-049**)). Potential in combination effects of other projects on the Dogger Bank SCI during construction, operation and decommissioning are identified in Table 7.3 in the Applicant's HRA Report (Appendix B, **APP-049**). The Applicant's HRA Report concludes that the favourable condition target aimed at (restoring the sandbanks feature) would not be compromised and that there would not be an adverse effect on the integrity of the Dogger Bank SCI as a result of application in combination with other plans and projects (paragraph

7.3.43, Appendix B (**APP-049**). The Applicant's justification for this conclusion is summarised in the Applicant's HRA Report at paragraph 7.3.42 and Table 7.10 (Appendix B, **APP-049**).

The Applicant's Dogger Bank SCI Position Statement at Deadline VII (**REP-405**), concludes that the Applicant *"considers that the Dogger Bank Teesside A & B project, alone and in-combination with other projects, would not have an adverse effect upon the integrity of the Dogger Bank SCI as the conservation objective to restore the sandbank feature of the SCI would not be compromised. This view is based upon the comprehensive assessment work that Forewind has undertaken, which demonstrates that the effects of the project on the fundamental processes that maintain the ecological function of the site are localised to the immediate area of the project infrastructure and that significant impacts at the scale of the SCI would not arise"* (paragraph 1.3.67, **REP-405**). Although it is not explicitly stated in the Applicant's Dogger Bank SCI Position Statement, it has been assumed for the purposes of this RIES, that the Applicant is of the view that the application will not have an adverse effect on the site integrity of the Dogger Bank SCI alone, during decommissioning.

Stage 2 Matrix 2: Farne Islands SPA

Site Code: UK9006021

Distance to project: 119km (Export Cable Corridor) and 236km (offshore wind farm)³²

European site features	Adverse effect on integrity														
	Habitat loss / alteration (prey resources)			Disturbance / displacement			Habitat loss (barrier effect)			Physical Damage (collision risk)			In combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Black legged kittiwake	x a,b,c	x a,b,d	x a,b,e	x f,b	x f,b	x f,b,e	n/a	x m,b	n/a	n/a	x n,b	n/a	x p,f,b	x p,n,b	x p,n,b,e
Common guillemot	x a,b,c	x a,b,d	x a,b,e	x g,b	x h,b	x g,b,e	n/a	x m,b	n/a	n/a	x o,b	n/a	x p,g,b	x p,h,b	x p,h,b,e
Puffin	x a,b,c	x a,b,d	x a,b,e	x i,b	x j,b	x i,b,e	n/a	x m,b	n/a	n/a	x o,b	n/a	x p,i,b	x p,j,b	x p,j,b,e
Razorbill ³³	x a,b,c	x a,b,d	x a,b,e	x i,b	x l,b	x k,b,e	n/a	x m,b	n/a	n/a	x o,b	n/a	x p,k,b	x p,l,b	x p,l,b,e

Notes:

- a. In matrix A48 of **REP-357** (and updated in **REP-408**), the Applicant states that the development would not have any direct effect on supporting habitat features within the designated SPA, but that changes in habitat conditions as a result of development could potentially influence prey resource availability and the energetics and behaviour of birds that may

³² Distances to the project for the site are taken from the Applicant's Stage 2 HRA matrix A48 originally submitted as part of the Application documents (**APP-056**) and updated at Deadline VI (**REP-360**) and Deadline VII (**REP-408**).

³³ The ExA understand that razorbill is not a qualifying feature of the Farne Islands SPA. It is not identified on the JNCC website for this site (or on the Natura 2000 data form, <http://jncc.defra.gov.uk/default.aspx?page=1990>, yet it was listed as a feature of concern in terms of the Applicant's conclusion of no adverse effect on integrity for the Farne Islands SPA by NE at paragraph 6.2.1(d) of their Written Representations and in their response to ExQ1 no. 2.13 (**REP-132** for both submissions).

form part of the designated SPA population.

In section 3.3 of their Written Representation (**REP-132**), NE did not raise the effects of habitat loss / alteration on the prey resources of any seabird species as one of the "*significant ornithological issues identified*".

Section 4-E-8 of the Statement of Common Ground between the Applicant and NE on offshore matters (**REP-079**) records agreement of the habitat loss or alteration impacts associated with the construction, operation and decommissioning of Dogger Bank Teesside A & B in EIA terms, but no such conclusions are expressed in terms of HRA. In response to the Applicant's Deadline V submissions, NE confirm at paragraph 2.48 of their Deadline VI submission (**REP-310**) that "*Regarding the Applicant's HRA, based on the information submitted up to and including Deadline V, Natural England agrees with the Applicant that, if built, Dogger Bank Teesside A & B will not cause an Adverse Effect on any SPA/pSPA site and its seabird features*".

- b. In response to ExQ1 no. 2.13, relating to concerns on the Applicant's findings of no adverse effects on integrity (**PD-023**), the RSPB did not list the Farne Islands SPA as a site of concern (**REP-166**). This is also reflected in item 3-D-1 of the Statement of Common Ground between the Applicant and the RSPB (**REP-085**) which lists the European sites of concern to RSPB, and does not include the Farne Islands SPA. It also states "*The RSPB offers no comments on any other sites or environmental impacts*".
- c. Determination of the impacts of the various effects of the project on the prey resources available to all seabird species during the construction phase is described in paragraphs 6.5.2 to 6.5.32 of **APP-049**. The Applicant's conclusions in terms of effect on integrity have not been disputed during the examination.
- d. Effects of the operational phase on prey resources and habitat utilisation by all seabird species is described in paragraphs 6.6.2-6.6.39 of **APP-049**. The Applicant's conclusions in terms of effect on integrity have not been disputed during the examination.
- e. For the purposes of their environmental assessment, the Applicant has assumed that the same effects that would arise during construction would also manifest during decommissioning of the Application (paragraph 2.3.28 & Table 2.2: Realistic worst case scenario for the assessment of impacts on European sites and their features, **APP-049**). The Applicant's approach to the assessment of effects during decommissioning has not been disputed during the examination (although it is noted that where construction effects have been identified in terms of particular species, these are effectively carried forwards in terms of relevance to decommissioning).
- f. The Applicant does not predict any displacement impact associated with proposed development for black-legged kittiwake during construction or operation (paragraph 6.3.34, **APP-049**). In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), NE did not list black legged kittiwake as such a species (**REP-132**). RSPB's response to the same question (**REP-166**) also did not list black legged kittiwake as a species of concern.

The Applicant's conclusions in terms of no adverse effect on integrity have therefore not been disputed during the examination.

- g. A precautionary displacement rate of 50% and mortality rate of 5% were defined by the Applicant for common guillemot (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the SPA in Tables A9.38a-d in Appendix 9 of **APP-094**. In paragraph 6.3.39 of **APP-049** and matrix A48 of **REP-357** (and updated in **REP-408**), the Applicant notes that displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project.

At the first ISH on biodiversity and natural environment matters (**HR-005 – HR-008**), NE concluded that the construction phase will have no significant effect on common guillemot. For species of auk that could be susceptible to displacement and associated mortality, NE state that, in terms of construction, the effects "*are predicted to be smaller than those predicted during the operational phase and over a smaller period of time*" (paragraph 1.10, **REP-286**).

- h. The operational impact of displacement for common guillemot is set out by the Applicant in Section 6.6, paragraphs 6.6.49 to 6.6.56 of **APP-049**. A precautionary displacement rate of 50% and mortality rate of 5% have been defined by the Applicant (paragraphs 6.3.26 - 6.3.57, **APP-049**). The Applicant's approach included variable displacement rates in two bands of distance from the wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**).

At section 6.5 of their relevant representations, NE raised concerns over displacement effects on common guillemot associated with the proposed development (**REP-132**), particularly in relation to the use of a variable displacement rate across the wind farm development zone and buffer, and advised that "*displacement effects should be assessed at a constant rate within the defined buffer area until such time that evidence suggests otherwise*". NE also disagreed with the Applicant's assertion that displacement effect should be viewed as a one off loss, and would not be repeated annually (NE's view is that displacement should be a year on year impact, paragraph 1.16 of **REP-286**).

At Deadline IV, the Applicant provided updated information in respect of apportioning of ornithological impacts to protected sites (**REP-228**). This information took the form of updated in combination assessment tables for (among other aspects) common guillemot displacement at the Farne Islands SPA (section 5, **REP-228**). This information applied the same methodology as that developed and agreed between the Applicant and NE during the examination of Dogger Bank Creyke Beck Offshore Wind Farm to the proposed development.

In Section 5 of **REP-228**, the Applicant provided revised figures which allowed NE to consider the predicted mortality figures as a year-on-year by comparison to potential biological removal (PBR) thresholds. The Applicant also produced revised calculations based on a fixed level of displacement throughout the 2km buffer zone (and NE confirmed that a 2km buffer was an appropriate buffer-size for species of concern present in the Dogger Bank zone).

In their submission at Deadline V in their written summary of their position put at the first biodiversity ISH (**REP-286**), NE confirmed that, whilst areas of disagreement remain (paragraphs 4.19 – 4.25), *“Displacement tables have been presented with several variations to reflect the risk-based approach recommended by Natural England. This includes the use of displacement rates of 30%, 50% and 70% with mortality rates of 5% and 10%”* (paragraph 4.20).

In respect of displacement of common guillemot at the Farne Islands SPA, NE conclude at paragraph 4.53 of **REP-286** that *“no adverse effect on the integrity of the Farne Islands SPA would occur from displacement of Guillemots at Dogger Bank Teesside A & B alone or in combination with other windfarms considered in the assessment”*.

NE’s conclusion was also repeated at Table 2.1 of **REP-310** submitted at Deadline VI as part of NE’s written submission following the second biodiversity and natural environment ISH.

The Applicant updated the apportioning values used for common guillemot at the Farne Islands SPA in line with the finalised BDMPS report (**REP-356**). For the most precautionary displacement mortality scenario (70% displacement and 10% variable mortality) a total loss of 400 adult birds is predicted. This value has not changed at Deadline VII in light of NE’s further comments on the Applicant’s Deadline VI submission (section 4 of **REP-448** and Applicant’s Deadline VII Appendix 1 **REP-404**). This value is less than the PBR threshold of 782 birds (at $f = 0.3$) used by NE against which to judge the potential displacement impact.

At Annex B of NE’s Deadline VII submission (**REP-450**) on advice on the Applicant’s apportioning updates and final HRA Ornithology In-combination Tables, NE state *“Natural England can confirm that in the case of the Farne Islands SPA these revisions [after the revised BDMPS work], being downwards make no difference to the conclusions [no AEO1] provided at Deadline V”* (paragraph 1.30).

- i. A precautionary displacement rate of 25% and mortality rate of 5% were defined by the Applicant for atlantic puffin (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the pSPA in Tables A9.44a-d in Appendix 9 of **APP-094**. In paragraph 6.3.39 of **APP-049** and matrix A48 of **REP-357** (and updated in **REP-408**), the Applicant notes displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project. At the first ISH on biodiversity and natural environment matters (**HR-005 – HR-008**), NE concluded the construction phase will have no significant effect on atlantic puffin. For species of auk that could be susceptible to displacement and associated mortality, NE state that, in terms of construction the effects *“are predicted to be smaller than those predicted during the operational phase and over a smaller period of time”* (paragraph 1.10, **REP-286**).
- j. The operational impact of displacement for puffin is set out in Section 6.6 (paragraphs 6.6.64 to 6.6.68) of **APP-049**. A precautionary displacement rate of 25% and mortality rate of 5% have been defined by the Applicant (paragraphs 6.3.26 - 6.3.57, **APP-049**). The Applicant’s approach included variable displacement rates in two bands of distance from the

wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**).

In paragraph 2.3 of their Relevant Representation (**REP-041**), NE highlighted puffin at the Farne Islands SPA as a species of concern. However, NE subsequently did not raise puffin as a species of concern in HRA terms in their written representation or response to ExQ1 no. 2.13 (**REP-132**) or in section 1.2 of their Written Summary of the Oral Case at the first ISH (**REP-286**) (where "NE confirmed that the following sites and features have been subject to outstanding disagreement between the Applicant and NE", and puffin at the Farne Islands SPA was not listed).

Table 1 of their Written Summary of the Oral Case at the first ISH (**REP-286**) did list puffin at the Farne Islands SPA as an area of disagreement, and paragraph 4.73 concluded "*that the contribution of Dogger Bank Teesside A and B OWF to existing mortality is likely to so small as not to constitute a likely significant effect alone*" but that further information on apportionment was required (recorded as action point 1.14 from the first ISH (**HR-014**)). This was due to NE concerns over the assessment of displacement effects associated with the proposed development (**REP-132**), particularly in relation to the use of a variable displacement rate across the wind farm development zone and buffer, and advised that "*displacement effects should be assessed at a constant rate within the defined buffer area until such time that evidence suggests otherwise*". NE also disagreed with the Applicant's assertion that displacement effect should be viewed as a one off loss, and would not be repeated annually (NE's view is that displacement should be a year on year impact, paragraph 1.16 of **REP-286**).

In their Deadline VI submission (**REP-310**) the Applicant included correspondence from the Applicant regarding puffin in HRA terms at Annex B. At paragraph 2.45 of **REP-310**, NE state that "*In the light of this additional information provided by the Applicant, it is clear that in order for this PBR threshold at $f=0.3$ to be exceeded (i.e. equivalent to the PBR thresholds already used as the basis for guillemot and razorbill assessments) any in combination mortality would have to add in excess of a further 1000 Farne Islands individuals to the Teesside A&B total. Natural England agrees with the Applicant that this is an unrealistic expectation – bearing in mind that the in combination total of guillemot fatalities predicted to be linked to the Farne Islands population of that species (which is of a similar size to the puffin population) was only 98 individuals*".

At paragraph 2.45 of **REP-310**, NE "*advise the ExA that there is no pressing need for the Applicant to conduct any further additional work on this matter in this case as we believe that sufficient information has been provided to allow the Examining Authority to provide a recommendation to the Secretary of State*".

Their position is also reflected at table 2.1 of **REP-310**, where NE agree with the Applicant's conclusion of no adverse effects on integrity from the project alone, but that in combination "*no further work required in this case due to non-discernible contribution from site alone*".

NE confirm at paragraph 1.2 of their Deadline VI submission (**REP-310**) that "*all previous offshore ornithological disagreements are now agreed*". Paragraph 2.48 takes this further with NE stating that "*Regarding the Applicant's HRA, based on the information submitted up to and including Deadline V, Natural England agrees with the Applicant that, if built, Dogger Bank Teesside A & B will not cause an Adverse Effect on any SPA/pSPA site and its seabird features*".

- k. A precautionary displacement rate of 50% and mortality rate of 5% was defined by the Applicant for razorbill (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the Farne Islands SPA in Tables A9.41a-d in Appendix 9 of **APP-094**. In paragraph 6.3.39 of **APP-049** and matrix A48 of **REP-357** (and updated in **REP-408**), the Applicant notes displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project.
- At the first ISH on biodiversity and natural environment matters (**HR-005 – HR-008**), NE concluded the construction phase will have no significant effect on razorbill. For species of auk that could be susceptible to displacement and associated mortality, NE state that, in terms of construction the effects *"are predicted to be smaller than those predicted during the operational phase and over a smaller period of time"* (paragraph 1.10, **REP-286**).
- l. The operational impact of displacement for razorbill is set out in Section 6.6, paragraphs 6.6.57 – 6.6.63 of **APP-049**. A precautionary displacement rate of 50% and mortality rate of 5% has been defined by the Applicant (paragraphs 6.3.26 - 6.3.57, **APP-049**). The Applicant's approach included variable displacement rates in two bands of distance from the wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**).
- At section 6.5 of their relevant representations, NE raised concerns over displacement effects on razorbill associated with the proposed development (**REP-132**), particularly in relation to the use of a variable displacement rate across the wind farm development zone and buffer, and advised that *"displacement effects should be assessed at a constant rate within the defined buffer area until such time that evidence suggests otherwise"*. NE also disagreed with the Applicant's assertion that displacement effect should be viewed as a one off loss, and would not be repeated annually (NE's view is that displacement should be a year on year impact, paragraph 1.16 of **REP-286**).
- At deadline IV, the Applicant provided updated information in respect of apportioning of ornithological impacts to protected sites (**REP-228**). This information took the form of updated in combination assessment tables for (among other aspects) razorbill displacement at Farne Islands (section 5, **REP-228**). This information applied the same methodology developed and agreed between the Applicant and NE during the examination of Dogger Bank Creyke Beck Offshore Wind Farm to the proposed development.
- In Section 5 of **REP-228**, the Applicant provided revised figures which allowed NE to consider the predicted mortality figures as a year-on-year by comparison to potential biological removal (PBR) thresholds. The Applicant also produced revised calculations based on a fixed level of displacement throughout the 2km buffer zone (and NE confirmed that a 2km buffer was an appropriate buffer-size for species of concern present in the Dogger Bank zone).
- In their submission at Deadline V in their written summary of their position put at the first biodiversity ISH (**REP-286**), NE confirmed that, whilst areas of disagreement remain (paragraphs 4.19 – 4.25), *"Displacement tables have been*

presented with several variations to reflect the risk-based approach recommended by Natural England. This includes the use of displacement rates of 30%, 50% and 70% with mortality rates of 5% and 10%" (paragraph 4.20).

In respect of displacement of razorbill at the Farne Islands SPA, NE conclude at paragraph 4.61 of **REP-286** that *"no adverse effect on integrity of the Farne Islands SPA would occur from displacement of Razorbill at Dogger Bank Teesside A & B alone or in combination with other windfarms considered in the assessment"*.

NE's conclusion was also repeated at Table 2.1 of **REP-310** submitted at Deadline VI as part of NE's written submission following the second biodiversity and natural environment ISH.

The Applicant updated the apportioning values used for razorbill at the Farne Islands SPA in line with the finalised Biologically Defined Minimum Population Scales (BDMPS) report (**REP-356**). For the most precautionary displacement mortality scenario (70% displacement and 10% variable mortality) a total loss of 3.6 adult birds was predicted. This value has not changed at Deadline VII in light of NE's further comments on the Applicant's Deadline VI submission (section 4 of **REP-448** and Applicant's Deadline VII Appendix 1 **REP-404**). This value is less than the PBR threshold of 13 birds (at $f = 0.3$) used by NE against which to judge the potential displacement impact.

At Annex B of NE's Deadline VII submission (**REP-450**) on advice on the Applicant's apportioning updates and final HRA Ornithology In-combination Tables, they state *"Natural England can confirm that in the case of the Farne Islands SPA these revisions [after the revised BDMPS work], being downwards make no difference to the conclusions [no AEOI] provided at Deadline V"* (paragraph 1.37).

- m. Barrier effects are discussed in paragraphs 6.6.73 to 6.6.95 of **APP-049** and summarised for individual SPA's / pSPA's in **APP-050**. The conclusion of no AEOI in terms of barrier effects has not been disputed during the examination in relation to any European sites or qualifying features.

Item 4-E-9 of the Statement of Common Ground between the Applicant and NE on offshore matters (**REP-079**) states *"It is agreed that there are no outstanding concerns regarding the assessment of barrier effects at a project alone and cumulative or in-combination level"*.

- n. Matrix A48 (**REP-357**) (and updated in **REP-408**) states that the Dogger Bank Teesside A & B project is outside the maximum foraging range of black-legged kittiwake (230km) that could derive from the Farne Islands SPA. Apportioning of the annual collision estimate during the breeding season attributes a collision loss of 1.12 adults representing 0.01% of the SPA population (Table A9.35d in Appendix 9 of **APP-094**). In total the loss of adult birds through collision at this SPA would represent an increase in the background mortality of 0.17%.

In section 6.5, table 1 of its written representations (**REP-132**), NE outlined concerns in relation the conclusion of no adverse effect on integrity (project both alone and in-combination) associated with black-legged kittiwake collisions at the Farne Islands SPA, associated with the Applicant's use of the Extended Band Model (Option 3) (NE recommended further assessment of Band model Option 2 should be presented and used).

At Deadline IV, the Applicant provided updated information in respect of apportioning of ornithological impacts to protected sites (**REP-228**). This information took the form of updated in combination assessment tables for (among

other aspects) black-legged kittiwake collision risk at the Farne Islands SPA (section 3, **REP-228**). This information applied the same methodology developed and agreed between the Applicant and NE during the examination of Dogger Bank Creyke Beck Offshore Wind Farm to the proposed development.

In Section 3 of **REP-228**, the Applicant provided revised figures for the assessment of collision risk. For each of the tables, two versions of modelled output were provided: NE's view, and the Applicant's view. The NE view was based on guidance and their advice, whereas the Applicant considered this to be overly precautionary as it required the use of a 98% avoidance rate for all species, the use of the 'basic Band model' (option 1/2) and the exclusion of consideration of refined designs for some offshore wind farm projects (paragraph 1.1.5 of **REP-228**).

The difference between the Applicant's view and NE's view on the collision risk assessment methodology is outlined further in paragraph 2.1.1 of **REP-228**. The Applicant provides data in tables 2.1 – 2.8 which are based on: use of the 'basic' Band model Option 1 / 2; a 98% avoidance rate (for all species where dispute between NE and the Applicant arose); and with no allowance made for changes to project parameters for submitted / consented projects. The Applicant's view is that this assessment remains overly precautionary, as set out in section 2.1 of their Comments on NE's Written Representation, submitted at Deadline IV (**REP-206**).

In their submission at Deadline V in their written summary of their position put at the first biodiversity ISH (**REP-286**), NE confirmed that, whilst areas of disagreement remain, "*Natural England is content that it has been able to base its advice on the former approach [using one of the Basic Band Models (1 or 2) and using a 98% avoidance rate]*" (paragraphs 4.8 and 4.9 of **REP-286**).

In paragraph 1.13 of **REP-286**, NE accepts the avoidance rates of 99% for both northern gannet and black-legged kittiwake for use with the Basic Band model, and has formed its advice on that basis. This is in response to the results from a recently published report on avoidance rates, by Marine Scotland Science (NE's position is set out in section 5 of **REP-286**).

In respect of black legged kittiwake collisions at the Farne Islands SPA, NE conclude at paragraph 4.44 of **REP-286** "*no adverse effect on integrity of the Farne Islands SPA arising from kittiwake collision mortality, either alone or in combination.*"

NE's conclusion was also repeated at Table 2.1 of **REP-310** submitted at Deadline VI as part of NE's written submission following the second biodiversity and natural environment ISH.

The Applicant updated the apportioning values used for black-legged kittiwake in line with the finalised BDMPS report (**REP-355**). The calculated adult loss (in-combination) was 30 birds (**REP-358**). This is less than the precautionary PBR threshold adopted by NE (Table 2.1 of **REP-310**). The adult collision mortality figure was revised again by the Applicant following advice from NE at the Issue Specific Hearing on the 3rd December 2014 (**HR-035 – HR-038**) and the revised adult collision mortality figure remained at 30 adult birds (see Applicant's Deadline VII Appendix 1 **REP-404**).

At paragraph 1.8 of Annex B of NE's Deadline VII submission (**REP-450**) on advice on the Applicant's apportioning updates and final HRA Ornithology In-combination Tables, they state "*Natural England can confirm that the revisions [after the revised BDMPS work] to the figures do not alter the conclusions [no AEOI] provided at Deadline V*".

- o. In relation to puffin, razorbill and guillemot at the Farne Islands SPA, the Applicant does not predict significant effects in terms of collision risk (section 6.6, paragraph 6.6.106, and Table 6.26 of **REP-049**). In response to ExQ1 no. 2.18 (bird species of concern in relation to collision risk) (**PD-023**), puffin, razorbill and guillemot were not raised by any Interested Parties (including NE (**REP-132**) and RSPB (**REP-166**)), and the conclusions of no adverse effect on integrity have not been disputed during the examination.
- p. In combination impacts are discussed and assessed in Section 7.8 of **REP-049**. Specific assessment of in combination impacts for the species screened in for all SPA's / pSPA's is provided in **REP-053**. The projects included in the Applicant's in combination assessment were disputed by NE and their concerns in respect of ornithological matters outlined in paragraphs 3.3.33 – 3.3.37 of Annex E of their written representations (Expert Report on offshore ornithology, **REP-132**). These concerns surrounded the exclusion of wind farms from the in combination assessment that were commissioned and operational before the start of bird monitoring for Dogger Bank Teesside A & B. NE also stated at paragraph 3.3.89 of Annex E of their written representations (**REP-132**) that "*the Applicant has not used consistent models and parameters, for example Band Option and avoidance rate used, which makes it extremely challenging to draw conclusions on the significance of impact from the in-combination assessment*". NE therefore requested that the Applicant provided 'common currency' tables to address these points (paragraph 3.3.90). Following agreement between the Applicant and NE, that the in combination assessment for the application should be updated to reflect the revised apportioning approach (for the sites and species of concern) developed during the examination of Dogger Bank Creyke Beck, the Applicant applied the revised apportioning approach to provide "*updated in-combination tables for the key sites and species of concern identified within the HRA, and as agreed with Natural England*" (Appendix 25 of the Applicant's Deadline IV submission, **REP-228**). The Applicant's submission also included an additional offshore wind project, Navitus Bay, "*for which information on impacts such as collision mortality are now available*" and confirmation that the Applicant has agreed this project should now be included in the in combination assessment (paragraph 1.1.3 of **REP-228**). This document also addressed NE's concerns in relation to Band model options for collision risk (paragraph 1.1.5) and in relation to displacement and scaled mortality rates (paragraph 1.1.6). In each case, the Applicant provided a range of assessment scenarios to covering their position as well as that advised by NE. NE in their written summary of their oral submission put at the first ISH on HRA and natural environment matters on 14 October 2014 (paragraph 1.19 of **REP-286**), confirmed their agreement with the revised projects for inclusion within the Applicant's in combination assessment. Following the submission of Deadline IV Appendix 25 (**REP-228**), the draft report on Biologically Defined Minimum Population Scales (BDMPS) commissioned by NE was finalised (section 6 of **REP-286**). As the draft report had been used to derive the original apportioning figures and some minor amendments had been made that affected the overall apportioning figures, it was agreed that the Applicant should update Deadline IV Appendix 25 to reflect the final version. The updated in combination tables were provided by the Applicant at Deadline VI (**REP-358**).

In response to the Applicant's Deadline V submissions, NE confirm at paragraph 1.2 of their Deadline VI submission (**REP-310**) that "*all previous offshore ornithological disagreements are now agreed*". Paragraph 2.48 takes this further with NE stating that "*Regarding the Applicant's HRA, based on the information submitted up to and including Deadline V, Natural England agrees with the Applicant that, if built, Dogger Bank Teesside A & B will not cause an Adverse Effect on any SPA/pSPA site and its seabird features*". Table 2.1 of **REP-310** outlines NE's position for the sites and species of concern, and in respect of the Flamborough and Filey Coast pSPA, agrees with the Applicant's conclusion of no adverse effect on integrity for the project alone and in combination.

Stage 2 Matrix 3: Flamborough and Filey Coast pSPA

Site Code: UK9006101

Distance to project: 55km (Export Cable Corridor) and 163km (offshore wind farm)³⁴

European site features	Adverse effect on integrity														
	Habitat loss / alteration (prey resources)			Disturbance / displacement			Habitat loss (barrier effect)			Physical Damage (collision risk)			In combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Black legged Kittiwake	X a,b	X a,c	X a,d	X e	X e	X e,d	n/a	X m	n/a	n/a	X n	n/a	X q,e	X q,e,n	X q,d,n
Common guillemot	X a,b	X a,c	X a,d	X f	X g	X f,d	n/a	X m	n/a	n/a	X o	n/a	X q,f	X q,g	X q,g,d
Northern gannet	X a,b	X a,c	X a,d	X h	X h	X h,d	n/a	X m	n/a	n/a	X p	n/a	X q,h	X q,h,p	X q,d,p
Puffin	X a,b	X a,c	X a,d	X i	X j	X i,d	n/a	X m	n/a	n/a	X o	n/a	X q,i	X q,j	X q,j,d
Razorbill	X a,b	X a,c	X a,d	X k	X l	X k,d	n/a	X m	n/a	n/a	X o	n/a	X q,k	X q,l	X q,l,d

Notes:

- a. In matrix A54 of **REP-357** and Matrix A54A of **REP-408**, the Applicant states that the development would not have any direct effect on supporting habitat features within the designated SPA, but that changes in habitat conditions as a result of development could potentially influence prey resource availability and the energetics and behaviour of birds that may form part of the pSPA population.

In section 3.3 of their Written Representation (**REP-132**), NE did not raise the effects of habitat loss / alteration on the

³⁴ Distances to the project for the site are taken from the Applicant's Stage 2 HRA matrix A54 originally submitted as part of the Application documents (**APP-056**) and updated at Deadline VI (**REP-360**) and Deadline VII (matrix A54A, **REP-408**).

prey resources of any seabird species as one of the "*significant ornithological issues identified*".

Section 4-E-8 of the Statement of Common Ground between the Applicant and NE on offshore matters (**REP-079**) records agreement of the habitat loss or alteration impacts associated with the construction, operation and decommissioning of Dogger Bank Teesside A & B in EIA terms, but no such conclusions are expressed in terms of HRA. In response to the Applicant's Deadline V submissions, NE confirm at paragraph 2.48 of their Deadline VI submission (**REP-310**) that "*Regarding the Applicant's HRA, based on the information submitted up to and including Deadline V, Natural England agrees with the Applicant that, if built, Dogger Bank Teesside A & B will not cause an Adverse Effect on any SPA/pSPA site and its seabird features*".

- b. Determination of the impacts of the various effects of the project on the prey resources available to all seabird species during the construction phase is described in paragraphs 6.5.2 to 6.5.32 of **APP-049**. The Applicant's conclusions in terms of effect on integrity have not been disputed during the examination.
- c. Effects of the operational phase on prey resources and habitat utilisation by all seabird species is described in paragraphs 6.6.2-6.6.39 of **APP-049**. The Applicant's conclusions in terms of effect on integrity have not been disputed during the examination.
- d. For the purposes of their environmental assessment, the Applicant has assumed that the same effects that would arise during construction would also manifest during decommissioning of the Application (paragraph 2.3.28 & Table 2.2: Realistic worst case scenario for the assessment of impacts on European sites and their features, **APP-049**). The Applicant's approach to the assessment of effects during decommissioning has not been disputed during the examination (although it is noted that where construction effects have been identified in terms of particular species, these are effectively carried forwards in terms of relevance to decommissioning).
- e. The Applicant does not predict any displacement impact associated with proposed development for black-legged kittiwake during construction or operation (paragraph 6.3.34, **APP-049**).
In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), NE did not list black legged kittiwake as such a species (**REP-132**). RSPB's response to the same question (**REP-166**) also did not list black legged kittiwake as a species of concern.
The Applicant's conclusions in terms of no adverse effect on integrity have therefore not been disputed during the examination.
- f. A precautionary displacement rate of 50% and mortality rate of 5% was defined by the Applicant for common guillemot (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the pSPA in Tables A9.38a-d in Appendix 9 of **APP-094**)
In paragraph 6.3.39 of **APP-049** and matrix A54 of **REP-357** and matrix A54A of **REP-408**, the Applicant notes displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle

of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project.

At the first ISH on biodiversity and natural environment matters (**HR-005 – HR-008**), NE concluded the construction phase will have no significant effect on common guillemot. For species of auk that could be susceptible to displacement and associated mortality, NE state that, in terms of construction the effects *"are predicted to be smaller than those predicted during the operational phase and over a smaller period of time"* (paragraph 1.10, **REP-286**).

- g. The operational impact of displacement for common guillemot is set out in Section 6.6 of **APP-049**. A precautionary displacement rate of 50% and mortality rate of 5% has been defined by the Applicant (paragraphs 6.3.26 - 6.3.57, **APP-049**). The Applicant's approach included variable displacement rates in two bands of distance from the wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**).

At section 6.5 of their relevant representations, NE raised concerns over displacement effects on common guillemot associated with the proposed development (**REP-132**), particularly in relation to the use of a variable displacement rate across the wind farm development zone and buffer, and advised that *"displacement effects should be assessed at a constant rate within the defined buffer area until such time that evidence suggests otherwise"*. NE also disagreed with the Applicant's assertion that displacement effect should be viewed as a one off loss, and would not be repeated annually (NE's view is that displacement should be a year on year impact, paragraph 1.16 of **REP-286**).

At deadline IV, the Applicant provided updated information in respect of apportioning of ornithological impacts to protected sites (**REP-228**). This information took the form of updated in combination assessment tables for (among other aspects) common guillemot displacement at the Flamborough and Filey Coast pSPA (section 4, **REP-228**). This information applied the same methodology developed and agreed between the Applicant and NE during the examination of Dogger Bank Creyke Beck Offshore Wind Farm to the proposed development.

In Section 4 of **REP-228**, the Applicant provided revised figures which allowed NE to consider the predicted mortality figures as a year-on-year by comparison to potential biological removal (PBR) thresholds. The Applicant also produced revised calculations based on a fixed level of displacement throughout the 2km buffer zone (and NE confirmed that a 2km buffer was an appropriate buffer-size for species of concern present in the Dogger Bank zone).

In their submission at Deadline V in their written summary of their position put at the first biodiversity ISH (**REP-286**), NE confirmed that, whilst areas of disagreement remain (paragraphs 4.19 – 4.25), *"Displacement tables have been presented with several variations to reflect the risk-based approach recommended by Natural England. This includes the use of displacement rates of 30%, 50% and 70% with mortality rates of 5% and 10%"* (paragraph 4.20).

In respect of displacement of common guillemot at the Flamborough and Filey Coast pSPA, NE conclude at paragraph 4.51 of **REP-286** that *"no adverse effect on integrity of the FFC pSPA would occur from displacement of Guillemots at Dogger Bank Teesside A & B alone and in combination with other windfarms considered in the assessment"*.

NE's conclusion was also repeated at Table 2.1 of **REP-310** submitted at Deadline VI as part of NE's written submission following the second biodiversity and natural environment ISH. However, Table 2.1 of **REP-310** suggests that under the worst case in combination scenario (70% displacement / 10% mortality), mortality of 1,052 adults exceeds the PBR (**REP-310**). However, NE state that "*As this threshold is exceeded only under the worst case scenario on balance can conclude No AEOI alone and in combination*" (**REP-310**).

The Applicant updated the apportioning values used for common guillemot in line with the finalised BDMPS report (**REP-356**). For the most precautionary displacement mortality scenario (70% displacement and 10% variable mortality) a total loss of 581 adult birds is predicted (**REP-358**). This is less than the PBR threshold of 970 birds (at $f = 0.3$) used by NE against which to judge the potential displacement impact. Further refinement of this mortality value has been undertaken, again following advice from Natural England given orally at the Issue Specific Hearing on the 3rd December 2014 (**REP-448**) and the revised adult mortality figure is calculated as 622 birds (see Applicant's Deadline VII Appendix 1, **REP-404** and Matrix A54A of **REP-408**). This value is below the PBR threshold of 970 adult birds (Table 2.1 of **REP-310**).

NE note at paragraph 1.31 of Annex B to their Deadline VII submission (**REP-450**) "*that the downward revision in the case of the FFC pSPA is incorrect in that Table 4.2 of Deadline VI Final HRA ornithology in combination tables [REP-358] still omits figures for any of the windfarms in the northern North Sea...This is an omission which means the current value of 581 cannot be relied upon*". No further comment is made in their Deadline VII submissions regarding the validity of their Deadline V conclusions (**REP-310**). It is therefore unclear whether the conclusions of no AEOI reached by NE at Deadline V (**REP-286**) and Deadline VI (**REP-310**) still apply in light of their submission at Deadline VII (**REP-450**).

In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), RSPB highlighted common guillemot at the Flamborough and Filey Coast as such a species (**REP-166**). In their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over "*the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement, specifically Flamborough Head and Filey Coast pSPA / Flamborough Head and Bempton Cliffs SPA*". The RSPB state that "*the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement*". The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that "*when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values*" (paragraph 2.3.3).

In response to ExQ2 no. 2.8 (**PD-036**), RSPB maintain their position of disagreement that displacement represents a one-off impact (i.e. it should be treated as ongoing throughout the lifetime of the wind farm), and that it "*strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme*" (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**).

At Deadline VII, RSPB "*maintains its position as set out in our previous representations – in particular our Statement of Common Ground with Forewind and our response to the Examining Authority's Second Written Questions*" (**REP-446**).

They also state that "*a likely significant effect cannot be excluded for guillemot and razorbill*" (**REP-446**), and it is assumed that this relates to all sites where these features were identified as being contentious in their statement of common ground (**REP-085**).

- h. The Applicant discusses displacement of northern gannet at paragraphs 6.3.33, 6.3.35, 6.3.53, and 6.3.54 (**APP-049**). A 75% displacement rate has been adopted by the Applicant as described at paragraph 6.3.35, and the Applicant concludes a 0% mortality rate in terms of displacement of northern gannet for the project alone. In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), NE listed northern gannet as such a species (**REP-132**), and paragraph 6.5.26 of their written representation (**REP-132**) states that NE had concerns about the conclusion of no adverse effect on integrity "*due to collision mortality of gannets at Dogger Bank Teesside A & B projects acting jointly with displacement mortality alone*". At the first ISH on biodiversity and natural environment issues (**HR-005 – HR-008**), NE did not discuss displacement of northern gannet at the Flamborough and Filey Coast pSPA as an area of outstanding concern. In their summary of the oral position put at this hearing, NE responded to provide their agreement with the Applicant's conclusion of no adverse effect on integrity in terms of collision risk (paragraph 4.33, **REP-286**) and not in terms of displacement. In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), RSPB did not raise northern gannet as such a species (**REP-166**)
- i. A precautionary displacement rate of 25% and mortality rate of 5% was defined by the Applicant for Atlantic puffin (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the pSPA in Tables A9.44a-d in Appendix 9 of **APP-094**. In paragraph 6.3.39 of **APP-049**, matrix A54 of **REP-357** and matrix A54A of **REP-408**, the Applicant notes displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project. At the first ISH on biodiversity and natural environment matters (**HR-005 – HR-008**), NE concluded the construction phase will have no significant effect on atlantic puffin. For species of auk that could be susceptible to displacement and associated mortality, NE state that, in terms of construction the effects "*are predicted to be smaller than those predicted during the operational phase and over a smaller period of time*" (paragraph 1.10, **REP-286**).
- j. The operational impact of displacement for puffin is set out in Section 6.6 (paragraphs 6.6.64 to 6.6.68) of **APP-049**. A precautionary displacement rate of 25% and mortality rate of 5% has been defined by the Applicant (paragraphs 6.3.26 - 6.3.57, **APP-049**). The Applicant's approach included variable displacement rates in two bands of distance from the wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**).

In paragraph 2.3 of their Relevant Representation (**REP-041**), NE / JNCC highlighted Puffin at the Flamborough and Filey Coast pSPA, and the Flamborough Head and Bempton Cliffs SPA as a species of concern in terms of HRA. However, NE subsequently did not raise puffin as a species of concern in HRA terms in their written representation or response to ExQ1 no. 2.13 (**REP-132**), or in section 1.2 of their Written Summary of the Oral Case at the first ISH (**REP-286**). However, NE did raise concerns over the assessment of displacement effects associated with the proposed development (**REP-132**), particularly in relation to the use of a variable displacement rate across the wind farm development zone and buffer, and advised that "*displacement effects should be assessed at a constant rate within the defined buffer area until such time that evidence suggests otherwise*". NE also disagreed with the Applicant's assertion that displacement effect should be viewed as a one off loss, and would not be repeated annually (NE's view is that displacement should be a year on year impact, paragraph 1.16 of **REP-286**).

In response to the Applicant's Deadline V submissions, NE confirm at paragraph 1.2 of their Deadline VI submission (**REP-310**) that "*all previous offshore ornithological disagreements are now agreed*". Paragraph 2.48 takes this further with NE stating that "*Regarding the Applicant's HRA, based on the information submitted up to and including Deadline V, Natural England agrees with the Applicant that, if built, Dogger Bank Teesside A & B will not cause an Adverse Effect on any SPA/pSPA site and its seabird features*".

In their Written Summary of the Oral Case put at the 3rd natural environment and biodiversity Issue-Specific Hearing (**HR-035 – HR-038**), NE stated that "*Puffin is neither a named feature nor an important component of the Flamborough and Filey Coast pSPA and as such, is not an HRA concern for Natural England*" (paragraph 1.14 of **REP-448**).

In response to ExQ1 no. 2.13 and 2.20, relating to the Applicants conclusions of no adverse effect on integrity and the species of concern in terms of displacement mortality respectively (**PD-023**), RSPB did not highlighted puffin at the Flamborough and Filey Coast pSPA as such a species (**REP-166**).

- k. A precautionary displacement rate of 50% and mortality rate of 5% was defined by the Applicant for razorbill (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the pSPA in Tables A9.41a-d in Appendix 9 of **APP-094**)
In paragraph 6.3.39 of **APP-049**, matrix A54 of **REP-357** and matrix A54A of **REP-408**, the Applicant notes displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project.
At the first ISH on biodiversity and natural environment matters (**HR-005 – HR-008**), NE concluded the construction phase will have no significant effect on razorbill. For species of auk that could be susceptible to displacement and associated mortality, NE state that, in terms of construction the effects "*are predicted to be smaller than those predicted during the operational phase and over a smaller period of time*" (paragraph 1.10, **REP-286**).

- I. The operational impact of displacement for razorbill is set out in Section 6.6 of **APP-049**. A precautionary displacement rate of 50% and mortality rate of 5% has been defined by the Applicant (paragraphs 6.3.26 - 6.3.57, **APP-049**). The Applicant's approach included variable displacement rates in two bands of distance from the wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**). At section 6.5 of their relevant representations, NE raised concerns over displacement effects on razorbill associated with the proposed development (**REP-132**), particularly in relation to the use of a variable displacement rate across the wind farm development zone and buffer, and advised that "*displacement effects should be assessed at a constant rate within the defined buffer area until such time that evidence suggests otherwise*". NE also disagreed with the Applicant's assertion that displacement effect should be viewed as a one off loss, and would not be repeated annually (NE's view is that displacement should be a year on year impact, paragraph 1.16 of **REP-286**).
- At Deadline IV, the Applicant provided updated information in respect of apportioning of ornithological impacts to protected sites (**REP-228**). This information took the form of updated in combination assessment tables for (among other aspects) razorbill displacement at the Flamborough and Filey Coast pSPA (section 4, **REP-228**). This information applied the same methodology developed and agreed between the Applicant and NE during the examination of Dogger Bank Creyke Beck Offshore Wind Farm to the proposed development.
- In Section 4 of **REP-228**, the Applicant provided revised figures which allowed NE to consider the predicted mortality figures as a year-on-year by comparison to potential biological removal (PBR) thresholds. The Applicant also produced revised calculations based on a fixed level of displacement throughout the 2km buffer zone (and NE confirmed that a 2km buffer was an appropriate buffer-size for species of concern present in the Dogger Bank zone).
- In their submission at Deadline V (written summary of their position put at the first biodiversity ISH (**REP-286**)), NE confirmed that, whilst areas of disagreement remain (paragraphs 4.19 – 4.25), "*Displacement tables have been presented with several variations to reflect the risk-based approach recommended by Natural England. This includes the use of displacement rates of 30%, 50% and 70% with mortality rates of 5% and 10%*" (paragraph 4.20).
- In respect of displacement of razorbill at the Flamborough and Filey Coast pSPA, NE conclude at paragraph 4.59 of **REP-286** that "*no adverse effect on integrity on the FFC pSPA would occur from displacement of Razorbill at Dogger Bank Teesside A & B alone or in combination with other windfarms considered in the assessment*".
- NE's conclusion was also repeated at Table 2.1 of **REP-310** submitted at Deadline VI as part of NE's written submission following the second biodiversity and natural environment ISH. However, Table 2.1 of **REP-310** suggests that under the worst case scenario in combination scenario (70% displacement / 10% mortality), mortality of 383 adults exceeds the PBR (**REP-310**). However, NE state that "*As this threshold is exceeded only under the worst case scenario on balance can conclude No AEOI alone and in combination*" (**REP-310**).
- The Applicant updated the apportioning values used for razorbill in line with the finalised BDMPS report (**REP-356**). For the most precautionary displacement mortality scenario (70% displacement and 10% variable mortality) a total loss of 321 adult birds was predicted (**REP-358**). This is less than the PBR threshold of 364 birds (at $f = 0.3$) used by NE against which to judge the potential displacement impact (Table 2.1, **REP-310**). Further refinement of this mortality

value was undertaken by the Applicant following advice from NE at the 3rd Issue Specific Hearing (**HR-035 – HR-038**). The revised adult mortality figure was calculated as 128 adult birds (Matrix A54A, **REP-408**). NE note at paragraph 1.38 of Annex B to their Deadline VII submission (**REP-450**) that *"the downward revision in the case of the FFC pSPA is incorrect in that Table 4.5 of Deadline VI Final HRA ornithology in combination tables still omits figures for any of the windfarms in the northern North Sea.... This is an omission which means the current value of 321 cannot be relied upon"*. No further comment is made in their Deadline VII submissions regarding the validity of their Deadline V conclusions (**REP-310**). It is therefore unclear whether the conclusions of no AEOI reached by NE at Deadline V (**REP-286**) and Deadline VI (**REP-310**) still apply in light of their submission at Deadline VII (**REP-450**). In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), RSPB highlighted razorbill at the Flamborough and Filey Coast as such a species (**REP-166**). In their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over *"the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement, specifically Flamborough Head and Filey Coast pSPA / Flamborough Head and Bempton Cliffs SPA"*. The RSPB state that *"the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement"*. The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that *"when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values."* (paragraph 2.3.3). In response to ExQ2 no. 2.8 (**PD-036**), RSPB maintain their position of disagreement that displacement represents a one-off impact (i.e. it should be treated as ongoing throughout the lifetime of the wind farm), and that it *"strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme"* (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**). At Deadline VII, RSPB *"maintains its position as set out in our previous representations – in particular our Statement of Common Ground with Forewind and our response to the Examining Authority's Second Written Questions"* (**REP-446**). They also state that *"a likely significant effect cannot be excluded for guillemot and razorbill"* (**REP-446**), and it is assumed that this relates to all sites where these features were identified as being contentious in their statement of common ground (**REP-085**).

- m. Barrier effects are discussed in paragraphs 6.6.73 to 6.6.95 of **APP-049** and summarised for individual SPA's / pSPA's in **APP-050**. The conclusion of no AEOI in terms of barrier effects has not been disputed during the examination in relation to any European sites or qualifying features. Item 4-E-9 of the Statement of Common Ground between the Applicant and NE on offshore matters (**REP-079**) states *"It is agreed that there are no outstanding concerns regarding the assessment of barrier effects at a project alone and cumulative or in-combination level"*.

- n. Matrix A54 (**REP-357**) and A54A (**REP-408**) states that the Dogger Bank Teesside A & B project is within the maximum foraging range of black-legged kittiwake (230km) that could derive from this pSPA. Apportioning of the annual collision estimate during the breeding season attributes a collision loss of 54.5 adults representing 0.06% of the SPA population (Table A9.35d in Appendix 9 of **APP-094**). For non-breeding birds (summer and winter), 12.6 birds lost through collision are attributed this pSPA, representing 0.01% of the designated SPA population (Table A9.35d in Appendix 9 of **APP-094** and paragraphs 6.6.123 to 6.6.127 of **APP-049**). In total the loss of adult birds through collision at this SPA would represent an increase in the background mortality of 1.34%, although a Potential Biological Removal (PBR) value of between 400 and 800 adult birds has been calculated for this species at the Flamborough and Filey Coast pSPA (paragraphs 6.6.128 to 6.6.133 of **APP-049**), and the Applicants view is that losses as a result of Dogger Bank Teesside A & B fall well below the lowest PBR value, and therefore there would be no adverse effect on integrity.
- In section 6.5, table 1 of its written representations (**REP-132**), NE outlined concerns in relation the conclusion of no adverse effect on integrity (project both alone and in-combination) associated with black-legged kittiwake collisions at the Flamborough and Filey Coast pSPA, associated with the Applicant's use of the Extended Band Model (Option 3) (NE recommended further assessment of Band model Option 2 should be presented and used).
- At Deadline IV, the Applicant provided updated information in respect of apportioning of ornithological impacts to protected sites (**REP-228**). This information took the form of updated in combination assessment tables for (among other aspects) black-legged kittiwake collision risk at the Flamborough and Filey Coast pSPA (section 2, **REP-228**). This information applied the same methodology developed and agreed between the Applicant and NE during the examination of Dogger Bank Creyke Beck Offshore Wind Farm to the proposed development.
- In Section 2 of **REP-228**, the Applicant provided revised figures for the assessment of collision risk. For each of the tables, two versions of modelled output were provided: NE's view, and the Applicant's view. The NE view was based on guidance and their advice, whereas the Applicant considered this to be overly precautionary as it required the use of a 98% avoidance rate for all species, the use of the 'basic Band model' (option 1/2) and the exclusion of consideration of refined designs for some offshore wind farm projects (paragraph 1.1.5 of **REP-228**).
- The difference between the Applicant's view and NE's view on the collision risk assessment methodology is outlined further in paragraph 2.1.1 of **REP-228**. The Applicant provides data in tables 2.1 – 2.8 which are based on: use of the 'basic' Band model Option 1 / 2; a 98% avoidance rate (for all species where dispute between NE and the Applicant arose); and with no allowance made for changes to project parameters for submitted / consented projects. The Applicant's view is that this assessment remains overly precautionary, as set out in section 2.1 of their Comments on NE's Written Representation, submitted at Deadline IV (**REP-206**).
- In their submission at Deadline V in their written summary of their position put at the first biodiversity ISH (**REP-286**), NE confirmed that, whilst areas of disagreement remain, "*Natural England is content that it has been able to base its advice on the former approach [using one of the Basic Band Models (1 or 2) and using a 98% avoidance rate]*" (paragraphs 4.8 and 4.9 of **REP-286**).
- In paragraph 1.13 of **REP-286**, NE accepts the avoidance rates of 99% for both northern gannet and black-legged

kittiwake for use with the Basic Band model, and has formed its advice on that basis. This is in response to the results from a recently published report on avoidance rates, by Marine Scotland Science (NE's position is set out in section 5 of **REP-286**).

In respect of black legged kittiwake collisions at the Flamborough and Filey Coast pSPA, NE conclude at paragraph 4.42 of **REP-286** that *"Accepting an avoidance rate of 99%, Natural England are able to conclude that there would be no adverse effect on integrity on the FFC pSPA arising from kittiwake collision mortality alone or in combination on the basis of both the PBR and PVA analyses available"*.

NE's conclusion was also repeated at Table 2.1 of **REP-310** submitted at Deadline VI as part of NE's written submission following the second biodiversity and natural environment ISH.

The Applicant updated the apportioning values used for black-legged kittiwake in line with the finalised BDMPS report (**REP-355**). The calculated adult loss (in-combination) was 372 birds (**REP-358**). This is less than the precautionary PBR and PVA thresholds adopted by NE (Table 2.1 of **REP-310**). At paragraph 1.8 of At Annex B of NE's Deadline VII submission (**REP-450**) on advice on the Applicant's apportioning updates and final HRA Ornithology In-combination Tables, they state *"Natural England can confirm that the revisions [after the revised BDMPS work] to the figures do not alter the conclusions [no AEOI] provided at Deadline V"*.

In response to ExQ1 no. 2.18 (bird species of concern in relation to collision risk) and 2.19 (use of Band modelling approach) (**PD-023**), RSPB highlighted black-legged kittiwake at the Flamborough and Filey Coast pSPA as a species of concern, and also stated that RSPB *"continues to have concerns about the use of Option 3 of the Band modelling approach"*.

In their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over *"the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement, specifically Flamborough Head and Filey Coast pSPA / Flamborough Head and Bempton Cliffs SPA"*. The RSPB state that *"the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement"*. The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that *"when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values."* (paragraph 2.3.3).

In response to ExQ2 no. 2.8 (**PD-036**), RSPB outline their position of disagreement with the avoidance rates presented in the Marine Science Scotland Report: *"Until the evidence base improves to include robust data on the behaviour of breeding gannets we consider that the avoidance rate for breeding should remain at 98%, and will only accept the 99% rate outside the breeding season"* (**REP-304**). RSPB also maintain that it *"strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme"* (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**).

At Deadline VII, RSPB "*maintains its position as set out in our previous representations – in particular our Statement of Common Ground with Forewind and our response to the Examining Authority's Second Written Questions*" (**REP-446**).

- o. In relation to puffin, razorbill and guillemot at the Flamborough and Filey Coast pSPA, the Applicant does not predict significant effects in terms of collision risk (section 6.6, paragraph 6.6.106, and Table 6.26 of **REP-049**). In response to ExQ1 no. 2.18 (bird species of concern in relation to collision risk) (**PD-023**), puffin, razorbill and guillemot were not raised by any Interested Parties (including NE (**REP-132**) and RSPB (**REP-166**)), and the conclusions of no adverse effect on integrity have not been disputed during the examination.
- p. Matrix A54 (**REP-357**) and A54A (**REP-408**) states that the Dogger Bank Teesside A & B project is within the maximum foraging range of northern gannet (230km) that could derive from this pSPA. Apportioning of the annual collision estimate during the breeding season attributes a collision loss of 7.1 adults representing 0.03% of the SPA population (Table A9.33d in Appendix 9 of **APP-094**). For non-breeding birds (summer and winter), 3.1 birds lost through collision are attributed this pSPA, representing 0.01% of the designated SPA population (Table A9.33d in Appendix 9 of **APP-094** and paragraphs 6.6.109 to 6.6.114 of **APP-049**). In total the loss of adult birds through collision at this SPA would represent an increase in the background mortality of 0.79%, although a Potential Biological Removal (PBR) value of between 286 and 393 adult birds has been calculated for this species at the Flamborough and Filey Coast pSPA (paragraphs 6.6.128 to 6.6.133 of **APP-049**), and the Applicants view is that losses as a result of Dogger Bank Teesside A & B fall well below the lowest PBR value, and therefore there would be no adverse effect on integrity. In section 6.5, table 1 of its written representations (**REP-132**), NE outlined concerns in relation the conclusion of no adverse effect on integrity (project both alone and in-combination) associated with northern gannet collisions at the Flamborough and Filey Coast pSPA, associated with the Applicant's use of the Extended Band Model (Option 3) (NE recommended further assessment of Band model Option 2 should be presented and used). At Deadline IV, the Applicant provided updated information in respect of apportioning of ornithological impacts to protected sites (**REP-228**). This information took the form of updated in combination assessment tables for (among other aspects) northern gannet collision risk at the Flamborough and Filey Coast pSPA (section 2, **REP-228**). This information applied the same methodology developed and agreed between the Applicant and NE during the examination of Dogger Bank Creyke Beck Offshore Wind Farm to the proposed development. In Section 2 of **REP-228**, the Applicant provided revised figures for the assessment of collision risk. For each of the tables, two versions of modelled output were provided: NE's view, and the Applicant's view. The NE view was based on guidance and their advice, whereas the Applicant considered this to be overly precautionary as it required the use of a 98% avoidance rate for all species, the use of the 'basic Band model' (option 1/2) and the exclusion of consideration of refined designs for some offshore wind farm projects (paragraph 1.1.5 of **REP-228**). The difference between the Applicant's view and NE's view on the collision risk assessment methodology is outlined further in paragraph 2.1.1 of **REP-228**. The Applicant provides data in tables 2.1 – 2.8 which are based on: use of the 'basic' Band model Option 1 / 2; a 98% avoidance rate (for all species where dispute between NE and the Applicant

arose); and with no allowance made for changes to project parameters for submitted / consented projects. The Applicant's view is that this assessment remains overly precautionary, as set out in section 2.1 of their Comments on NE's Written Representation, submitted at Deadline IV (**REP-206**).

In their submission at Deadline V in their written summary of their position put at the first biodiversity ISH (**REP-286**), NE confirmed that, whilst areas of disagreement remain, "*Natural England is content that it has been able to base its advice on the former approach[using one of the Basic Band Models (1 or 2) and using a 98% avoidance rate]*" (paragraphs 4.8 and 4.9 of **REP-286**).

In paragraph 1.13 of **REP-286**, NE accepts the avoidance rates of 99% for both northern gannet and black-legged kittiwake for use with the Basic Band model, and has formed its advice on that basis. This is in response to the results from a recently published report on avoidance rates, by Marine Scotland Science (NE's position is set out in section 5 of **REP-286**).

In respect of northern gannet collisions at the Flamborough and Filey Coast pSPA, NE conclude at paragraph 4.33 of **REP-286** that "*Given that the predicted additional mortality is below both the PBR and importantly also below the more precautionary PVA figures, Natural England can conclude that evidence suggests that there would be no adverse effect on integrity on the FFC pSPA from collision mortality of gannets either alone or in combination*".

NE's conclusion was also repeated at Table 2.1 of **REP-310** submitted at Deadline VI as part of NE's written submission following the second biodiversity and natural environment ISH.

The Applicant updated the apportioning values used for the gannet population at Flamborough Head and Filey Coast pSPA in line with the finalised BDMPS report (**REP-354**). The calculated adult loss (in-combination) was 177 birds (**REP-358**). This is less than the precautionary PBR and PVA thresholds adopted by NE (see Table 2.1 of **REP-310**). Further refinement of this collision mortality was undertaken following advice from NE at the 3rd Issue Specific Hearing on natural environment and biodiversity matters (**HR-035 – HR-038**) (relating to the inclusion of north-west SPA colonies of gannet). The recalculated total adult mortality loss taking account of the exclusion of these north-west colonies is 179 adult birds (**REP-404** and matrix A54A of **REP-408**). This value is still less than the precautionary PBR and PVA thresholds adopted by NE (Table 2.1 of **REP-310**).

At paragraphs 1.20 and 1.21 of **REP-450**, NE "*confirm that these revisions, being downwards, as they stand, make no difference to the conclusions provided at Deadline V...However, Natural England remains unclear as to whether the update provided is indeed in line with what might be expected in the light of the revised BDMPS report*".

In response to ExQ1 no. 2.18 (bird species of concern in relation to collision risk) and 2.19 (use of Band modelling approach) (**PD-023**), RSPB highlighted northern gannet at the Flamborough and Filey Coast pSPA as a species of concern, and also stated that RSPB "*continues to have concerns about the use of Option 3 of the Band modelling approach*".

In their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over "*the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement, specifically Flamborough Head and Filey Coast pSPA / Flamborough Head and Bempton Cliffs SPA*". The RSPB state that

"the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement". The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that *"when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values."* (paragraph 2.3.3).

In response to ExQ2 no. 2.8 (**PD-036**), RSPB outline their position of disagreement with the avoidance rates presented in the Marine Science Scotland Report: *"Until the evidence base improves to include robust data on the behaviour of breeding gannets we consider that the avoidance rate for breeding should remain at 98%, and will only accept the 99% rate outside the breeding season"* (**REP-304**). RSPB also maintain that it *"strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme"* (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**).

At Deadline VII, RSPB *"maintains its position as set out in our previous representations – in particular our Statement of Common Ground with Forewind and our response to the Examining Authority's Second Written Questions"* (**REP-446**).

- q. In combination impacts are discussed and assessed in Section 7.8 of **REP-049**. Specific assessment of in combination impacts for the species screened in for all SPA's / pSPA's is provided in **REP-053**.

The projects included in the Applicant's in combination assessment were disputed by NE and their concerns in respect of ornithological matters outlined in paragraphs 3.3.33 – 3.3.37 of Annex E of their written representations (Expert Report on offshore ornithology, **REP-132**). These concerns surrounded the exclusion of wind farms from the in combination assessment that were commissioned and operational before the start of bird monitoring for Dogger Bank Teesside A & B. NE also stated at paragraph 3.3.89 of Annex E of their written representations (**REP-132**) that *"the Applicant has not used consistent models and parameters, for example Band Option and avoidance rate used, which makes it extremely challenging to draw conclusions on the significance of impact from the in-combination assessment"*. NE therefore requested that the Applicant provided 'common currency' tables to address these points (paragraph 3.3.90).

Following agreement between the Applicant and NE, that the in combination assessment for the application should be updated to reflect the revised apportioning approach (for the sites and species of concern) developed during the examination of Dogger Bank Creyke Beck, the Applicant applied the revised apportioning approach to provide *"updated in-combination tables for the key sites and species of concern identified within the HRA, and as agreed with Natural England"* (Appendix 25 of the Applicant's Deadline IV submission, **REP-228**).

The Applicant's submission also included an additional offshore wind project, Navitus Bay, *"for which information on impacts such as collision mortality are now available"* and confirmation that the Applicant has agreed this project should now be included in the in combination assessment (paragraph 1.1.3 of **REP-228**). This document also addressed NE's concerns in relation to Band model options for collision risk (paragraph 1.1.5) and in relation to displacement and scaled mortality rates (paragraph 1.1.6). In each case, the Applicant provided a range of assessment scenarios to covering their

position as well as that advised by NE.

NE in their written summary of their oral submission put at the first ISH on HRA and natural environment matters on 14 October 2014 (paragraph 1.19 of **REP-286**), confirmed their agreement with the revised projects for inclusion within the Applicant's in combination assessment.

Following the submission of Deadline IV Appendix 25 (**REP-228**), the draft report on Biologically Defined Minimum Population Scales (BDMPS) commissioned by NE was finalised (section 6 of **REP-286**). As the draft report had been used to derive the original apportioning figures and some minor amendments had been made that affected the overall apportioning figures, it was agreed that the Applicant should update Deadline IV Appendix 25 to reflect the final version. The updated in combination tables were provided by the Applicant at Deadline VI (**REP-358**).

In response to the Applicant's Deadline V submissions, NE confirm at paragraph 1.2 of their Deadline VI submission (**REP-310**) that "*all previous offshore ornithological disagreements are now agreed*". Paragraph 2.48 takes this further with NE stating that "*Regarding the Applicant's HRA, based on the information submitted up to and including Deadline V, Natural England agrees with the Applicant that, if built, Dogger Bank Teesside A & B will not cause an Adverse Effect on any SPA/pSPA site and its seabird features*". Table 2.1 of **REP-310** outlines NE's position for the sites and species of concern, and in respect of the Flamborough and Filey Coast pSPA, agrees with the Applicant's conclusion of no adverse effect on integrity for the project alone and in combination.

Stage 2 Matrix 4: Flamborough Head and Bempton Cliffs SPA³⁵

Site Code: UK9006101

Distance to project: 55km (Export Cable Corridor) and 163km (offshore wind farm)³⁶

European site features	Adverse effect on integrity														
	Habitat loss / alteration (prey resources)			Disturbance / displacement			Habitat loss (barrier effect)			Physical Damage (collision risk)			In combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Black legged kittiwake	X a,b	X a,c	X a,d	X e	X e	X e,d	n/a	X m	n/a	n/a	X n	n/a	X q,e	X q,e,n	X q,d,n
Common guillemot	X a,b	X a,c	X a,d	X f	X g	X f,d	n/a	X m	n/a	n/a	X o	n/a	X q,f	X q,g	X q,d,g
Northern gannet	X a,b	X a,c	X a,d	X h	X h	X h,d	n/a	X m	n/a	n/a	X p	n/a	X q,h	X q,h,p	X q,d,p
Puffin	X a,b	X a,c	X a,d	X i	X j	X i,d	n/a	X m	n/a	n/a	X o	n/a	X q,i	X q,j	X q,d,j
Razorbill	X a,b	X a,c	X a,d	X k	? l	X l,d	n/a	X m	n/a	n/a	X o	n/a	X q,k	X q,l	X q,d,l

³⁵ In July 2013, NE began formal consultation on the extension of the Flamborough Head and Bempton Cliffs SPA. At that stage the extension became a potential SPA and was renamed Flamborough and Filey Coast pSPA. The pSPA is based on a revised site boundary, revised interest features and new reference populations. During the pre-application stages of the Dogger Bank Teesside A & B application NE advised the Applicant of the proposed site alterations, and NE are of the view that they have been appropriately included in their assessments (Footnote 56 of NE/JNCC's Written Representations **REP-132**).

Flamborough and Filey Coast pSPA has superseded the previous designation of Flamborough Head and Bempton Cliffs SPA and the Applicant was instructed by NE to use the pSPA qualifying features as the basis of their assessment (section 3.2 of Annex E: Expert Report on offshore ornithology (**REP-132**)). However, NE also note that until the status of the pSPA boundaries have been confirmed, it is necessary, under Habitat Regulations, that both the designations of the original SPA and new pSPA designations are both considered in the assessment (section 3.2 of Annex E: Expert Report on offshore ornithology (**REP-132**)).

³⁶ Distances to the project for the site are taken from the Applicant's Stage 2 HRA matrix A54B submitted at Deadline VII (**REP-408**).

Notes:

- a. In matrix A54B of **REP-408**, the Applicant states that the development would not have any direct effect on supporting habitat features within the designated SPA, but that changes in habitat conditions as a result of development could potentially influence prey resource availability and the energetics and behaviour of birds that may form part of the designated SPA population.
In section 3.3 of their Written Representation (**REP-132**), NE did not raise the effects of habitat loss / alteration on the prey resources of any seabird species as one of the "*significant ornithological issues identified*".
Section 4-E-8 of the Statement of Common Ground between the Applicant and NE on offshore matters (**REP-079**) records agreement of the habitat loss or alteration impacts associated with the construction, operation and decommissioning of Dogger Bank Teesside A & B in EIA terms, but no such conclusions are expressed in terms of HRA. In response to the Applicant's Deadline V submissions, NE confirm at paragraph 2.48 of their Deadline VI submission (**REP-310**) that "*Regarding the Applicant's HRA, based on the information submitted up to and including Deadline V, Natural England agrees with the Applicant that, if built, Dogger Bank Teesside A & B will not cause an Adverse Effect on any SPA/pSPA site and its seabird features*".
- b. Determination of the impacts of the various effects of the project on the prey resources available to all seabird species during the construction phase is described in paragraphs 6.5.2 to 6.5.32 of **APP-049**. The Applicant's conclusions in terms of effect on integrity have not been disputed during the examination.
- c. Effects of the operational phase on prey resources and habitat utilisation by all seabird species is described in paragraphs 6.6.2-6.6.39 of **APP-049**. The Applicant's conclusions in terms of effect on integrity have not been disputed during the examination.
- d. For the purposes of their environmental assessment, the Applicant has assumed that the same effects that would arise during construction would also manifest during decommissioning of the Application (paragraph 2.3.28 & Table 2.2: Realistic worst case scenario for the assessment of impacts on European sites and their features, **APP-049**).
The Applicant's approach to the assessment of effects during decommissioning has not been disputed during the examination (although it is noted that where construction effects have been identified in terms of particular species, these are effectively carried forwards in terms of relevance to decommissioning).
- e. The Applicant does not predict any displacement impact associated with proposed development for black-legged kittiwake during construction or operation (paragraph 6.3.34, **APP-049**).
In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), NE did not list black legged kittiwake as such a species (**REP-132**). RSPB's response to the same question (**REP-166**) also did not list black legged kittiwake as a species of concern in terms of displacement impacts.

The Applicant's conclusions in terms of no adverse effect on integrity have therefore not been disputed during the examination.

- f. A precautionary displacement rate of 50% and mortality rate of 5% was defined by the Applicant for common guillemot (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the SPA in Tables A9.38a-d in Appendix 9 of **APP-094**. In paragraph 6.3.39 of **APP-049** and matrix A54B of **REP-408**, the Applicant notes displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project.

At the first ISH on biodiversity and natural environment matters (**HR-005 – HR-008**), NE concluded the construction phase will have no significant effect on common guillemot. For species of auk that could be susceptible to displacement and associated mortality, NE state that, in terms of construction the effects *"are predicted to be smaller than those predicted during the operational phase and over a smaller period of time"* (paragraph 1.10, **REP-286**).

- g. The operational impact of displacement for common guillemot is set out in Section 6.6 of **APP-049**. A precautionary displacement rate of 50% and mortality rate of 5% has been defined by the Applicant (paragraphs 6.3.26 - 6.3.57, **APP-049**). The Applicant's approach included variable displacement rates in two bands of distance from the wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**).

At section 6.5 of their relevant representations, NE raised concerns over displacement effects on common guillemot associated with the proposed development (**REP-132**), particularly in relation to the use of a variable displacement rate across the wind farm development zone and buffer, and advised that *"displacement effects should be assessed at a constant rate within the defined buffer area until such time that evidence suggests otherwise"*. NE also disagreed with the Applicant's assertion that displacement effect should be viewed as a one off loss, and would not be repeated annually (NE's view is that displacement should be a year on year impact, paragraph 1.16 of **REP-286**).

At Deadline IV, the Applicant provided updated information in respect of apportioning of ornithological impacts to protected sites (**REP-228**). This information took the form of updated in combination assessment tables for (among other aspects) common guillemot displacement at the Flamborough and Filey Coast pSPA (section 4, **REP-228**). It is noted at paragraph 1.2.4 of **REP-228** that the Applicant refers to *"Flamborough Head and Bempton Cliffs SPA (subsequently subsumed into the Flamborough and Filey Coast pSPA"* and therefore the SPA is not considered separately in **REP-228**.

This information applied the same methodology developed and agreed between the Applicant and NE during the examination of Dogger Bank Creyke Beck Offshore Wind Farm to the proposed development.

In Section 4 of **REP-228**, the Applicant provided revised figures which allowed NE to consider the predicted mortality

figures as a year-on-year by comparison to potential biological removal (PBR) thresholds. The Applicant also produced revised calculations based on a fixed level of displacement throughout the 2km buffer zone (and NE confirmed that a 2km buffer was an appropriate buffer-size for species of concern present in the Dogger Bank zone).

In their submission at Deadline V in their written summary of their position put at the first biodiversity ISH (**REP-286**), NE confirmed that, whilst areas of disagreement remain (paragraphs 4.19 – 4.25), *"Displacement tables have been presented with several variations to reflect the risk-based approach recommended by Natural England. This includes the use of displacement rates of 30%, 50% and 70% with mortality rates of 5% and 10%"* (paragraph 4.20).

In respect of displacement of common guillemot at the Flamborough and Filey Coast pSPA, NE conclude at paragraph 4.51 of **REP-286** that *"no adverse effect on integrity of the FFC [Flamborough and Filey Coast] pSPA would occur from displacement of Guillemots at Dogger Bank Teesside A & B alone and in combination with other windfarms considered in the assessment"*. It has been assumed in this RIES that this position also applies to the Flamborough Head and Bempton Cliffs SPA.

NE's conclusion was also repeated at Table 1 of **REP-286** and Table 2.1 of **REP-310** submitted at Deadline VI as part of NE's written submission following the second biodiversity and natural environment ISH. The relevant rows of these tables concluding on common guillemot lists both FHBC [Flamborough Head and Bempton Cliffs] SPA and FFC [Flamborough and Filey Coast] pSPA, i.e. their conclusion of no adverse effect on integrity applies to both. However, Table 2.1 of **REP-310** suggests that under the worst case scenario in combination scenario (70% displacement / 10% mortality), mortality of 1,052 adults exceeds the PBR (**REP-310**). However, NE state that *"As this threshold is exceeded only under the worst case scenario on balance can conclude No AEOI alone and in combination"* (**REP-310**).

In matrix A54B submitted at Deadline VII (**REP-408**), the Applicant refers to the same evidence base as described in the corresponding footnote in relation to the Flamborough and Filey Coast pSPA for guillemot displacement (see Stage 2 Matrix 3 above).

The Applicant updated the apportioning values used for common guillemot in line with the finalised BDMPS report (**REP-356**). For the most precautionary displacement mortality scenario (70% displacement and 10% variable mortality) a total loss of 581 adult birds is predicted (**REP-358**). This is less than the PBR threshold of 970 birds (at $f = 0.3$) used by NE against which to judge the potential displacement impact. Further refinement of this mortality value has been undertaken, again following advice from Natural England given orally at the Issue Specific Hearing on the 3rd December 2014 and the revised adult mortality figure is calculated as 622 birds (see Applicant's Deadline VII Appendix 1, **REP-404** and Matrix A54B of **REP-408**). This value is below the PBR threshold of 970 adult birds (Table 2.1 of **REP-310**).

NE note at paragraph 1.31 of Annex B to their Deadline VII submission (**REP-450**) *"that the downward revision in the case of the FFC pSPA is incorrect in that Table 4.2 of Deadline VI Final HRA ornithology in combination tables [REP-358] still omits figures for any of the windfarms in the northern North Sea...This is an omission which means the current value of 581 cannot be relied upon"*. No further comment is made in their Deadline VII submissions regarding the validity of their Deadline V conclusions (**REP-310**). It is therefore unclear whether the conclusions of no AEOI reached by NE at Deadline V (**REP-286**) and Deadline VI (**REP-310**) still apply in light of their submission at Deadline VII (**REP-450**).

In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), RSPB do not identify common guillemot at the Flamborough Head and Bempton Cliffs SPA as such a species (**REP-166**), though they do identify guillemot as a species of concern in relation to displacement at the Flamborough and Filey Coast pSPA. However, in their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over *"the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement, specifically Flamborough Head and Filey Coast pSPA / Flamborough Head and Bempton Cliffs SPA"*. The RSPB state that *"the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement"*. The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that *"when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values."* (paragraph 2.3.3).

In response to ExQ2 no. 2.8 (**PD-036**), RSPB maintain their position of disagreement that displacement represents a one-off impact (i.e. it should be treated as ongoing throughout the lifetime of the wind farm), and that it *"strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme"* (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**).

At Deadline VII, RSPB *"maintains its position as set out in our previous representations – in particular our Statement of Common Ground with Forewind and our response to the Examining Authority's Second Written Questions"* (**REP-446**).

- h. The Applicant discusses displacement of northern gannet at paragraphs 6.3.33, 6.3.35, 6.3.53, and 6.3.54 (**APP-049**). A 75% displacement rate has been adopted by the Applicant as described at paragraph 6.3.35, and the Applicant concludes a 0% mortality rate in terms of displacement of northern gannet for the project alone.

In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), NE listed northern gannet as such a species (**REP-132**), and paragraph 6.5.26 of their written representation (**REP-132**) states that NE had concerns about the conclusion of no adverse effect on integrity *"due to collision mortality of gannets at Dogger Bank Teesside A & B projects acting jointly with displacement mortality alone"*.

At the first ISH on biodiversity and natural environment issues (**HR-005 – HR-008**), NE did not discuss displacement of northern gannet at the Flamborough Head and Bempton Cliffs SPA as an area of outstanding concern. In their summary of the oral position put at this hearing, NE responded to provide their agreement with the Applicant's conclusion of no adverse effect on integrity in terms of collision risk in relation to the Flamborough and Filey Coast pSPA (paragraph 4.33, **REP-286**) and not in terms of displacement.

NE's conclusion was also repeated at Table 1 of **REP-286** and Table 2.1 of **REP-310** submitted at Deadline VI as part of NE's written submission following the second biodiversity and natural environment ISH. The relevant rows of these tables concluding on northern gannet lists both FHBC [Flamborough Head and Bempton Cliffs] SPA and FFC [Flamborough and Filey Coast] pSPA, i.e. their conclusion of no adverse effect on integrity applies to both.

In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), RSPB did not raise northern gannet as such a species (**REP-166**).

- i. A precautionary displacement rate of 25% and mortality rate of 5% was defined by the Applicant for Atlantic puffin (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the SPA in Tables A9.44a-d in Appendix 9 of **APP-094**. In paragraph 6.3.39 of **APP-049** and matrix A54B of **REP-408**, the Applicant notes displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project.

At the first ISH on biodiversity and natural environment matters (**HR-005 – HR-008**), NE concluded the construction phase will have no significant effect on Atlantic puffin. For species of auk that could be susceptible to displacement and associated mortality, NE state that, in terms of construction the effects *"are predicted to be smaller than those predicted during the operational phase and over a smaller period of time"* (paragraph 1.10, **REP-286**).

- j. The operational impact of displacement for puffin is set out in Section 6.6 (paragraphs 6.6.64 to 6.6.68) of **APP-049**. A precautionary displacement rate of 25% and mortality rate of 5% has been defined by the Applicant (paragraphs 6.3.26 - 6.3.57, **APP-049**). The Applicant's approach included variable displacement rates in two bands of distance from the wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**).

In paragraph 2.3 of their Relevant Representation (**REP-041**), NE / JNCC highlighted puffin at the Flamborough and Filey Coast pSPA, and the Flamborough Head and Bempton Cliffs SPA as a species of concern in terms of HRA. However, NE subsequently did not raise puffin as a species of concern in HRA terms in their written representation or response to ExQ1 no. 2.13 (**REP-132**), or in section 1.2 of their Written Summary of the Oral Case at the first ISH (**REP-286**). However, NE raised concerns over the assessment of displacement effects associated with the proposed development (**REP-132**), particularly in relation to the use of a variable displacement rate across the wind farm development zone and buffer, and advised that *"displacement effects should be assessed at a constant rate within the defined buffer area until such time that evidence suggests otherwise"*. NE also disagreed with the Applicant's assertion that displacement effect should be viewed as a one off loss, and would not be repeated annually (NE's view is that displacement should be a year on year impact, paragraph 1.16 of **REP-286**).

In response to the Applicant's Deadline V submissions, NE confirm at paragraph 1.2 of their Deadline VI submission (**REP-310**) that *"all previous offshore ornithological disagreements are now agreed"*. Paragraph 2.48 takes this further with NE stating that *"Regarding the Applicant's HRA, based on the information submitted up to and including Deadline V, Natural England agrees with the Applicant that, if built, Dogger Bank Teesside A & B will not cause an Adverse Effect on any SPA/pSPA site and its seabird features"*.

In their Written Summary of the Oral Case put at the 3rd natural environment and biodiversity Issue-Specific Hearing (**HR-035 – HR-038**), NE stated that "*Puffin is neither a named feature nor an important component of the Flamborough and Filey Coast pSPA and as such, is not an HRA concern for Natural England*" (paragraph 1.14 of **REP-448**). This conclusion is not stated in terms of the Flamborough and Bempton Cliffs SPA although it is assumed that it equally applies.

In response to ExQ1 no. 2.13 and 2.20, relating to the Applicants conclusions of no adverse effect on integrity and the species of concern in terms of displacement mortality respectively (**PD-023**), RSPB did not highlighted puffin at the Flamborough Head and Bempton Cliffs SPA as such a species (**REP-166**).

- k. A precautionary displacement rate of 50% and mortality rate of 5% was defined by the Applicant for razorbill (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the SPA in Tables A9.41a-d in Appendix 9 of **APP-094**. In paragraph 6.3.39 of **APP-049** and matrix A54B of **REP-408**, the Applicant notes displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project.

At the first ISH on biodiversity and natural environment matters (**HR-005 – HR-008**), NE concluded the construction phase will have no significant effect on razorbill. For species of auk that could be susceptible to displacement and associated mortality, NE state that, in terms of construction the effects "*are predicted to be smaller than those predicted during the operational phase and over a smaller period of time*" (paragraph 1.10, **REP-286**).

- l. The operational impact of displacement for razorbill is set out in Section 6.6 of **APP-049**. A precautionary displacement rate of 50% and mortality rate of 5% has been defined by the Applicant (paragraphs 6.3.26 - 6.3.57, **APP-049**). The Applicant's approach included variable displacement rates in two bands of distance from the wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**). At section 6.5 of their relevant representations, NE raised concerns over displacement effects on razorbill associated with the proposed development (**REP-132**), particularly in relation to the use of a variable displacement rate across the wind farm development zone and buffer, and advised that "*displacement effects should be assessed at a constant rate within the defined buffer area until such time that evidence suggests otherwise*". NE also disagreed with the Applicant's assertion that displacement effect should be viewed as a one off loss, and would not be repeated annually (NE's view is that displacement should be a year on year impact, paragraph 1.16 of **REP-286**).

At Deadline IV, the Applicant provided updated information in respect of apportioning of ornithological impacts to protected sites (**REP-228**). This information took the form of updated in combination assessment tables for (among other aspects) razorbill displacement at the Flamborough and Filey Coast pSPA (section 4, **REP-228**). This information applied the same methodology developed and agreed between the Applicant and NE during the examination of Dogger

Bank Creyke Beck Offshore Wind Farm to the proposed development. It is noted at paragraph 1.2.4 of **REP-228** that the Applicant refers to "*Flamborough Head and Bempton Cliffs SPA (subsequently subsumed into the Flamborough and Filey Coast pSPA)*" and therefore the SPA is not considered separately in **REP-228**.

In Section 4 of **REP-228**, the Applicant provided revised figures which allowed NE to consider the predicted mortality figures as a year-on-year by comparison to potential biological removal (PBR) thresholds. The Applicant also produced revised calculations based on a fixed level of displacement throughout the 2km buffer zone (and NE confirmed that a 2km buffer was an appropriate buffer-size for species of concern present in the Dogger Bank zone).

In their submission at Deadline V in their written summary of their position put at the first biodiversity ISH (**REP-286**), NE confirmed that, whilst areas of disagreement remain (paragraphs 4.19 – 4.25), "*Displacement tables have been presented with several variations to reflect the risk-based approach recommended by Natural England. This includes the use of displacement rates of 30%, 50% and 70% with mortality rates of 5% and 10%*" (paragraph 4.20).

In respect of displacement of razorbill at the Flamborough and Filey Coast pSPA, NE conclude at paragraph 4.59 of **REP-286** that "*no adverse effect on integrity on the FFC [Flamborough and Filey Coast] pSPA would occur from displacement of Razorbill at Dogger Bank Teesside A & B alone or in combination with other windfarms considered in the assessment*". NE's conclusion was also repeated at Table 1 of **REP-286** and Table 2.1 of **REP-310** submitted at Deadline VI as part of NE's written submission following the second biodiversity and natural environment ISH. The relevant rows of these tables concluding on razorbill displacement lists both FHBC [Flamborough Head and Bempton Cliffs] SPA and FFC [Flamborough and Filey Coast] pSPA, i.e. their conclusion of no adverse effect on integrity applies to both.

However, Table 2.1 of **REP-310** suggests that under the worst case scenario in combination scenario (70% displacement / 10% mortality), mortality of 383 adults exceeds the PBR (**REP-310**). However, NE state that "*As this threshold is exceeded only under the worst case scenario on balance can conclude No AEOI alone and in combination*" (**REP-310**). The Applicant updated the apportioning values used for razorbill in line with the finalised BDMPS report (**REP-356**). For the most precautionary displacement mortality scenario (70% displacement and 10% variable mortality) a total loss of 321 adult birds was predicted (**REP-358**). This is less than the PBR threshold of 364 birds (at $f = 0.3$) used by NE against which to judge the potential displacement impact (Table 2.1, **REP-310**). Further refinement of this mortality value was undertaken by the Applicant following advice from NE at the 3rd Issue Specific Hearing (**HR-035 – HR-038**). The revised adult mortality figure was calculated as 128 adult birds (Matrix A54A, **REP-408**).

In matrix A54B submitted at Deadline VII (**REP-408**), the Applicant refers to the same evidence base as described in the corresponding footnote in relation to the Flamborough and Filey Coast pSPA for razorbill displacement (see Stage 2 Matrix 3 above).

NE note at paragraph 1.38 of Annex B to their Deadline VII submission (**REP-450**) that "*the downward revision in the case of the FFC [Flamborough and Filey Coast] pSPA is incorrect in that Table 4.5 of Deadline VI Final HRA ornithology in combination tables still omits figures for any of the windfarms in the northern North Sea....This is an omission which means the current value of 321 cannot be relied upon*". No further comment is made in their Deadline VII submissions regarding the validity of their Deadline V conclusions in relation to the Flamborough and Filey Coast pSPA or the

Flamborough Head and Bempton Cliffs SPA (**REP-310**). It is therefore unclear whether the conclusions of no AEOI reached by NE at Deadline V (**REP-286**) and Deadline VI (**REP-310**) still apply in light of their submission at Deadline VII (**REP-450**).

In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), RSPB do not identify razorbill at the Flamborough Head and Bempton Cliffs SPA as such a species (**REP-166**), though they do identify razorbill as a species of concern in relation to displacement at the Flamborough and Filey Coast pSPA.

However, in their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over *"the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement, specifically Flamborough Head and Filey Coast pSPA / Flamborough Head and Bempton Cliffs SPA"*. The RSPB state that *"the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement"*. The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that *"when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values."* (paragraph 2.3.3).

In response to ExQ2 no. 2.8 (**PD-036**), RSPB maintain their position of disagreement that displacement represents a one-off impact (i.e. it should be treated as ongoing throughout the lifetime of the wind farm), and that it *"strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme"* (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**).

At Deadline VII, RSPB *"maintains its position as set out in our previous representations – in particular our Statement of Common Ground with Forewind and our response to the Examining Authority's Second Written Questions"* (**REP-446**).

- m. Barrier effects are discussed in paragraphs 6.6.73 to 6.6.95 of **APP-049** and summarised for individual SPA's / pSPA's in **APP-050**. The conclusion of no AEOI in terms of barrier effects has not been disputed during the examination in relation to any European sites or qualifying features.

Item 4-E-9 of the Statement of Common Ground between the Applicant and NE on offshore matters (**REP-079**) states *"It is agreed that there are no outstanding concerns regarding the assessment of barrier effects at a project alone and cumulative or in-combination level"*.

- n. Matrix A54B (**REP-408**) states that the Dogger Bank Teesside A & B project is within the maximum foraging range of black-legged kittiwake (230km) that could derive from this SPA. Apportioning of the annual collision estimate during the breeding season attributes a collision loss of 54.5 adults representing 0.06% of the SPA population (Table A9.35d in Appendix 9 of **APP-094**). For non-breeding birds (summer and winter), 12.6 birds lost through collision are attributed this pSPA, representing 0.01% of the designated SPA population (Table A9.35d in Appendix 9 of **APP-094** and paragraphs 6.6.123 to 6.6.127 of **APP-049**). In total the loss of adult birds through collision at this SPA would represent an increase in the background mortality of 1.34%, although a Potential Biological Removal (PBR) value of between 400

and 800 adult birds has been calculated for this species at the Flamborough and Filey Coast pSPA (paragraphs 6.6.128 to 6.6.133 of **APP-049**), and the Applicants view is that losses as a result of Dogger Bank Teesside A & B fall well below the lowest PBR value, and therefore there would be no adverse effect on integrity.

In section 6.5, table 1 of its written representations (**REP-132**), NE outlined concerns in relation the conclusion of no adverse effect on integrity (project both alone and in-combination) associated with black-legged kittiwake collisions at the Flamborough Head and Bempton Cliffs SPA, associated with the Applicant's use of the Extended Band Model (Option 3) (NE recommended further assessment of Band model Option 2 should be presented and used).

At Deadline IV, the Applicant provided updated information in respect of apportioning of ornithological impacts to protected sites (**REP-228**). This information took the form of updated in combination assessment tables for (among other aspects) black-legged kittiwake collision risk at the Flamborough and Filey Coast pSPA (section 2, **REP-228**). This information applied the same methodology developed and agreed between the Applicant and NE during the examination of Dogger Bank Creyke Beck Offshore Wind Farm to the proposed development. It is noted at paragraph 1.2.4 of **REP-228** that the Applicant refers to "*Flamborough Head and Bempton Cliffs SPA (subsequently subsumed into the Flamborough and Filey Coast pSPA)*" and therefore the SPA is not considered separately in **REP-228**.

In Section 2 of **REP-228**, the Applicant provided revised figures for the assessment of collision risk. For each of the tables, two versions of modelled output were provided: NE's view, and the Applicant's view. The NE view was based on guidance and their advice, whereas the Applicant considered this to be overly precautionary as it required the use of a 98% avoidance rate for all species, the use of the 'basic Band model' (option 1/2) and the exclusion of consideration of refined designs for some offshore wind farm projects (paragraph 1.1.5 of **REP-228**).

The difference between the Applicant's view and NE's view on the collision risk assessment methodology is outlined further in paragraph 2.1.1 of **REP-228**. The Applicant provides data in tables 2.1 – 2.8 which are based on: use of the 'basic' Band model Option 1 / 2; a 98% avoidance rate (for all species where dispute between NE and the Applicant arose); and with no allowance made for changes to project parameters for submitted / consented projects. The Applicant's view is that this assessment remains overly precautionary, as set out in section 2.1 of their Comments on NE's Written Representation, submitted at Deadline IV (**REP-206**).

In their submission at Deadline V in their written summary of their position put at the first biodiversity ISH (**REP-286**), NE confirmed that, whilst areas of disagreement remain, "*Natural England is content that it has been able to base its advice on the former approach[using one of the Basic Band Models (1 or 2) and using a 98% avoidance rate]*" (paragraphs 4.8 and 4.9 of **REP-286**).

In paragraph 1.13 of **REP-286**, NE accepts the avoidance rates of 99% for both northern gannet and black-legged kittiwake for use with the Basic Band model, and has formed its advice on that basis. This is in response to the results from a recently published report on avoidance rates, by Marine Scotland Science (NE's position is set out in section 5 of **REP-286**).

In respect of black legged kittiwake collisions at the Flamborough and Filey Coast pSPA, NE conclude at paragraph 4.42 of **REP-286** that "*Accepting an avoidance rate of 99%, Natural England are able to conclude that there would be no*

adverse effect on integrity on the FFC pSPA arising from kittiwake collision mortality alone or in combination on the basis of both the PBR and PVA analyses available".

NE's conclusion was also repeated at Table 1 of **REP-286** and Table 2.1 of **REP-310** submitted at Deadline VI as part of NE's written submission following the second biodiversity and natural environment ISH. The relevant rows of these tables concluding on kittiwake collision impacts lists both FHBC [Flamborough Head and Bempton Cliffs] SPA and FFC [Flamborough and Filey Coast] pSPA, i.e. their conclusion of no adverse effect on integrity applies to both.

In matrix A54B submitted at Deadline VII (**REP-408**), the Applicant refers to the same evidence base as described in the corresponding footnote in relation to the Flamborough and Filey Coast pSPA for kittiwake collision mortality (see Stage 2 Matrix 3 above).

In terms of the Flamborough and Filey Coast pSPA, the Applicant updated the apportioning values used for black-legged kittiwake in line with the finalised BDMPS report (**REP-355**). The calculated adult loss (in-combination) was 372 birds (**REP-358**). This is less than the precautionary PBR and PVA thresholds adopted by NE (Table 2.1 of **REP-310**). At paragraph 1.8 of At Annex B of NE's Deadline VII submission (**REP-450**) on advice on the Applicant's apportioning updates and final HRA Ornithology In-combination Tables, they state "*Natural England can confirm that the revisions [after the revised BDMPS work] to the figures do not alter the conclusions [no AEOI] provided at Deadline V*".

In response to ExQ1 no. 2.18 (bird species of concern in relation to collision risk) and 2.19 (use of Band modelling approach) (**PD-023**), RSPB highlighted black-legged kittiwake at the Flamborough Head and Bempton Cliffs SPA as a species of concern, and also stated that RSPB "*continues to have concerns about the use of Option 3 of the Band modelling approach*" (**REP-166**).

In their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over "*the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement, specifically Flamborough Head and Filey Coast pSPA / Flamborough Head and Bempton Cliffs SPA*". The RSPB state that "*the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement*". The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that "*when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values.*" (paragraph 2.3.3).

In response to ExQ2 no. 2.8 (**PD-036**), RSPB outline their position of disagreement with the avoidance rates presented in the Marine Science Scotland Report: "*Until the evidence base improves to include robust data on the behaviour of breeding gannets we consider that the avoidance rate for breeding should remain at 98%, and will only accept the 99% rate outside the breeding season*" (**REP-304**). RSPB also maintain that it "*strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme*" (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**).

At Deadline VII, RSPB "*maintains its position as set out in our previous representations – in particular our Statement of Common Ground with Forewind and our response to the Examining Authority's Second Written Questions*" (**REP-446**).

- o. In relation to puffin, razorbill and guillemot at the Flamborough Head and Bempton Cliffs SPA, the Applicant does not predict significant effects in terms of collision risk (section 6.6, paragraph 6.6.106, and Table 6.26 of **REP-049**). In response to ExQ1 no. 2.18 (bird species of concern in relation to collision risk) (**PD-023**), puffin, razorbill and guillemot were not raised by any Interested Parties (including NE (**REP-132**) and RSPB (**REP-166**)), and the conclusions of no adverse effect on integrity have not been disputed during the examination.
- p. Matrix A54B (**REP-408**) states that the Dogger Bank Teesside A & B project is within the maximum foraging range of northern gannet (230km) that could derive from this SPA. Apportioning of the annual collision estimate during the breeding season attributes a collision loss of 7.1 adults representing 0.03% of the SPA population (Table A9.33d in Appendix 9 of **APP-094**). For non-breeding birds (summer and winter), 3.1 birds lost through collision are attributed this pSPA, representing 0.01% of the designated SPA population (Table A9.33d in Appendix 9 of **APP-094** and paragraphs 6.6.109 to 6.6.114 of **APP-049**). In total the loss of adult birds through collision at this SPA would represent an increase in the background mortality of 0.79%, although a Potential Biological Removal (PBR) value of between 286 and 393 adult birds has been calculated for this species at the Flamborough and Filey Coast pSPA (paragraphs 6.6.128 to 6.6.133 of **APP-049**), and the Applicants view is that losses as a result of Dogger Bank Teesside A & B fall well below the lowest PBR value, and therefore there would be no adverse effect on integrity.
In section 6.5, table 1 of its written representations (**REP-132**), NE outlined concerns in relation the conclusion of no adverse effect on integrity (project both alone and in-combination) associated with northern gannet collisions at the Flamborough Head and Bempton Cliffs SPA, associated with the Applicant's use of the Extended Band Model (Option 3) (NE recommended further assessment of Band model Option 2 should be presented and used).
At Deadline IV, the Applicant provided updated information in respect of apportioning of ornithological impacts to protected sites (**REP-228**). This information took the form of updated in combination assessment tables for (among other aspects) northern gannet collision risk at the Flamborough and Filey Coast pSPA (section 2, **REP-228**). This information applied the same methodology developed and agreed between the Applicant and NE during the examination of Dogger Bank Creyke Beck Offshore Wind Farm to the proposed development. It is noted at paragraph 1.2.4 of **REP-228** that the Applicant refers to "*Flamborough Head and Bempton Cliffs SPA (subsequently subsumed into the Flamborough and Filey Coast pSPA)*" and therefore the SPA is not considered separately in **REP-228**.
In Section 2 of **REP-228**, the Applicant provided revised figures for the assessment of collision risk. For each of the tables, two versions of modelled output were provided: NE's view, and the Applicant's view. The NE view was based on guidance and their advice, whereas the Applicant considered this to be overly precautionary as it required the use of a 98% avoidance rate for all species, the use of the 'basic Band model' (option 1/2) and the exclusion of consideration of refined designs for some offshore wind farm projects (paragraph 1.1.5 of **REP-228**).
The difference between the Applicant's view and NE's view on the collision risk assessment methodology is outlined

further in paragraph 2.1.1 of **REP-228**. The Applicant provides data in tables 2.1 – 2.8 which are based on: use of the 'basic' Band model Option 1 / 2; a 98% avoidance rate (for all species where dispute between NE and the Applicant arose); and with no allowance made for changes to project parameters for submitted / consented projects. The Applicant's view is that this assessment remains overly precautionary, as set out in section 2.1 of their Comments on NE's Written Representation, submitted at Deadline IV (**REP-206**).

In their submission at Deadline V in their written summary of their position put at the first biodiversity ISH (**REP-286**), NE confirmed that, whilst areas of disagreement remain, "*Natural England is content that it has been able to base its advice on the former approach [using one of the Basic Band Models (1 or 2) and using a 98% avoidance rate]*" (paragraphs 4.8 and 4.9 of **REP-286**).

In paragraph 1.13 of **REP-286**, NE accepts the avoidance rates of 99% for both northern gannet and black-legged kittiwake for use with the Basic Band model, and has formed its advice on that basis. This is in response to the results from a recently published report on avoidance rates, by Marine Scotland Science (NE's position is set out in section 5 of **REP-286**).

In respect of northern gannet collisions at the Flamborough and Filey Coast pSPA, NE conclude at paragraph 4.33 of **REP-286** that "*Given that the predicted additional mortality is below both the PBR and importantly also below the more precautionary PVA figures, Natural England can conclude that evidence suggests that there would be no adverse effect on integrity on the FFC pSPA from collision mortality of gannets either alone or in combination*".

NE's conclusion was also repeated at Table 1 of **REP-286** and Table 2.1 of **REP-310** submitted at Deadline VI as part of NE's written submission following the second biodiversity and natural environment ISH. The relevant rows of these tables concluding on gannet collision impacts lists both FHBC [Flamborough Head and Bempton Cliffs] SPA and FFC [Flamborough and Filey Coast] pSPA, i.e. their conclusion of no adverse effect on integrity applies to both.

In matrix A54B submitted at Deadline VII (**REP-408**), the Applicant refers to the same evidence base as described in the corresponding footnote in relation to the Flamborough and Filey Coast pSPA for guillemot displacement (see Stage 2 Matrix 3 above).

The Applicant updated the apportioning values used for the gannet population at Flamborough Head and Filey Coast pSPA in line with the finalised BDMPS report (**REP-354**). The calculated adult loss (in-combination) was 177 birds (**REP-358**). This is less than the precautionary PBR and PVA thresholds adopted by NE (see Table 2.1 of **REP-310**). Further refinement of this collision mortality was undertaken following advice from NE at the 3rd Issue Specific Hearing on natural environment and biodiversity matters (**HR-035 – HR-038**) (relating to the inclusion of north-west SPA colonies of gannet). The recalculated total adult mortality loss taking account of the exclusion of these north-west colonies is 179 adult birds (**REP-404** and matrix A54A of **REP-408**). This value remains less than the precautionary PBR and PVA thresholds adopted by NE (Table 2.1 of **REP-310**).

At paragraphs 1.20 and 1.21 of **REP-450**, NE "*confirm that these revisions, being downwards, as they stand, make no difference to the conclusions provided at Deadline V...However, Natural England remains unclear as to whether the update provided is indeed in line with what might be expected in the light of the revised BDMPS report*".

In response to ExQ1 no. 2.18 (bird species of concern in relation to collision risk) and 2.19 (use of Band modelling approach) (**PD-023**), RSPB did not highlight northern gannet at the Flamborough and Filey Coast SPA as a species of concern (though they do identify gannet as a species of concern in relation to collision impacts at the Flamborough and Filey Coast pSPA) (**REP-166**). It also stated that RSPB "*continues to have concerns about the use of Option 3 of the Band modelling approach*" (**REP-166**).

In their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over "*the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement, specifically Flamborough Head and Filey Coast pSPA / Flamborough Head and Bempton Cliffs SPA*". The RSPB state that "*the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement*". The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that "*when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values.*" (paragraph 2.3.3).

In response to ExQ2 no. 2.8 (**PD-036**), RSPB outline their position of disagreement with the avoidance rates presented in the Marine Science Scotland Report: "*Until the evidence base improves to include robust data on the behaviour of breeding gannets we consider that the avoidance rate for breeding should remain at 98%, and will only accept the 99% rate outside the breeding season*" (**REP-304**). RSPB also maintain that it "*strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme*" (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**).

At Deadline VII, RSPB "*maintains its position as set out in our previous representations – in particular our Statement of Common Ground with Forewind and our response to the Examining Authority's Second Written Questions*" (**REP-446**).

- q. In combination impacts are discussed and assessed in Section 7.8 of **REP-049**. Specific assessment of in combination impacts for the species screened in for all SPA's / pSPA's is provided in **REP-053**.

The projects included in the Applicant's in combination assessment were disputed by NE and their concerns in respect of ornithological matters outlined in paragraphs 3.3.33 – 3.3.37 of Annex E of their written representations (Expert Report on offshore ornithology, **REP-132**). These concerns surrounded the exclusion of wind farms from the in combination assessment that were commissioned and operational before the start of bird monitoring for Dogger Bank Teesside A & B. NE also stated at paragraph 3.3.89 of Annex E of their written representations (**REP-132**) that "*the Applicant has not used consistent models and parameters, for example Band Option and avoidance rate used, which makes it extremely challenging to draw conclusions on the significance of impact from the in-combination assessment*". NE therefore requested that the Applicant provided 'common currency' tables to address these points (paragraph 3.3.90). Following agreement between the Applicant and NE, that the in combination assessment for the application should be updated to reflect the revised apportioning approach (for the sites and species of concern) developed during the

examination of Dogger Bank Creyke Beck, the Applicant applied the revised apportioning approach to provide "*updated in-combination tables for the key sites and species of concern identified within the HRA, and as agreed with Natural England*" (Appendix 25 of the Applicant's Deadline IV submission, **REP-228**).

The Applicant's submission also included an additional offshore wind project, Navitus Bay, "*for which information on impacts such as collision mortality are now available*" and confirmation that the Applicant has agreed this project should now be included in the in combination assessment (paragraph 1.1.3 of **REP-228**). This document also addressed NE's concerns in relation to Band model options for collision risk (paragraph 1.1.5) and in relation to displacement and scaled mortality rates (paragraph 1.1.6). In each case, the Applicant provided a range of assessment scenarios to covering their position as well as that advised by NE.

NE in their written summary of their oral submission put at the first ISH on HRA and natural environment matters on 14 October 2014 (paragraph 1.19 of **REP-286**), confirmed their agreement with the revised projects for inclusion within the Applicant's in combination assessment.

Following the submission of Deadline IV Appendix 25 (**REP-228**), the draft report on BDMPS commissioned by NE was finalised (section 6 of **REP-286**). As the draft report had been used to derive the original apportioning figures and some minor amendments had been made that affected the overall apportioning figures, it was agreed that the Applicant should update Deadline IV Appendix 25 to reflect the final version. The updated in combination tables were provided by the Applicant at Deadline VI (**REP-358**).

In response to the Applicant's Deadline V submissions, NE confirm at paragraph 1.2 of their Deadline VI submission (**REP-310**) that "*all previous offshore ornithological disagreements are now agreed*". Paragraph 2.48 takes this further with NE stating that "*Regarding the Applicant's HRA, based on the information submitted up to and including Deadline V, Natural England agrees with the Applicant that, if built, Dogger Bank Teesside A & B will not cause an Adverse Effect on any SPA/pSPA site and its seabird features*". Table 2.1 of **REP-310** outlines NE's position for the sites and species of concern, and in respect of the Flamborough Head and Bempton Cliffs SPA, agrees with the Applicant's conclusion of no adverse effect on integrity for the project alone and in combination.

Stage 2 Matrix 5: Forth Islands SPA

Site Code: UK9004171

Distance to project: 190 km (Export Cable Corridor) and 309 km (offshore wind farm)³⁷

European site features	Adverse effect on integrity														
	Habitat loss / alteration (prey resources)			Disturbance / displacement			Habitat loss (barrier effect)			Physical Damage (collision risk)			In combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Black legged Kittiwake	X a,b,c	X a,b,d	X a,b,e	X f,b	X f,b	X f,b,e	n/a	X k,b	n/a	n/a	X l,b	n/a	X o,f	?	X o,e
Common guillemot	X a,c	X a,d	X a,e	X g	X g	X g,e	n/a	X k	n/a	n/a	X m	n/a	X o,g	X o,m	X o,e
Northern gannet	X a,b,c	X a,b,d	X a,b,e	X h,b	X h,b	X h,b,e	n/a	X k,b	n/a	n/a	X n,b	n/a	X o,h	?	X o,e
Puffin	X a,b,c	X a,b,d	X a,b,e	X i,b,e	X i,b,e	X i,b,e	n/a	X k,b	n/a	n/a	X m,b	n/a	X o,i	?	X o,e
Razorbill	X a,c	X a,d	X a,e	X j	X j	X j,e	n/a	X k	n/a	n/a	X m	n/a	X o,j	X o,m	X o,e

Notes:

- a. In matrix A55 of **REP-357** (and updated in **REP-408**), the Applicant states that the development would not have any direct effect on supporting habitat features within the designated SPA, but that changes in habitat conditions as a result of development could potentially influence prey resource availability and the energetics and behaviour of birds that may form part of the designated SPA population.

SNH did not raise the effects of habitat loss / alteration on the prey resources of any seabird species as one of the areas

³⁷ Distances to the project for the site are taken from the Applicant's Stage 2 HRA matrix A55 originally submitted as part of the Application documents (**APP-056**) and updated at Deadline VI (**REP-360**) and Deadline VII (**REP-408**).

of disagreement with the Applicant's conclusion in their response to ExQ1 no.'s 2.4 – 2.6 (**REP-196**) or in correspondence with the Applicant submitted at Deadline V (**REP-239**, in response to action point 1.2 from the first ISH on biodiversity natural environment matters (**HR-014**)).

RSPB have also not disputed the Applicant's conclusion in relation to habitat loss / alteration on the prey resources of any seabird species (**REP-085**, **REP-166**, **REP-291**, **REP-304**).

- b. In the Applicant's Deadline V Appendix 1 submission (Correspondence with SNH and Marine Scotland Science) (**REP-239**), SNH state that mortality in relation to gannets, kittiwakes and puffins associated with Dogger Bank Teesside A & B wind farm are *"very small and well short of the mortality required for this proposal on its own to have a likely significant effect on Scottish SPA populations"*. In response to ExQ1 no. 2.4 (**REP-196**), SNH state that they *"agree that Dogger Bank Teesside A/B [sic], considered in its own right, will not have an adverse effect on any Scottish Special Protection Areas or Special Areas of Conservation"*.
At Deadline VII in response to the ExA's request for further information under Rule 17 (**PD-040**), SNH state that they *"have no changes to make to the advice provided at Deadline V (REP 239) at this stage...there are still large areas of uncertainty in the methodologies used and in the conclusions reached for all aspects of the impact assessment process (HRA) for mobile bird species both during and out with the breeding season. There are still ongoing discussions occurring both within the Statutory Nature Conservation Bodies (SNCBs) and between SNH and Marine Scotland –these are unlikely to conclude during the examination process for Teesside A & B"* (**REP-401**).
- c. Determination of the impacts of the various effects of the project on the prey resources available to all seabird species during the construction phase is described in paragraphs 6.5.2 to 6.5.32 of **APP-049**. The Applicant's conclusions in terms of effect on integrity have not been disputed during the examination.
- d. Effects of the operational phase on prey resources and habitat utilisation by all seabird species is described in paragraphs 6.6.2-6.6.39 of **APP-049**. The Applicant's conclusions in terms of effect on integrity have not been disputed during the examination.
- e. For the purposes of their environmental assessment, the Applicant has assumed that the same effects that would arise during construction would also manifest during decommissioning of the Application (paragraph 2.3.28 & Table 2.2: Realistic worst case scenario for the assessment of impacts on European sites and their features, **APP-049**). The Applicant's approach to the assessment of effects during decommissioning has not been disputed during the examination (although it is noted that where construction effects have been identified in terms of particular species, these are effectively carried forwards in terms of relevance to decommissioning).
- f. The Applicant does not predict any displacement impact associated with proposed development for black-legged kittiwake during construction or operation (paragraph 6.3.34, **APP-049**).
In response to ExQ1 no. 2.4 and 2.5 , relating to the Applicant's conclusions in terms of European sites in Scotland (**PD-**

023), SNH did not identify black-legged kittiwake as a species of concern in terms of displacement mortality (**REP-196**) RSPB's response to ExQ1 (**REP-166**) also did not list black legged kittiwake as a species of concern in terms of displacement.

The Applicant's conclusions in terms of no adverse effect on integrity have therefore not been disputed during the examination.

- g. A precautionary displacement rate of 50% and mortality rate of 5% was defined by the Applicant for common guillemot (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the SPA in Tables A9.38a-d in Appendix 9 of **APP-094**). In paragraph 6.3.39 of **APP-049** and matrix A55 of **REP-357** (and updated in **REP-408**), the Applicant notes displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project.
- The operational impact of displacement for common guillemot is set out in Section 6.6 of **APP-049**. A precautionary displacement rate of 50% and mortality rate of 5% has been defined by the Applicant (paragraphs 6.3.26 - 6.3.57, **APP-049**). The Applicant's approach included variable displacement rates in two bands of distance from the wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**)
- SNH did not raise common guillemot at any SPA as an area of concern in their response to ExQ1 no.'s 2.4 – 2.6 (**REP-196**).
- In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), RSPB highlighted common guillemot at the Forth Islands SPA as such a species (**REP-166**). In their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over "*the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement*". The RSPB state that "*the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement*". The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that "*when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values.*" (paragraph 2.3.3).
- In response to ExQ2 no. 2.8 (**PD-036**), RSPB maintain their position of disagreement that displacement represents a one-off impact (i.e. it should be treated as ongoing throughout the lifetime of the wind farm), and that it "*strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme*" (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**).

At Deadline VII, RSPB "*maintains its position as set out in our previous representations – in particular our Statement of Common Ground with Forewind and our response to the Examining Authority's Second Written Questions*" (**REP-446**).

- h. The Applicant discusses displacement of northern gannet see paragraphs 6.3.33, 6.3.35, 6.3.53, and 6.3.54 **APP-049**. A 75% displacement rate has been adopted by the Applicant as described at paragraph 6.3.35, and the Applicant concludes a 0% mortality rate in terms of displacement of northern gannet for the project alone. In response to ExQ1 no. 2.4 and 2.5, relating to the Applicant's conclusions in terms of European sites in Scotland (**PD-023**), SNH did not identify northern gannet as a species of concern in terms of displacement mortality (**REP-196**). RSPB's response to ExQ1 (**REP-166**) also did not list black northern gannet as a species of concern in terms of displacement. The Applicant's conclusions in terms of no adverse effect on integrity have therefore not been disputed during the examination.

- i. A precautionary displacement rate of 25% and mortality rate of 5% was defined by the Applicant for Atlantic puffin (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the pSPA in Tables A9.44a-d in Appendix 9 of **APP-094**. The operational impact of displacement for puffin is set out in Section 6.6 (paragraphs 6.6.64 to 6.6.68) of **APP-049**. The Applicant's approach included variable displacement rates in two bands of distance from the wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**). In paragraph 6.3.39 of **APP-049** and matrix A55 of **REP-357** (and updated in **REP-408**), the Applicant notes displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project.

In terms of Atlantic puffin at the Forth Islands, SNH raised "*impact on site integrity expected in combination due to mortality from displacement impacts in winter*" as an area of concern in their response to ExQ1 no. 2.5 (**REP-196**). However, SNH agree to the Applicants conclusions in terms of impacts of the project alone (see footnote b). They also state at **REP-196** that "*In magnitude, the effects on kittwake and puffin are very small (less than 10 birds dying per year) and might be considered trivial*".

At Deadline VII, SNH confirmed that the advice they provided at Deadline V (**REP-239**) still stands (**REP-401**) (see Note **b** of this matrix above).

In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), RSPB highlighted Atlantic puffin at the Forth Islands SPA as such a species (**REP-166**). In their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over "*the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement*". The RSPB state that "*the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects*

arising from collision or displacement". The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that *"when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values."* (paragraph 2.3.3). In response to ExQ2 no. 2.8 (**PD-036**), RSPB maintain their position of disagreement that displacement represents a one-off impact (i.e. it should be treated as ongoing throughout the lifetime of the wind farm), and that it *"strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme"* (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**). At Deadline VII, RSPB *"maintains its position as set out in our previous representations – in particular our Statement of Common Ground with Forewind and our response to the Examining Authority's Second Written Questions"* (**REP-446**).

- j. A precautionary displacement rate of 50% and mortality rate of 5% was defined by the Applicant for razorbill (paragraphs 6.3.26 - 6.3.57, **APP-049**). Assessment of the displacement impact during construction is provided within Section 6.5 of **APP-049** and quantitative data for the SPA in Tables A9.41a-d in Appendix 9 of **APP-094**). The operational impact of displacement for razorbill is set out in Section 6.6 of **APP-049**. A precautionary displacement rate of 50% and mortality rate of 5% has been defined by the Applicant (paragraphs 6.3.26 - 6.3.57, **APP-049**). The Applicant's approach included variable displacement rates in two bands of distance from the wind farm: 0-1km, 75% of the displacement rate for the wind farm; and 1km-2km, 25% of the displacement rate (paragraph 6.3.38 of **APP-049**). In paragraph 6.3.39 of **APP-049** and matrix A55 of **REP-357** (and updated in **REP-408**), the Applicant notes displacement during the construction phase is viewed as the beginning of the displacement impact for the entire lifecycle of the project (i.e. construction-operation-decommissioning), albeit that the magnitude of the impact may vary as construction progresses through into operation, and the displacement impact is assessed for individual species and SPAs solely for the operational phase of the project.
- SNH did not raise razorbill at any SPA as an area of concern in their response to ExQ1 nos. 2.4 – 2.6 (**REP-196**). In response to ExQ1 no. 2.20, relating to species of concern in terms of displacement mortality (**PD-023**), RSPB highlighted razorbill at the Forth Islands SPA as such a species (**REP-166**). In their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over *"the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement"*. The RSPB state that *"the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement"*. The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that *"when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values."* (paragraph 2.3.3). In response to ExQ2 no. 2.8 (**PD-036**), RSPB maintain their position of disagreement that displacement represents a one-off impact (i.e. it should be treated as ongoing throughout the lifetime of the wind farm), and that it *"strongly*

disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme" (REP-304). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (REP-085).

At Deadline VII, RSPB "maintains its position as set out in our previous representations – in particular our Statement of Common Ground with Forewind and our response to the Examining Authority's Second Written Questions" (REP-446).

- k. Barrier effects are discussed in paragraphs 6.6.73 to 6.6.95 of **APP-049** and summarised for individual SPA's / pSPA's in **APP-050**. The conclusion of no AEIO in terms of barrier effects has not been disputed during the examination in relation to any European sites or qualifying features.
- l. Matrix A55 (**REP-357**) (and updated in **REP-408**) states that the Dogger Bank Teesside A & B project is outside the maximum foraging range of black-legged kittiwake (230km) that could derive from the Forth Islands SPA. Apportioning of the annual collision estimate (i.e. non-breeding birds in summer and winter), attributes a collision loss of 1.07 adults representing 0.01% of the SPA population (Table A9.35d in Appendix 9 of **APP-094**). In total the loss of adult birds through collision at this SPA would represent an increase in the background mortality of 0.17%.
In terms of black –legged kittiwake at the Forth Islands, SNH raised "*expected in combination mortality arising from Collision impacts outside the breeding season*" as an area of concern in their response to ExQ1 no. 2.5 (**REP-196**). However, SNH agree to the Applicants conclusions in terms of impacts of the project alone (see footnote b). They also state at **REP-196** that "*In magnitude, the effects on kittiwake and puffin are very small (less than 10 birds dying per year) and might be considered trivial*".
In their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over "*the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement*". The RSPB state that "*the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement*". The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that "*when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values.*" (paragraph 2.3.3).
In response to ExQ2 no. 2.8 (**PD-036**), RSPB outline their position of disagreement with the avoidance rates presented in the Marine Science Scotland Report: "*Until the evidence base improves to include robust data on the behaviour of breeding gannets we consider that the avoidance rate for breeding should remain at 98%, and will only accept the 99% rate outside the breeding season*" (**REP-304**). RSPB also maintain that it "*strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme*" (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**).
- m. In relation to puffin, razorbill and guillemot at the Forth Islands SPA, the Applicant does not predict significant effects in terms of collision risk (section 6.6, paragraph 6.6.106, and Table 6.26 of **REP-049**).

In response to ExQ1 no. 2.18 (bird species of concern in relation to collision risk) (**PD-023**), puffin, razorbill and guillemot were not raised by any Interested Parties (including SNH (**REP-196**) and RSPB (**REP-166**)), and the conclusions of no adverse effect on integrity have not been disputed during the examination.

- n. Matrix A55 (**REP-357**) (and updated in **REP-408**) states that the Dogger Bank Teesside A & B project is not within the maximum foraging range of northern gannet (230km) that could derive from the Forth Islands SPA, however, on the basis of tagging data, it is possible that birds from this SPA may forage within the Dogger Bank Zone.. Apportioning of the annual collision estimate during the breeding season attributes a collision loss of 14.1 adults representing 0.01% of the SPA population (Table A9.33d in Appendix 9 of **APP-094**). For non-breeding birds (summer and winter), 20.5 birds lost through collision are attributed this SPA, representing 0.01% of the designated SPA population (Table A9.33d in Appendix 9 of **APP-094** and paragraphs 6.6.109 to 6.6.112 of **APP-049**). In total the loss of adult birds through collision at this SPA would represent an increase in the background mortality of 0.36%, and the Applicants view is that losses as a result of Dogger Bank Teesside A & B fall well below the threshold for adverse effect on integrity as informed by PVA analysis for this species (paragraphs 6.6.121 and 6.6.122 of **REP-049**).

In terms of northern gannet at the Forth Islands, SNH raised "*expected in combination mortality arising from Collision*" as an area of concern in their response to ExQ1 no. 2.5 (**REP-196**).

However, SNH agree to the Applicants conclusions in terms of impacts of the project alone (see Note **b** of this matrix above).

In their statement of common ground with the Applicant (**REP-085**), RSPB highlight concerns over "*the use of Potential Biological Removal (PBR) to assess additional mortality effects on a population through collision or displacement*". The RSPB state that "*the use of PBR is not appropriate and that PVA [population viability analysis] should be used to assess the likely additional mortality effects arising from collision or displacement*". The Applicant's and RSPB's positions are set out in Appendices 3 and 5 of **REP-085** respectively. The Applicant provided an updated position on the use of PVA and PBR at Appendix 8 of their Deadline IV submission (**REP-208**), concluding that "*when used together, PVA and PBR are useful tools for defining thresholds but selection of appropriate model variations and inputs are important when interpreting these values.*" (paragraph 2.3.3).

In response to ExQ2 no. 2.8 (**PD-036**), RSPB outline their position of disagreement with the avoidance rates presented in the Marine Science Scotland Report: "*Until the evidence base improves to include robust data on the behaviour of breeding gannets we consider that the avoidance rate for breeding should remain at 98%, and will only accept the 99% rate outside the breeding season*" (**REP-304**). RSPB also maintain that it "*strongly disagrees with the use of Potential Biological Removal (PBR) for assessment of the likely impacts of this scheme*" (**REP-304**). RSPB refer back to their position set out at Appendix 5 of their SoCG with the Applicant (**REP-085**).

- o. In combination impacts are discussed and assessed in Section 7.8 of **REP-049**. Specific assessment of in combination impacts for the species screened in for all SPA's / pSPA's is provided in **REP-053**.

The projects included in the Applicant's in combination assessment were not disputed by SNH or RSPB in any of their

written submissions. However, in their response to ExQ1 no 2.4 (**REP-196**), SNH state that they *"do not agree that there will be no adverse effects on Forth Islands SPA and Fowlsheugh SPA in combination with other projects"*. However, in the correspondence between the Applicant and SNH submitted at Deadline V (**REP-239**), SNH state that *"The absolute numbers of gannets, kittiwakes and puffins that the Dogger Bank Teesside A&B wind farm is likely to kill are very small and well short of the mortality required for this proposal on its own to have a likely significant effect on Scottish SPA populations. In terms of cumulative impacts the mortality from this proposal is less than 1% of the estimated effects of the three Forth and Tay wind farms. Given this difference in magnitude and the unknown but probably large amount of uncertainty associated with collision risk estimates these small additional levels of mortality are likely to be trivial but we cannot advise that for certain"*.

At Deadline VII, SNH confirmed that the advice they provided at Deadline V (**REP-239**) still stands (**REP-401**) (see Note **b** of this matrix above).

Stage 2 Matrix 6: Fowlsheugh SPA

Site Code: UK9002271

Distance to project: 264 km (Export Cable Corridor) and 332 km (offshore wind farm)³⁸

European site features	Adverse effect on integrity														
	Habitat loss / alteration (prey resources)			Disturbance / displacement			Habitat loss (barrier effect)			Physical Damage (collision risk)			In combination Effects		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Black-legged kittiwake	x a,b,c	x a,b,d	x a,b,e	x f,b	x f,b	x f,b,e	n/a	x g,b	n/a	n/a	x h,b	n/a	x i,f	?	x i,e

Notes:

- a. In matrix A59 of **REP-357** (and updated in **REP-408**), the Applicant states that the development would not have any direct effect on supporting habitat features within the designated SPA, but that changes in habitat conditions as a result of development could potentially influence prey resource availability and the energetics and behaviour of birds that may form part of the designated SPA population.
SNH did not raise the effects of habitat loss / alteration on the prey resources of any seabird species as one of the areas of disagreement with the Applicant's conclusion in their response to ExQ1 no.'s 2.4 – 2.6 (**REP-196**) or in correspondence with the Applicant submitted at Deadline V (**REP-239**, in response to action point 1.2 from the first ISH on biodiversity natural environment matters (**HR-014**)).
RSPB have also not disputed the Applicant's conclusion in relation to habitat loss / alteration on the prey resources of any seabird species (**REP-085**, **REP-166**, **REP-291**, **REP-304**).
- b. In the Applicant's Deadline V Appendix 1 submission (Correspondence with SNH and Marine Scotland Science) (**REP-239**), SNH state that mortality in relation to gannets, kittiwakes and puffins associated with Dogger Bank Teesside A & B

³⁸ Distances to the project for the site are taken from the Applicant's Stage 2 HRA matrix A59 originally submitted as part of the Application documents (**APP-056**) and updated at Deadline VI (**REP-360**) and Deadline VII (**REP-408**).

wind farm are "very small and well short of the mortality required for this proposal on its own to have a likely significant effect on Scottish SPA populations". In response to ExQ1 no. 2.4 (**REP-196**), SNH state that they "agree that Dogger Bank Teesside A/B [sic], considered in its own right, will not have an adverse effect on any Scottish Special Protection Areas or Special Areas of Conservation". In respect of ExQ1 no. 2.5, SNH outline kittiwake collision impacts outside of the breeding season as the only area of concern in relation to the Applicants conclusions at the Fowlsheugh SPA (**REP-196**). At Deadline VII in response to the ExA's request for further information under Rule 17 (**PD-040**), SNH state that they "have no changes to make to the advice provided at Deadline V (REP 239) at this stage...there are still large areas of uncertainty in the methodologies used and in the conclusions reached for all aspects of the impact assessment process(HRA) for mobile bird species both during and out with the breeding season. There are still ongoing discussions occurring both within the Statutory Nature Conservation Bodies (SNCBs) and between SNH and Marine Scotland –these are unlikely to conclude during the examination process for Teesside A & B" (**REP-401**).

In response to ExQ1 no. 2.13, relating to concerns on the Applicants findings of no adverse effects on integrity (**PD-023**), the RSPB did not list the Fowlsheugh SPA as a site of concern (**REP-166**). This is also reflected in item 3-D-1 of the Statement of Common Ground between the Applicant and the RSPB (**REP-085**) which lists the European sites of concern to RSPB, and does not include the Farne Islands SPA. It also states "The RSPB offers no comments on any other sites or environmental impacts".

- c. Determination of the impacts of the various effects of the project on the prey resources available to all seabird species during the construction phase is described in paragraphs 6.5.2 to 6.5.32 of **APP-049**. The Applicant's conclusions in terms of effect on integrity have not been disputed during the examination. Effects of the operational phase on prey resources and habitat utilisation by all seabird species is described in paragraphs 6.6.2-6.6.39 of **APP-049**. The Applicant's conclusions in terms of effect on integrity have not been disputed during the examination.
- d. Effects of the operational phase on prey resources and habitat utilisation by all seabird species is described in paragraphs 6.6.2-6.6.39 of **APP-049**. The Applicant's conclusions in terms of effect on integrity have not been disputed during the examination.
- e. For the purposes of their environmental assessment, the Applicant has assumed that the same effects that would arise during construction would also manifest during decommissioning of the Application (paragraph 2.3.28 & Table 2.2: Realistic worst case scenario for the assessment of impacts on European sites and their features, **APP-049**). The Applicant's approach to the assessment of effects during decommissioning has not been disputed during the examination (although it is noted that where construction effects have been identified in terms of particular species, these are effectively carried forwards in terms of relevance to decommissioning).
- f. The Applicant does not predict any displacement impact associated with proposed development for black-legged kittiwake during construction or operation (paragraph 6.3.34, **APP-049**).
In response to ExQ1 no. 2.4 and 2.5, relating to the Applicant's conclusions in terms of European sites in Scotland (**PD-**

023), SNH did not identify black-legged kittiwake as a species of concern in terms of displacement mortality (**REP-196**). The Applicant's conclusions in terms of no adverse effect on integrity have therefore not been disputed during the examination.

- g. Barrier effects are discussed in paragraphs 6.6.73 to 6.6.95 of **APP-049** and summarised for individual SPA's / pSPA's in **APP-050**. The conclusion of no AEIOI in terms of barrier effects has not been disputed during the examination in relation to any European sites or qualifying features.
- h. Matrix A59 (**REP-357**) (and updated in **REP-408**) states that the Dogger Bank Teesside A & B project is outside the maximum foraging range of black-legged kittiwake (230km) that could derive from the Fowlsheugh SPA. Apportioning of the annual collision estimate (i.e. non-breeding birds in summer and winter), attributes a collision loss of 2.64 adults representing 0.01% of the SPA population (Table A9.35d in Appendix 9 of **APP-094**). In total the loss of adult birds through collision at this SPA would represent an increase in the background mortality of 0.17%.
In terms of black-legged kittiwake at the Fowlsheugh SPA, SNH raised "*expected in combination mortality arising from Collision impacts outside the breeding season*" as an area of concern in their response to ExQ1 no. 2.5 (**REP-196**). However, SNH agree to the Applicant's conclusions in terms of impacts of the project alone (see footnote b). They also state at **REP-196** that "*In magnitude, the effects on kittiwake and puffin are very small (less than 10 birds dying per year) and might be considered trivial*".
- i. In combination impacts are discussed and assessed in Section 7.8 of **REP-049**. Specific assessment of in combination impacts for the species screened in for all SPA's / pSPA's is provided in **REP-053**.
The projects included in the Applicant's in combination assessment were not disputed by SNH in any of their written submissions. However, in their response to ExQ1 no 2.4 (**REP-196**), SNH state that they "*do not agree that there will be no adverse effects on Forth Islands SPA and Fowlsheugh SPA in combination with other projects*".
In the correspondence between the Applicant and SNH submitted at Deadline V (**REP-239**), SNH state that "*The absolute numbers of gannets, kittiwakes and puffins that the Dogger Bank Teesside A&B wind farm is likely to kill are very small and well short of the mortality required for this proposal on its own to have a likely significant effect on Scottish SPA populations. In terms of cumulative impacts the mortality from this proposal is less than 1% of the estimated effects of the three Forth and Tay wind farms. Given this difference in magnitude and the unknown but probably large amount of uncertainty associated with collision risk estimates these small additional levels of mortality are likely to be trivial but we cannot advise that for certain*".
At Deadline VII, SNH confirmed that the advice they provided at Deadline V (**REP-239**) still stands (**REP-401**) (see Note **b** of this matrix above).