UK Government

Habitats Regulations Assessment for an Application Under the Planning Act 2008
DOGGER BANK SOUTH OFFSHORE WIND FARMS

Regulations 63, 64 and 68 of the Conservation of Habitats and Species Regulations 2017, and

Regulations 28, 29 and 36 of the Conservation of Offshore Marine Habitats and Species Regulations 2017

Department for Energy Security and Net Zero

May 2026

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Glossary

Term	Abbreviation
Acoustic Deterrent Device	ADD
Adverse Effect on Integrity	AEoI
Appropriate Assessment	AA
Artificial Nesting Site/Structure (onshore)	ANS
Berwickshire and North Northumberland Coast SAC	BNNC SAC
British Trust for Ornithology	BTO
Carbon Capture and Storage	CCS
Climate Change Committee	CCC
Compensation Implementation and Monitoring Plan	CIMP
Compulsory Acquisition	CA
Counterfactual Growth Rate	CGR
Counterfactual Population Size	CPS
Critical National Priority	CNP
Deemed Marine Licence	DML
Department for Energy Security and Net Zero	DESNZ
Development Consent Order	DCO
Dogger Bank South	DBS
East Riding of Yorkshire Council	ERYC
Effective Deterrent Ranges	EDR
Environmental Impact Assessment	EIA
European Court of Justice	ECJ
European Economic Area	EEA
European Nature Information System	EUNIS
Examining Authority	ExA
Exclusive Economic Zone	EEZ
Flamborough and Filey Coast SPA	FFC SPA
Greenhouse Gas	GHG
Habitat Regulations Assessment	HRA
Highly Pathogenic Avian Influenza	HPAI
Imperative Reasons of Overriding Public Interest	IROPI
Inter-Agency Marine Mammal Working Group	IAMMWG
Interested Parties	IPs
Intergovernmental Panel on Climate Change	IPCC
Interim Population Consequences of Disturbance Model	iPCoD
Joint Nature Conservation Committee	JNCC

Term	Abbreviation
Kittiwake Compensation Steering Group	KCSG
Library of Strategic Compensation Measures	LoSCM
Likely Significant Effect	LSE
Lowest Astronomical Tide	LAT
Management Unit	MU
Marine Mammal Mitigation Plan	MMMP
Marine Management Organisation	MMO
Marine Protected Area	MPA
Marine Recovery Fund	MRF
Mean High Water Spring	MHWS
Mean Low Water Spring	MLWS
Memorandum of Understanding	MoU
National Policy Statement	NPS
Nationally Determined Contribution	NDC
Nationally Significant Infrastructure Project	NSIP
Natural England	NE
Noise Abatement System	NAS
Offshore Artificial Nesting Site/Structure	oANS
Offshore Operations and Maintenance Plan	OOMP
Onshore Substation Zone	OSZ
Outer Dowsing Offshore Wind Farm	ODOWF
Permanent Threshold Shift	PTS
Planning Act 2008	PA 2008
Planning Inspectorate	PINS
Population Viability Analyses	PVA
Population Viability Analysis	PVA
Predicted Environmental Concentrations	PEC
Preliminary Environmental Information Report	PEIR
Procedural Decision	PD
Project Environmental Management Plan	PEMP
Report on the Implications for European Sites	RIES
Report to Inform Appropriate Assessment	RIAA
Royal Society for the Protection of Birds	RSPB
Site Integrity Plan	SIP
Southern North Sea SAC	SNS SAC
Statement of Common Ground	SoCG
Statutory Nature Conservation Body	SNCB

Term	Abbreviation
Supplementary Advice on Conservation Objectives	SACO
Sustainable Drainage Systems	SuDS
The Carbon Budget and Growth Delivery Plan	CBGDP
The Wildlife Trusts	TWT
Trailing Suction Hopper Dredger	TSHD
Transition Joint Bays	TJB
Unexploded Ordnance	UXO
Upper Confidence Level	UCL
Wash and North Norfolk SAC	WNNC SAC
Zone of Influence	ZoI

1 Introduction

1.1 Background

This is a record of the Habitats Regulations Assessment ("HRA") that the Secretary of State for Energy Security and Net Zero ("the Secretary of State") has undertaken under the Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations") and the Conservation of Offshore Marine Habitats and Species Regulations 2017 ("the Offshore Habitats Regulations") in respect of the Development Consent Order ("DCO") and Deemed Marine Licences ("DMLs") for the Dogger Bank South Offshore Wind Farm and its associated infrastructure. The Examining Authority ("ExA") defines this as the "Proposed Development". It is defined as the "Project" within this HRA for consistency with the terminology of the Habitats Regulations. For the purposes of these Regulations the Secretary of State is the competent authority.

The Project will comprise the construction and operation of an offshore windfarm comprising several onshore and offshore elements, including two array areas (Dogger Bank East and Dogger Bank West) being at least 100 km north east of Flamborough Head off the Yorkshire coast, within the UK's Exclusive Economic Zone ("EEZ"). The Project application is described in more detail in Section 2.

The Project constitutes a nationally significant infrastructure project ("NSIP") as defined by s14(1)(a) and s 15(3) of the Planning Act 2008 as it is for an offshore generating station with a capacity over 100MW.

The Project was accepted for Examination by the Planning Inspectorate ("PINS") on 10 July 2024 and a five-member Panel of Inspectors ("the Panel") was appointed as the ExA for the application. The preliminary meeting commenced on 22 October 2024, however, the meeting was adjourned to enable the Applicants to undertake a major update of their offshore ornithology information and to progress the HRA compensation proposals. The ExA re-opened the meeting on 14 January 2025 following review of additional and updated documents. The examination of the Project application began on 14 January 2025 and completed on 11 July 2025. The ExA submitted its report of the Examination, including its recommendation ("the ExA's Report"), to the Secretary of State on 10 October 2025. Following the close of Examination, the Applicants submitted multiple post-examination documents relevant to the HRA, including an update to part of their Report to Inform Appropriate Assessment ("RIAA"), and documents relating to compensatory measures. The MMO also submitted post-examination documentation, which included further comments in relation to monitoring and surveys.

On 6th November 2025, the Secretary of State invited Interested Parties to provide additional updates or information regarding certain issues including those relating to potential impacts on qualifying features of sites within the UK's National Site Network, followed by a further request for information on 16th January 2026.

This report also contains assessment of the potential effects of the Project upon designated sites in European Economic Area ("EEA") States ("transboundary sites") (Section 6).

1.2 Habitats Regulations Assessment (HRA)

The Habitats Regulations and Offshore Habitats Regulations aim to ensure the long-term conservation of certain species and habitats by protecting them from possible adverse effects of plans and projects. In the UK, the Habitats Regulations apply as far as the 12 nautical miles ("nm") limit of territorial waters. Beyond territorial waters, the Offshore Habitats Regulations serve the same function for the UK's offshore marine area. The Secretary of State notes the Application covers areas within and outside the 12 nm limit, so both sets of Regulations apply and hereafter will be referred to collectively as the "Habitats Regulations".

Following the UK's departure from the European Union, the Habitats Regulations were amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 ("the 2019 Regulations"). Reference to the Habitat Regulations in this HRA Report are therefore to the latest amended version at the time of publication, unless otherwise stated.

The Habitats Regulations provide for the designation of sites for the protection of habitats and species of international importance. These sites are called Special Areas of Conservation ("SACs"). They also provide for the classification of sites for the protection of rare and vulnerable birds and for regularly occurring migratory species within the UK and internationally. These sites are called Special Protection Areas ("SPAs"). SACs and SPAs together from part of the UK's National Site Network.

The Convention on Wetlands of International Importance 1972 ("the Ramsar Convention") provides for the listing of wetlands of international importance. These sites are called Ramsar sites. Government policy is to afford Ramsar sites in the United Kingdom the same protection as sites within the National Site Network (collectively referred to in this HRA as "protected sites"). Amendments made to the *Habitats Regulations 2017* under the *Planning and Infrastructure Act 2025 will, when brought into force, place this policy on a statutory basis*1. Candidate SACs ("cSACs"), SACs and SPAs are afforded protection as European sites. As a matter of policy[2] the Government affords potential SPAs ("pSPAs") the same level of protection.

Regulation 63 of the Habitats Regulations provides that:

…before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in-combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, [the competent authority] must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.

And that:

In the light of the conclusions of the assessment, and subject to regulation 64 [IROPI], the competent authority may agree to the plan or project only after having ascertained that it will not

1 The Levelling-up and Regeneration Act 2023 (Commencement No. 9) and Planning and Infrastructure Act 2025 (Commencement No. 1 and Transitional Provisions) Regulations 2025

2 NPS EN-1 para 5.4.5

adversely affect the integrity of the European site or the European offshore marine site (as the case may be).

Regulation 28 of the Conservation of Offshore Marine Habitats and Species Regulations 2017 contains similar provisions:

Before deciding to undertake, or give any consent, permission or other authorisation for, a relevant plan or project, a competent authority must make an appropriate assessment of the implications of the plan or project for the site in view of that site's conservation objectives.

And that:

In the light of the conclusions of the assessment, and subject to regulation 29 [IROPI], the competent authority may agree to the plan or project only if it has ascertained that it will not adversely affect the integrity of the European offshore marine site or European site (as the case may be).

This Project is not directly connected with, or necessary to, the management of a protected site. The Habitats Regulations require that, where the Project is likely to have a significant effect ("LSE") on any such site, alone or in-combination with other plans and projects, an appropriate assessment ("AA") is carried out to determine whether or not the Project will have an adverse effect on the integrity ("AEoI'') of the site in view of that site's Conservation Objectives. In this document, the following assessments are collectively referred to as the HRA:

- Stage 1: Assessment of LSE,
- Stage 2: AA to determine whether there is an adverse effect on the integrity of a site,
- Stage 3: Assessment of Alternative Solutions,
- Stage 4: Imperative Reasons of Overriding Public Interest ("IROPI"),
- Stage 5: Proposed Compensatory Measures.

The Secretary of State has had regard to relevant guidance on the application of the HRA including that of the PINS (2024)[3], European Commission guidance[4], as well as joint guidance by Department for Environment, Food and Rural Affairs ("DEFRA"), Natural England ("NE"), the Welsh Government, and Natural Resources Wales (2021) on 'Habitats Regulations Assessment: protecting a European site'[5].

1.3 Site Conservation Objectives

Where an AA is required in respect of a protected site, regulation 63(1) of the Habitats Regulations (and regulation 28(1) of the Offshore Habitats Regulations) requires that it be an AA of the implications of the plan or project for the site in view of its conservation objectives. Government guidance also recommends that in carrying out the LSE screening, Applicants must

[3] https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-habitats-regulations-assessments

[4] European Commission (2019). Managing Natura 2000 sites. The provision of the Article 6 of the 'Habitats' Directive 92/43/ECC. 70pp + appendices.

[5] https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site

check if the proposal could have a significant effect on a European site that could affect its conservation objectives.

Defra Guidance indicates that disturbance to a species or deterioration of a protected site must be considered in relation to the integrity of that site and its conservation objectives[6]. It states that *"the integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was designated"*.

Conservation objectives have been established by Natural England ("NE"). When met, each site will contribute to the overall favourable conservation status of the species or habitat feature across its natural range. Conservation objectives outline the desired state for a protected site, in terms of the interest features for which it has been designated. If these interest features are being managed in a way which maintains their nature conservation value, they are assessed as being in a 'favourable condition'. An AEoI is likely to be one which prevents the site from making the same contribution to favourable conservation status for the relevant feature as it did at the time of its designation. There are no set thresholds at which impacts on site integrity are considered adverse. This is a matter for interpretation on a site-by-site basis, depending on the designated feature and nature, scale, and significance of the impact.

NE has issued generic conservation objectives, which should be applied to each interest feature of the site. Supplementary advice for each site underpins these generic objectives to provide site-specific information and give greater clarity to what might constitute an adverse effect on a site interest feature. Supplementary advice on conservation objectives ("SACOs") are subject to availability and are currently being updated on a rolling basis.

Where supplementary advice is not yet available for a site, NE advises that HRAs should use the generic objectives and apply them to the site-specific situation. For SPAs, the overarching objective is to avoid the deterioration of the habitats of qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Habitats Regulations. This is achieved by, subject to natural change, maintaining and restoring:

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The populations of the qualifying features; and
- The distribution of the qualifying features within the site.

For SACs, the overarching objective is to avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving favourable conservation status of each of the qualifying features. This is achieved by, subject to natural change, maintaining and restoring:

- The extent and distribution of the qualifying natural habitats and habitats of qualifying species;

[6] https://www.gov.uk/guidance/appropriate-assessment

- The structure and function (including typical species) of qualifying natural habitats;
- The structure and function of the habitats of qualifying species;
- The supporting processes on which qualifying natural habitats and habitats of qualifying species rely;
- The populations of qualifying species; and
- The distribution of qualifying species within the site.

The conservation objectives and, where available, SACOs have been used by the Secretary of State to consider whether the Project has the potential to have an adverse effect on the integrity of sites, either alone or in-combination with other plans or projects. The potential for the Project to have an adverse effect on site integrity is considered for each site in turn. The conservation objectives for the European sites and features for which a LSE was identified by the Applicant are set out in RIAA Parts 1 [REP5-007], 2 [REP7-016], 3 [REP5-009] and 4 [REP6-008].

The SACOs relevant to this HRA Report, as published by NE and the Joint Nature Conservation Committee ("JNCC"), are referenced in Table 1 of this HRA Report.

1.4 The Report on the Implications for European Sites (RIES) and Statutory Consultation

Under Regulation 63(3) of the Habitats Regulations and Regulation 28(4) of the Offshore Habitats Regulations the competent authority must, for the purposes of an AA, consult the appropriate Statutory Nature Conservation Body ("SNCB") and have regard to any representation made by that body within such reasonable time as the authority specifies.

NE is the SNCB for England and for English waters within the 12 nm limit. The JNCC is the SNCB beyond 12 nm, but this duty has been discharged by NE following the 2013 Triennial Review of both organisations[7] [8]. However, JNCC retains responsibility as the statutory advisor for protected sites that are located outside the territorial sea and UK internal waters (i.e. more than 12 nautical miles offshore) and as such continues to provide advice to NE on the significance of any potential effects on interest features of such sites.

The ExA, with support from the Inspectorate's Environmental Services Team, produced a Report on the Implications for European Sites ("the RIES") [PD-025]. The purpose of the RIES was to compile, document and signpost information submitted by the Applicants and Interested Parties ("IPs") during the Examination (up until 23 May 2025). It was issued to ensure that IPs, including NE as the appropriate SNCB in respect of the Application for the Project, had been formally consulted on Habitats Regulations matters during the Examination.

The RIES was published on the PINS Nationally Significant Infrastructure Project web pages and the ExA notified Interested Parties that it had been published. Consultation on the RIES was undertaken between 6 June 2025 and 26 June 2025, with comments received at Deadline ("DL")

[7] https://www.gov.uk/government/publications/triennial-review-of-the-environment-agency-ea-and-natural-england-ne

[8] https://www.gov.uk/government/publications/triennial-review-of-the-joint-nature-conservation-committee-jncc

7 from the Applicants [REP7-129], East Riding of Yorkshire Council (ERYC) [REP7-144], the Marine Management Organisation (MMO) [REP7-148] and NE [REP7-152].

A number of Examination submissions at DL6 and DL7 included HRA-relevant information. NE [REP7-152] noted that the RIES did not take account of this information and recommended that the RIES be updated and included in the ExA's Recommendation to the Secretary of State. NE advised that consultation on the RIES did not adequately discharge the statutory requirement to consult NE on appropriate assessments (AA) [REP7-152].

For the avoidance of doubt, the Secretary of State considers all representations made by all IPs on HRA matters throughout the entirety of the Examination and post-Examination process. He does not rely solely on consultation on the RIES to inform his conclusions on matters relevant to the HRA, but he does consider that the RIES can formally support his duties to consult on AAs. The Secretary of State considers that the further rounds of consultation which he has issued since the close of Examination, including consulting with NE as the SNCB, in addition to the extensive consultation undertaken during Examination have adequately fulfilled his duties to consult on the AA under Regulation 63(3) of the Habitats Regulations and Regulation 28(4) of the Offshore Habitats Regulations.

1.5 Documents Referred to in this HRA Report

This HRA Report has taken account of, and should be read in conjunction with, the documents produced as part of the application and Examination, together with the responses to the Secretary of State's requests for comment and further information which are available on the PINS Nationally Significant Infrastructure Project web pages[9]. These are in particular, but not limited to:

- The ExA's Recommendation Report
- The Report on the Implications for European Sites ("RIES") [PD-025]
- The Report to Inform Appropriate Assessment ("RIAA") [REP6-008, REP5-007, REP5-009, Part 2 of 4 (Revision 6) updated post-examination]
- Project Level Dogger Bank Compensation Plan (Revision 5)[10]
- Project Level Kittiwake Compensation Plan (Revision 8)[11]
- Outline Kittiwake Compensation Implementation and Monitoring Plan (Revision 4)[12]

[9] For a list of document references and related links to these documents, see the examination library here: https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010125/documents

[10] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002481-6.2.3%20Appendix%203%20-%20Project%20Level%20Dogger%20Bank%20Compensation%20Plan%20(Revision%205)%20(Clean).pdf

[11] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002525-6.2.1%20Appendix%201%20-%20Project%20Level%20Kittiwake%20Compensation%20Plan%20(Revision%208)%20(Clean).pdf

[12] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002527-6.2.1.2%20Outline%20Kittiwake%20Compensation%20Implementation%20and%20Monitoring%20Plan%20(Revision%204)%20(Clean).pdf

- Guillemot and Razorbill Compensation Plan (Revision 9)[13]
- Outline Guillemot and Razorbill Compensation Implementation and Monitoring Plan (Revision 4)[14]
- Commitments Register (Revision 5)[15]
- The Statement of Common Ground with NE [REP9-018]
- NE's end of Examination position on ornithology [REP8-053]
- NE's Risks and Issues Log [REP9-031]
- The Statement of Common Ground with RSPB (Revision 3) [REP9-016]
- The Statement of Common Ground with The Wildlife Trusts (''TWT'') (Revision 3) [REP8-026]

Plus, other information submitted during the Examination and during the Secretary of State's consideration of the Application.

A Statement of Common Ground ("SoCG") between the Applicants and NE was first submitted at deadline 8 (4th July 2025). Subsequent references to the SoCG between the Applicants and NE in this HRA Report are to the DL9 version [REP9-018], unless otherwise stated. A further update to the SoCG was made following the closure of Examination[16], however, this only covered relevant matters previously noted as 'not agreed' in REP9-018, and the update confirmed that not all matters relating to HRA were agreed between the two parties, and that there were HRA matters outstanding between them in respect of the Project.

13 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002576-6.2.2%20Appendix%202%20Guillemot%20and%20Razorbill%20Compensation%20Plan%20(Revision%209)%20(Clean)(1).pdf

14 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002529-6.2.2.1%20Annex%20A%20-%20Outline%20Guillemot%20and%20Razorbill%20Compensation%20Implementation%20and%20Monitoring%20Plan%20(Revision%204)%20(Clean).pdf

15 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002512-8.6%20Commitments%20Register%20(Revision%205)%20(Clean).pdf

16 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002465-20.3%20Natural%20England%20SoCG%20Update(1).pdf

2 Project description

A detailed description of the Project is presented in the Environmental Statement (ES) Chapter 5 (Project Description) [APP-071] and each Work No. can be found in Schedule 1 to the Development Consent Order (DCO). The Project comprises the following components:

- the construction and operation of two array areas (Dogger Bank East and Dogger Bank West), each with up to 100 wind turbines and their foundations;
- the construction of up to eight offshore platforms and their foundations including collector platforms, offshore converter platforms and accommodation platform and an electrical switching platform;
- scour protection (where required);
- subsea cables including: array cables which would link the wind turbines to each other and the offshore platforms; inter-platform cables which would link the offshore platforms; export cables from the offshore platforms to the landfall;
- cable protection (as required);
- landfall, intertidal works between Mean High Water Spring (MHWS) and Mean Low Water Spring (MLWS) and associated transition joint bays (TJB) which would be used to connect the onshore and offshore cables at landfall;
- onshore export cables installed underground from the TJB to the onshore converter stations and associated joining bays and link boxes;
- up to two onshore converter stations;
- onward 400kV cable connection from the onshore convertor stations to the proposed Birkhill Wood National Grid Substation;
- trenchless crossing locations (for example by horizontal directional drilling);
- construction and operational accesses, and;
- temporary construction compounds.

The Applicants have sought flexibility in submitting a final design, and as such adopted a Project Design Envelope in accordance with PINS Advice Note 9[17] (Rochdale Envelope) to take a worst-case scenario approach in presenting and assessing effects, as set out in the Environmental Impact Assessment Methodology [APP-076]. The Applicants have also considered the option to build one of either, or both of two array areas (Dogger Bank East and Dogger Bank West), however, have taken a coordinated approach to their design and application in a single DCO. The Secretary of State's Habitats Regulations Assessment (HRA) is based upon the maximum

[17] https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-nine-rochdale-envelope

extent or worst-case potential impact of the Project for each parameter, and assumes that both wind farm arrays will be constructed.

The final offshore construction programme will be submitted to the Marine Management Organisation ("MMO") under condition 24(1)(b) of the generation assets deemed Marine Licences ("DML"), which are at Schedules 10 and 11 to the DCO, and 22(1)(b) of the transmission assets DMLs, which are at Schedules 12 and 13 to the DCO, and 20(1)(b) of the DMLs in respect of the transmission assets interlinking the arrays, which are at Schedules 14 and 14A to the DCO. The construction programme must be submitted to the MMO at least six months prior to commencement of licensed activities, which include, and must include details of:

i. the proposed construction start date
ii. proposed timings for mobilisation of plant, delivery of materials and installation works
iii. proposed pre-construction surveys, baseline report format and content, construction monitoring, post-construction surveys and monitoring and related reporting in accordance with conditions 29, 30 and 31 to be submitted to the MMO in accordance with the following (unless otherwise agreed in writing with the MMO):
    a. at least six months prior to the first survey, detail of the pre-construction surveys and an outline of all proposed pre-construction monitoring
    b. at least six months prior to construction, detail on construction monitoring
    c. at least six months prior to commissioning, detail of post-construction (and operational) monitoring
iv. an indicative written construction programme for all wind turbine generators (and offshore converter platforms) and cables including fibre optic cables comprised in the works at Part 1 (licensed marine activities) of this Schedule (insofar as not shown in paragraph (ii) above)
v. a monitoring plan for each topic identified, unless otherwise agreed in writing with the MMO, setting out the circumstances in which monitoring will be required and the monitoring to be carried out in such circumstances

The final as-built parameters will be submitted to the MMO under condition 33(1)(c) of the generation assets DMLs, which are at Schedules 10 and 11 to the DCO, and condition 31(1)(a) of the offshore transmission assets DML which are at Schedules 12 and 13 to the DCO and condition 27 of the transmission interlinking the arrays, at Schedules 14 and 14A.

2.1 Project Location

The proposed array areas would be located within the Dogger Bank region of the North Sea. The closest point to the coast from the proposed array areas would be 100 kilometres (km) for Dogger Bank South (DBS) West and 122 km from DBS East (Figure 1, Figure 2). The offshore export cables landfall on the East Riding of Yorkshire coastline, near Skipsea, with up to two new onshore converter stations before onshore cable routeing to a proposed new National Grid substation close to the existing Creyke Beck substation known as Birkhill Wood, which is to the south of Beverley.

Figure 1: Proposed offshore project area; offshore array and export cable corridors

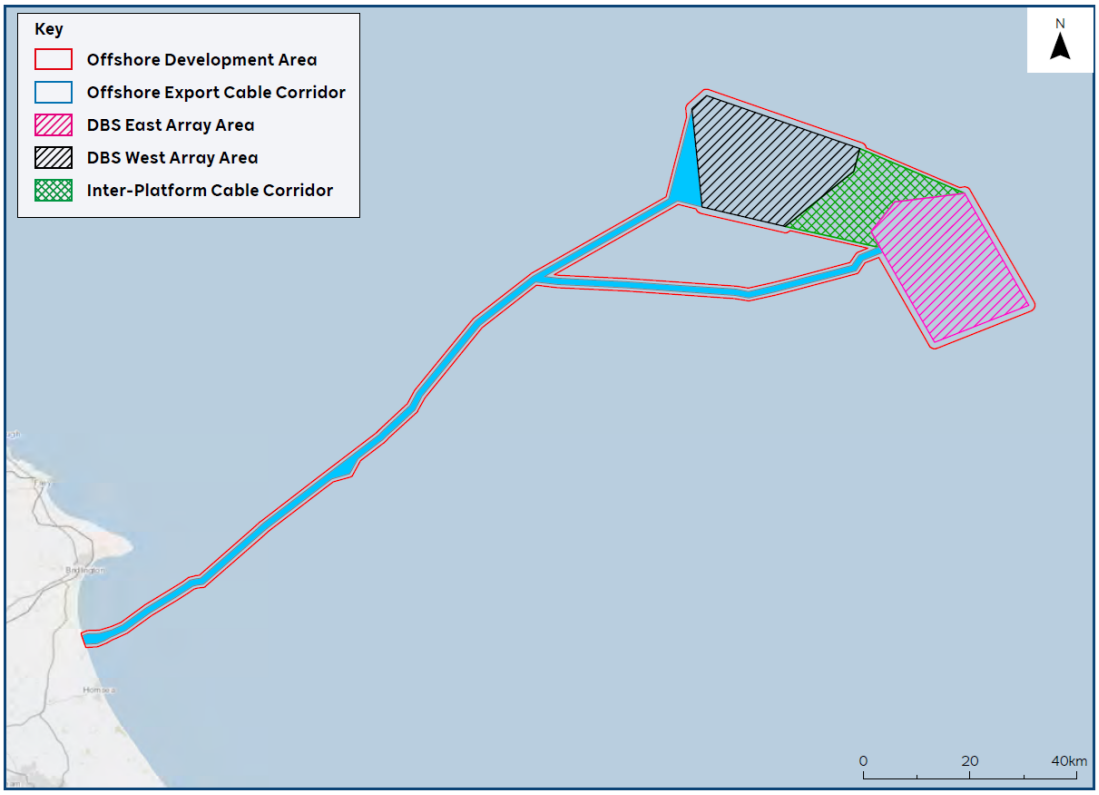
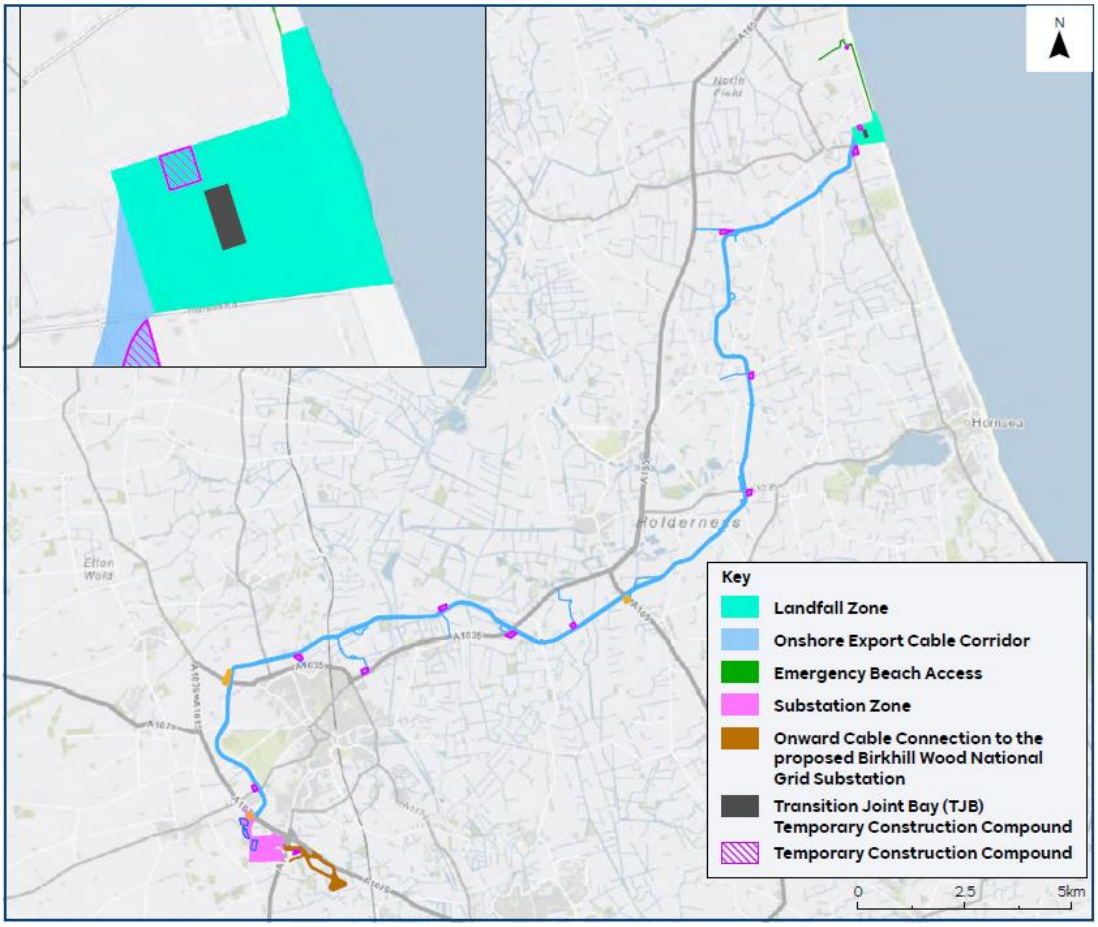


Figure 2: Proposed project area; landfall and onshore elements



2.2 Changes to the Application During Examination

The Applicants submitted a formal change request on 10th January 2025 [AS-129 to AS-152] for which the Applicants carried out a non-statutory consultation exercise.

Change request 1 related to offshore and intertidal aspects of the Project. The changes included:

- change 1: removal of proposed gravity base structure foundations
- change 2: removal of the proposed electrical switching platform from the design envelope
- change 3: reduction of the number of proposed platforms in the design envelope, plus associated scour protection
- change 4: reduction of proposed cabling within the array areas, plus associated seabed preparation and cable protection
- change 5: removal of the proposed short trenchless crossing option at landfall

Change request 2 related to the onshore aspects of the Project, specifically within the onshore substation zone ("OSZ"). The change reduced the footprint of the proposed onshore convertor station(s) within the OSZ and resulted in the following changes:

- change 1: reduction in the footprint of the onshore convertor station(s) and reduction in the nature of the compulsory acquisition ("CA") powers sought
- change 2: removal of the diversion of existing Yorkshire Water Main which would result in a reduction in the nature of CA powers sought
- change 3: reduction in the size and change in the indicative location of the proposed sustainable drainage systems ("SuDS")
- change 4: changes to the proposed landscaping

The ExA agreed with the Applicants that neither of the proposed changes were so material that it constituted a materially different project [PD-012]. The proposed changes were not considered, individually or cumulatively, to lead to the project being different in nature or substance to that which was originally applied for. Additionally, parties that may have been affected by the proposed changes were given an appropriate opportunity to engage and sufficient time remained in the Examination to allow for their full and proper consideration. The Project Description was updated to reflect the change request [REP7-032].

The ExA therefore issued a Procedural Decision ("PD") [PD-012] to accept both changes into the Examination.

3 Stage 1: Screening for Likely Significant Effects

Under regulation 63 of the Habitats Regulations and regulation 28 of the Offshore Habitats Regulations, the Secretary of State must consider whether a project will have an LSE on a protected site, either alone or in-combination with other plans or projects.

The purpose of this section is to identify any LSEs on protected sites that may result from the Project and to record the Secretary of State's conclusions on the need for an AA.

Section 3.3 of the HRA Screening [APP-049] set out the process undertaken by the Applicants to identify the European sites and features to be included in the screening assessment. A pre-screening was undertaken using a source-pathway-receptor approach, and adopted a number of criteria to identify relevant sites:

1. The site boundaries of the Projects overlap with one or more European or Ramsar site(s).
2. European or Ramsar site(s) with qualifying mobile features/species (e.g. Annex I birds, Annex II marine mammals, migratory fish) whose range (e.g. foraging, migratory, overwintering, breeding or natural habitat range) overlaps with the Projects.
3. European or Ramsar site (s) and/or qualifying interest features located within the potential zone of influence ("ZoI") of impacts associated with the Projects (e.g. habitat loss/disturbance, noise and risk of collision).

3.1 Screening results

The approach to screening for each receptor is outlined in sections 4.1 to 4.3 of the Applicants' HRA Screening, and is based on the known distribution, ecology and sensitivities of each receptor group. Therefore, the potential for being affected by the project, and European sites and qualifying features for consideration in the assessment were identified based on the following groups:

- Annex I offshore habitats – 3 UK European sites in table 4-2 and figure 4-1 of [APP-049]
- Annex II migratory fish – 2 UK European sites in table 4-4 and figure 4.2 of [APP-049]
- Annex II marine mammals – 5 UK European sites in table 4-7 and figures 4-3 and 4-4 of [APP-049])
- marine ornithological features – 105 UK European sites in table 4-10 of [APP-049] and [PDA-007]
- terrestrial ecology – 5 UK European sites on figure 4-5 of [APP-049]

The European sites and qualifying features for which an LSE impact pathway was identified by the Applicants at the point of application were summarised in tables 1 and 4-7 of the RIAA Part 1 [APP-045]. This reflected changes to the conclusions of the HRA Screening Report which were made following feedback on the PEIR. The Applicants screening for LSE took account of the ruling of the European Court of Justice (ECJ) in People Over Wind, Peter Sweetman v Coillte

Teoranta (C-323/17) (the "Sweetman Judgement")[18] to ensure that no mitigation or avoidance measures were taken into account in reaching their conclusion, as stated at paragraph 154 of [REP5-007].

Having had regard to the view of NE, which was maintained throughout the Examination, the ExA was unable to rule out an LSE on river lamprey and sea lamprey of the Humber Estuary SAC and Ramsar site as a result of indirect impacts through effects on preferred prey availability during construction. As such, the ExA considered that an LSE should be concluded, but that the information provided by the Applicants was sufficient to inform the AA. The Secretary of State agrees with the ExA, and will therefore consider this source of effect in the Stage 2 Appropriate Assessment. The ExA was otherwise satisfied that the Applicants' final RIAA Part 1 [REP5-007] identified all LSEs that could result from the Project alone or in-combination with other plans or projects.

Table 1 lists the sites for which significant effects cannot be excluded, either alone or in-combination, alongside the relevant site features and impact pathways. These sites are also shown in Figures 3-7 of this HRA report. The Secretary of State is satisfied to adopt the rationale and conclusions of the ExA for those sites and features screened out of the LSE assessment [PD-025, also see NE's conclusion REP7-152, Q1] and has not duplicated this assessment here.

The Secretary of State has considered the potential effects of the application on all interest features of the protected sites listed in Table 1, taking into account their conservation objectives, to determine whether there will be likely significant effects in the context of the Habitats Regulations and Offshore Habitats Regulations. The Secretary of State considers that sufficient information has been provided to inform a robust assessment in line with his duties. In reaching his conclusion, the Secretary of State took no account of measures intended to mitigate effects on any protected site.

[18] ECJ case reference C-323/17, available: http://curia.europa.eu/juris/document/document.jsf?docid=200970&doclang=EN (Accessed 04/12/2025)

Figure 3: Sites designated for Annex I habitats

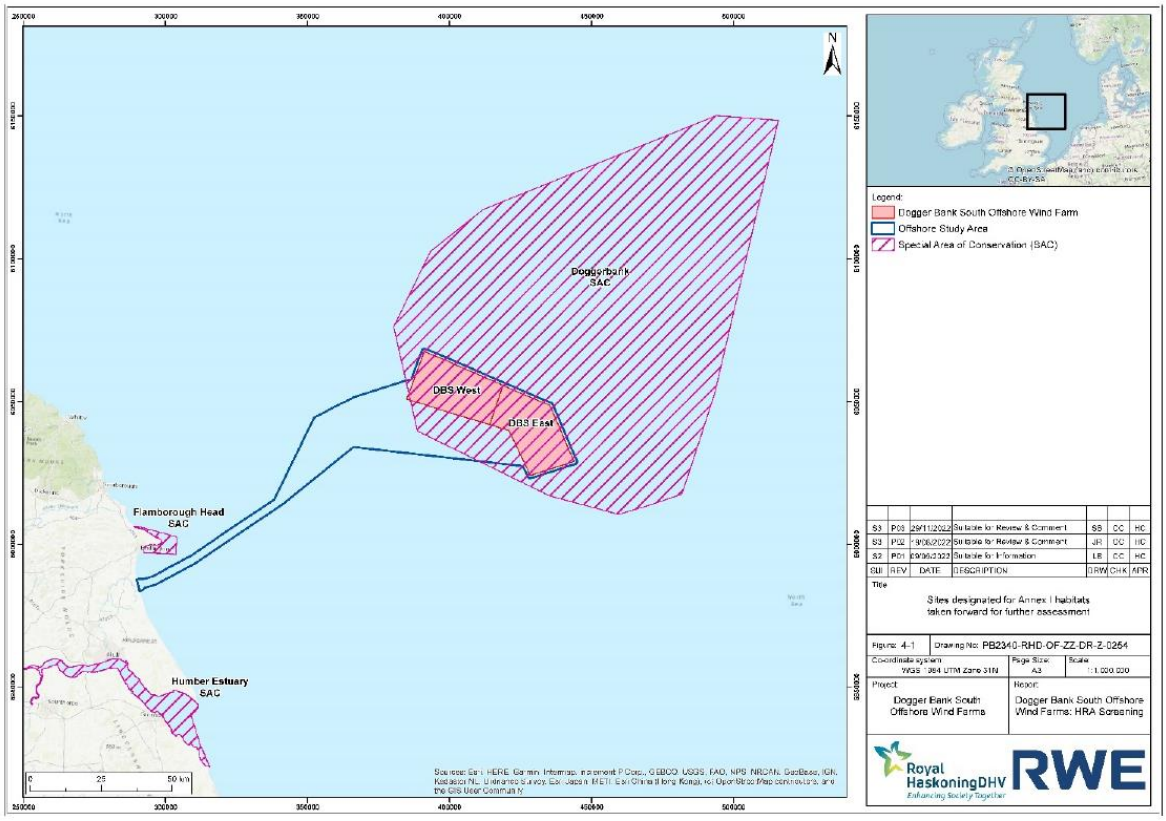


Figure 4: Sites designated for Annex II migratory fish

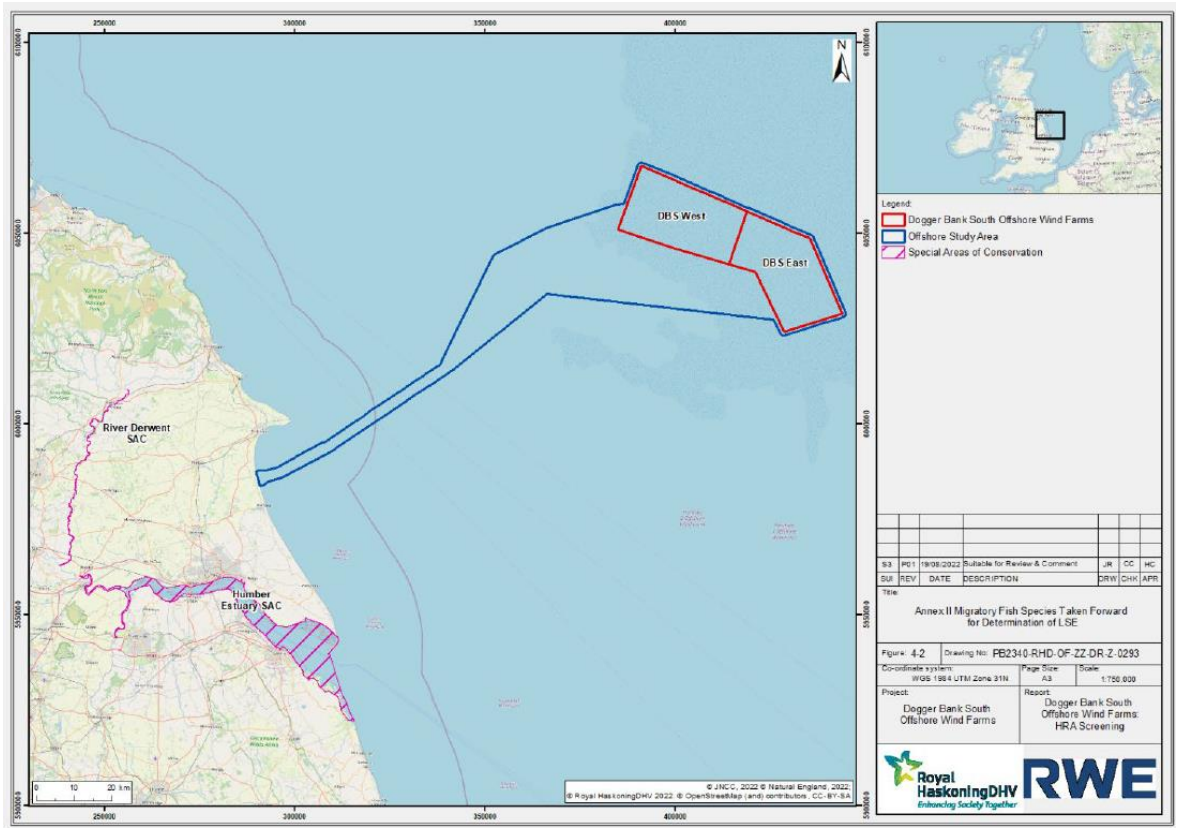


Figure 5: Sites designated for Annex II marine mammals

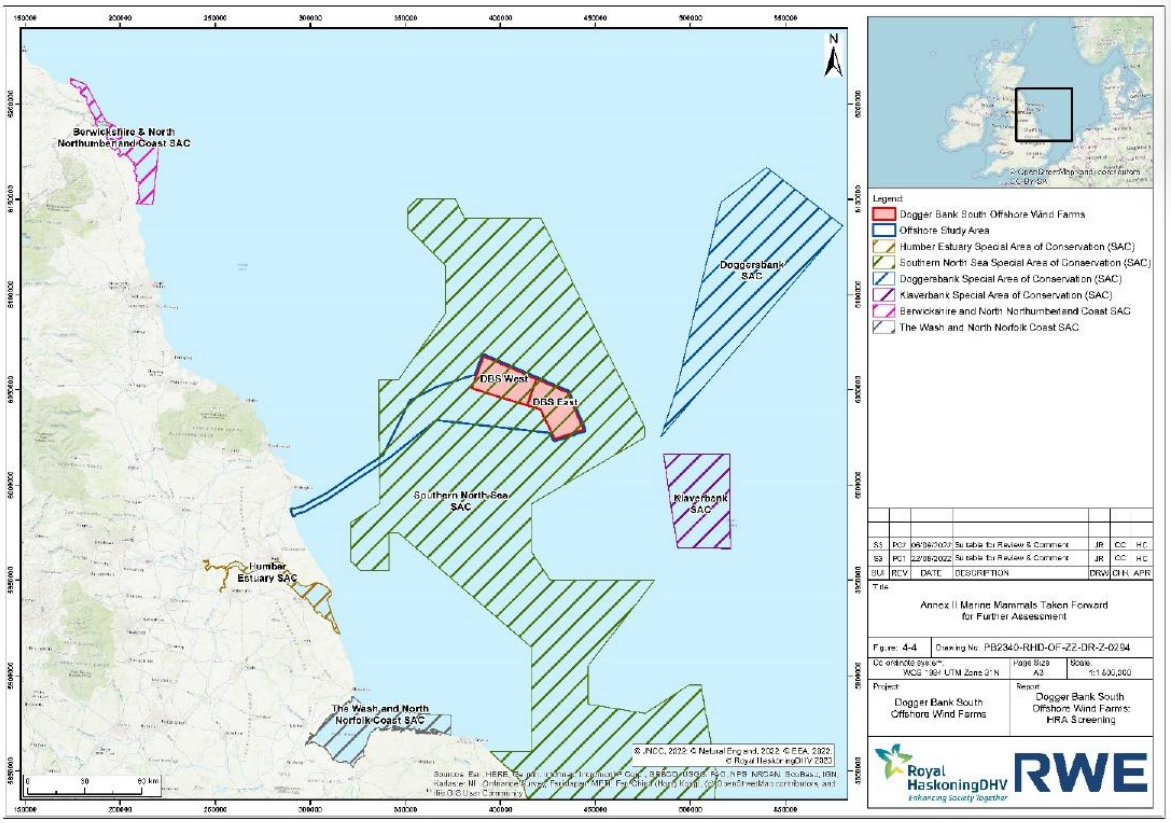


Figure 6: Sites designated for Annex II marine mammals (continued)

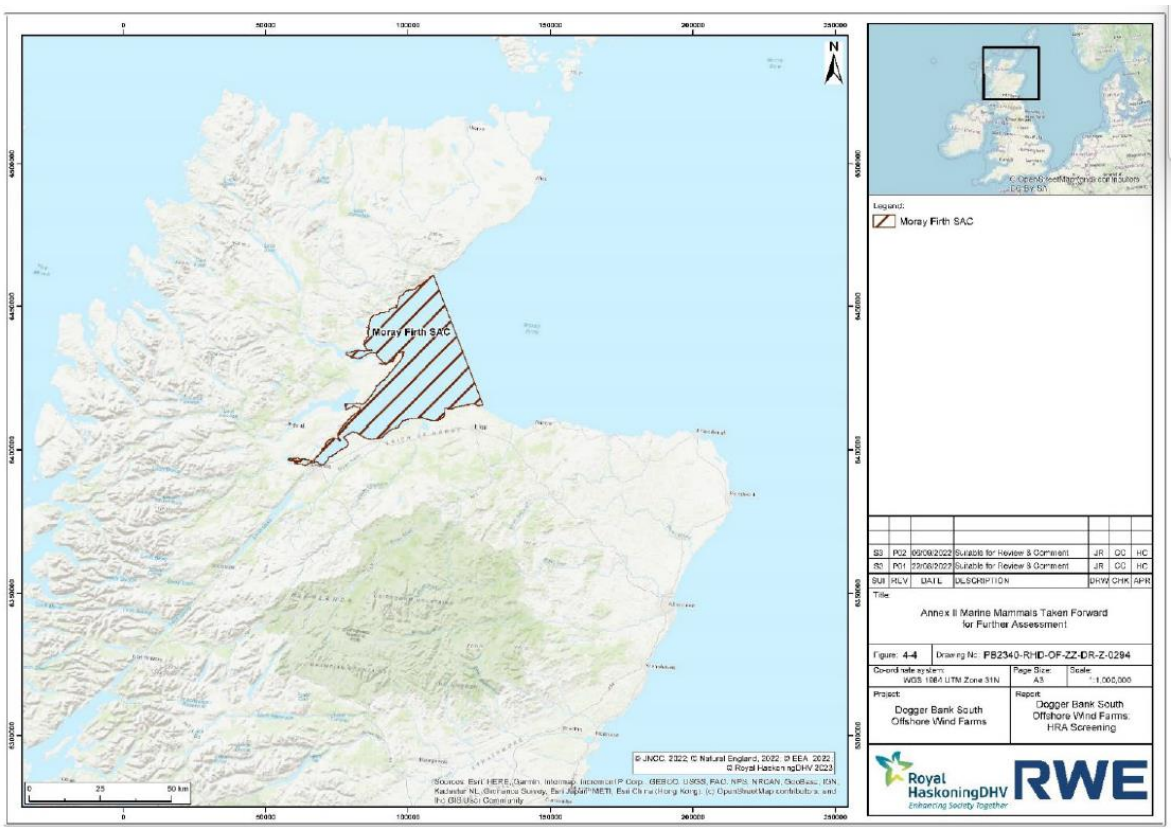


Figure 7: Sites designated for marine ornithological features

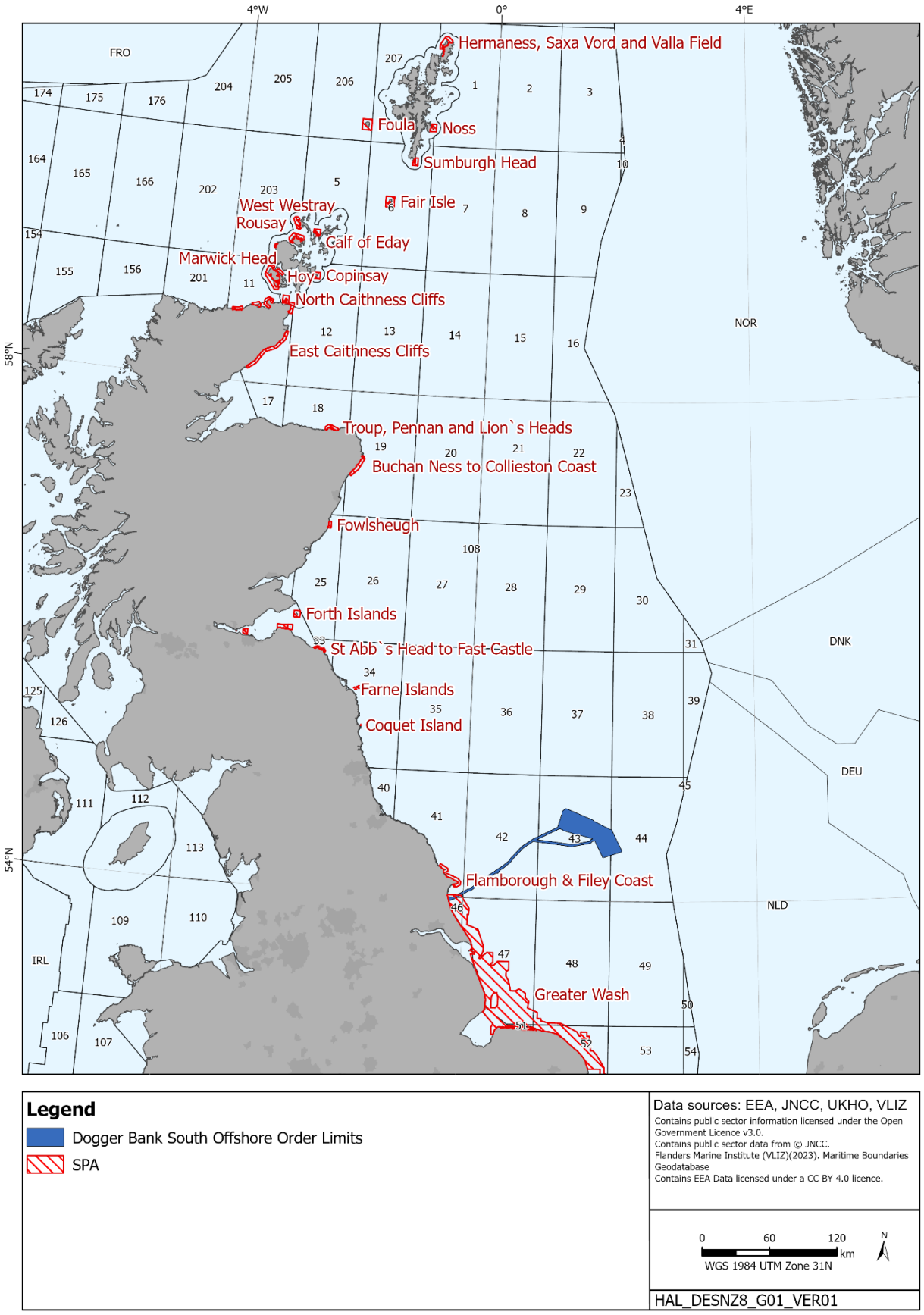


Table 1: Protected sites for which likely significant effects cannot be excluded

Protected Site	**Distance from the Project (km)**	**Qualifying feature**	**Impact Pathway and Project Phase (C,O,D)** C = construction; O = operations and maintenance; D = decommissioning
Annex I habitats			
Dogger Bank SAC[19]	Within array areas	Sandbanks which are slightly covered by sea water all the time	Physical change (to another seabed type) (C, O, D) Physical change (to another sediment type) (C, O, D) Abrasion/ disturbance of the substrate on the surface of the seabed (C, O, D) Habitat structure changes – removal of substratum (extraction) (C) Penetration and/ or disturbance of the substratum below the surface of the seabed, including abrasion (C, O, D) Changes in suspended solids (water clarity) (C, O, D) Smothering and siltation rate changes (heavy) (C, O, D) Smothering and siltation rate changes (light) (C, O, D) Indirect effects (impacts on sandeel leading to impacts on the characteristic community and ecological function of the Dogger Bank SAC) Introduction or spread of INIS (C, O, D) Electromagnetic changes (O) Hydrocarbon and PAH contamination (C, O, D) Synthetic compound contaminant (including pesticides, antifoulants, pharmaceuticals) (O) Transition elements and organometal (for example TBT) contamination (C, O, D) In-combination effects

[19] https://jncc.gov.uk/resources/26659f8d-271e-403d-8a6b-300defcabcb1

Protected Site	**Distance from the Project (km)**	**Qualifying feature**	**Impact Pathway and Project Phase (C,O,D)** C = construction; O = operations and maintenance; D = decommissioning
Flamborough Head SAC[20]	3 (south-east of the offshore export cable corridor)	Reefs Vegetated sea cliffs of the Atlantic and Baltic Coasts[21] Submerged or partially submerged sea caves	Smothering and siltation rate changes (heavy and light) (C, O, D) In-combination effects

[20] https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK0013036

[21] Natural England initially identified the vegetated sea cliffs of the Atlantic and Baltic Coasts feature of the Flamborough Head SAC as a feature for which outstanding concerns remained [RR-039, table 5.1]. However, further to the Applicants confirming that there would be no interaction of concern between this qualifying feature and the offshore export cable corridor [RIAA Part 2 REP7-016], NE agreed an LSE could be excluded [REP5-055] [REP5-062] [REP7-152, Q2].

Protected Site	**Distance from the Project (km)**	**Qualifying feature**	**Impact Pathway and Project Phase (C,O,D)** C = construction; O = operations and maintenance; D = decommissioning
Humber Estuary SAC[22]	44.6 (south of the proposed landfall)	[23]Estuaries Mudflats and sandflats not covered by seawater at low tide Sandbanks which are slightly covered by seawater all the time Coastal lagoons Salicornia and other annuals colonising mud and sand Atlantic salt meadows (*Glauco Puccinellietalia maritima*)	Smothering and siltation rate changes (heavy and light) (C, O, D) Introduction of other substances (solid, liquid or gas) (C) In-combination effects
Annex II fish			
River Derwent SAC[24]	43 (west of the landfall site (inland))	River lamprey, sea lamprey	Underwater noise and vibration impacts due to Unexploded Ordinance (‘‘UXO’’) clearance (C) In-combination effects

[22] https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK0030170

[23] The Applicants considered that no interaction was possible in relation to the vegetated sea cliffs of the Atlantic and Boreal coasts feature [REP7-016], and NE agreed that LSE could be excluded for this feature, and it is therefore not discussed further in this report.

[24] https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK0030253, https://designatedsites.naturalengland.org.uk/TerrestrialAdvicePDFs/UK0030253.pdf

Protected Site	Distance from the Project (km)	Qualifying feature	Impact Pathway and Project Phase (C,O,D) C = construction; O = operations and maintenance; D = decommissioning
Humber Estuary SAC and Ramsar[25]	44 (south of the export cable corridor)	River lamprey, sea lamprey	Underwater noise and vibration impacts due to UXO clearance (C) Indirect impacts through effects on preferred prey availability (C, O, D)[26] In-combination effects
Annex II marine mammals			
Southern North Sea SAC[27]	Array areas within SAC	Harbour porpoise	Physical or auditory injury resulting from underwater noise (C, O, D) Behavioural impacts resulting from underwater noise (C, O, D) Disturbance to porpoise foraging at sea (C, O, D) Disturbance from vessels due to presence and underwater noise (C, O, D) Barrier effects from underwater noise (C, O, D) Vessel interaction (increase in risk of collision) (C, O, D) Barrier effects due to the physical presence of offshore infrastructure (O) Changes to prey availability (C, O, D) Indirect effects (spawning habitat loss for prey species during operation) (O) In-combination effects

[25] Annex II migratory fish features of the Humber Estuary Ramsar site were not considered in the Applicants' screening assessment. In response to the RIES, the Applicants confirmed [REP7-129, Q4] that the Humber Estuary Ramsar site covers the same geographic area as the Humber Estuary SAC. They updated section 7.5 of the RIAA Part 2 (revision 5) [REP7-016] to confirm an LSE from underwater noise and vibration impacts (due to unexploded ordnance (UXO) clearance during construction) on sea lamprey and river lamprey of the Humber Estuary Ramsar site.

[26] NE [RR-039, E34] [REP3-059] [REP4-129] [REP7-152] advised that in addition to the other impact pathways assessed, indirect impacts on sea lamprey and river lamprey of the Humber Estuary SAC and Ramsar site from effects on prey availability during the construction phase should be considered. The Applicants [AS-048, table 2.6.1] [REP2-058, table 2-7] advised that, given the wide range of prey types, determining any source-pathway-receptor relationship specific to the proposed development was not possible. NE [REP3-059] [REP4-129] [REP7-152, Q3] acknowledged that the uncertainties and data poor environment would prevent a reliable assessment being made, but maintained the pathway should be screened in. The ExA agreed, and noted that the information provided by the Applicants is sufficient to inform the Appropriate Assessment.

[27] https://jncc.gov.uk/resources/206f2222-5c2b-4312-99ba-d59dfd1dec1d

Protected Site	**Distance from the Project (km)**	**Qualifying feature**	**Impact Pathway and Project Phase (C,O,D)** C = construction; O = operations and maintenance; D = decommissioning
Humber Estuary SAC[22]	44	Grey seal	Behavioural impacts resulting from underwater noise (C, O, D) Physical or auditory injury resulting from underwater noise (C, O, D) (in-combination) Disturbance from vessels due to presence and underwater noise (C, O, D) Barrier effects from underwater noise (C, O, D) Vessel interaction (increase in risk of collision) (C, O, D) Disturbance to seals foraging at sea (C, O, D) Barrier effects due to the physical presence of offshore infrastructure (O) Changes to prey availability (C, O, D) In-combination effects
Doggersbank SAC [NL]	43	Harbour porpoise, harbour seal and grey seal	Behavioural impacts resulting from underwater noise (C, O, D) Physical or auditory injury resulting from underwater noise (C, O, D) (in-combination) Disturbance from vessels due to presence and underwater noise (C, O, D) Barrier effects from underwater noise (C, O, D) Vessel interaction (increase in risk of collision) (C, O, D) Disturbance to seals foraging at sea (C, O, D) Barrier effects due to the physical presence of offshore infrastructure (O) Changes to prey availability (C, O, D) In-combination effects
Klaverbank SAC [NL]	43	Harbour porpoise, harbour seal and grey seal	
The Wash and North Norfolk Coast SAC[28]	103	Harbour seal	Physical or auditory injury resulting from underwater noise (C, O, D) Behavioural impacts resulting from underwater noise (C, O, D) Disturbance from vessels due to presence and underwater noise (C, O, D) Barrier effects from underwater noise (C, O, D) Vessel interaction (increase in risk of collision) (C, O, D) Disturbance to seals foraging at sea (C, O, D) Barrier effects due to the physical presence of offshore infrastructure (O) Changes to prey availability (C, O, D) In-combination effects

[28] https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK0017075

Protected Site	Distance from the Project (km)	Qualifying feature	Impact Pathway and Project Phase (C,O,D) C = construction; O = operations and maintenance; D = decommissioning
Berwickshire & North Northumberland Coast SAC[29]	173	Grey seal	Behavioural impacts resulting from underwater noise (C, O, D) Physical or auditory injury resulting from underwater noise (C, O, D) (in-combination) Disturbance from vessels due to presence and underwater noise (C, O, D) Barrier effects from underwater noise (C, O, D) Vessel interaction (increase in risk of collision) (C, O, D) Disturbance to seals foraging at sea (C, O, D) Barrier effects due to the physical presence of offshore infrastructure (O) Changes to prey availability (C, O, D) In-combination effects
Moray Firth SAC[30]	440	Bottlenose dolphin	Physical or auditory injury resulting from underwater noise (C, O, D) Behavioural impacts resulting from underwater noise (C, O, D) Barrier effects from underwater noise (C, O, D) Vessel interaction (increase in risk of collision) (C, O, D) Changes to prey availability (C, O, D) In-combination effects
Offshore and intertidal ornithology			
Flamborough and Filey Coast SPA[31]	100	Gannet, breeding	Disturbance/ displacement (C, O) Collision risk (O) Barrier effects (O) Indirect impacts through effects on habitats and/ or prey species (C, O)
		Kittiwake, breeding	Collision risk (O) Indirect impacts through effects on habitats and/ or prey species (C, O) In-combination effects

[29] https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK0017072
[30] https://sitelink.nature.scot/site/8327, https://www.nature.scot/sites/default/files/special-area-conservation/8327/conservation-and-management-advice.pdf
[31] https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK9006101

Protected Site	Distance from the Project (km)	Qualifying feature	Impact Pathway and Project Phase (C,O,D) C = construction; O = operations and maintenance; D = decommissioning
		Guillemot, breeding	Disturbance/ displacement (C, O) Barrier effects (O) Indirect impacts through effects on habitats and/ or prey species (C, O) In-combination effects
		Razorbill, breeding	Disturbance/ displacement (C, O) Barrier effects (O) Indirect impacts through effects on habitats and/ or prey species (C, O) In-combination effects
		Breeding seabird assemblage	Disturbance/ displacement (C, O) Barrier effects (O) Collision mortality (O) Indirect impacts through effects on habitats and/ or prey species (C, O) In-combination effects
Greater Wash SPA[32]	130 (overlap with cable corridor)	Red-throated diver, non-breeding Common scoter, non-breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Coquet Island SPA[33]	194	Puffing, breeding (assemblage feature)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Farne Islands SPA[34]	210	Guillemot, breeding Puffing, breeding (assemblage feature)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
		Kittiwake, breeding (assemblage feature)	Collision risk (O) In-combination effects

[32] https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK9020329
[33] https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK9006031
[34] https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK9006021

Protected Site	Distance from the Project (km)	Qualifying feature	Impact Pathway and Project Phase (C,O,D) C = construction; O = operations and maintenance; D = decommissioning
St Abbs Head to Fast Castle SPA[35]	252	Kittiwake, breeding	Collision risk (O) In-combination effects
		Razorbill, breeding Guillemot, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Forth Islands SPA[36]	289	Gannet, breeding	Disturbance/ displacement (C, O) Collision risk (O) Barrier effects (O) In-combination effects
		Kittiwake, breeding	Collision risk (O) In-combination effects
		Razorbill, breeding (assemblage feature) Guillemot, breeding (assemblage feature)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Buchan Ness to Collieston Coast SPA[37]*	340	Kittiwake, breeding	Collision risk (O) In-combination effects
		Guillemot, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Calf of Eday SPA[38]*	533	Kittiwake, breeding (assemblage feature)	Collision risk (O) In-combination effects

[35] https://sitelink.nature.scot/site/8579, https://www.nature.scot/sites/default/files/special-protection-area/8579/conservation-and-management-advice.pdf
[36] https://sitelink.nature.scot/site/8500, https://www.nature.scot/sites/default/files/special-protection-area/8500/conservation-and-management-advice.pdf
[37] https://sitelink.nature.scot/site/8473, https://www.nature.scot/sites/default/files/special-protection-area/8473/conservation-and-management-advice.pdf
[38] https://sitelink.nature.scot/site/8478, https://www.nature.scot/sites/default/files/special-protection-area/8478/conservation-and-management-advice.pdf

Protected Site	Distance from the Project (km)	Qualifying feature	Impact Pathway and Project Phase (C,O,D) C = construction; O = operations and maintenance; D = decommissioning
		Guillemot, breeding (assemblage feature)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Copinsay SPA[39]*	520	Kittiwake, breeding (assemblage feature)	Collision risk (O) In-combination effects
		Guillemot, breeding (assemblage feature)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
East Caithness Cliffs SPA[40]*	485	Kittiwake, breeding	Collision risk (O) In-combination effects
		Guillemot, breeding Razorbill, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Fair Isle SPA[41]*	559	Kittiwake, breeding	Collision risk (O) In-combination effects
		Guillemot, breeding Razorbill, breeding Puffin, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
		Gannet, breeding	Collision risk (O) Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Foula SPA[42]*	630	Kittiwake, breeding	Collision risk (O) In-combination effects

[39] https://sitelink.nature.scot/site/8485, https://www.nature.scot/sites/default/files/special-protection-area/8485/conservation-and-management-advice.pdf
[40] https://sitelink.nature.scot/site/8492, https://www.nature.scot/sites/default/files/special-protection-area/8492/conservation-and-management-advice.pdf
[41] https://sitelink.nature.scot/site/8496, https://www.nature.scot/sites/default/files/special-protection-area/8496/conservation-and-management-advice.pdf
[42] https://sitelink.nature.scot/site/8504, https://www.nature.scot/sites/default/files/special-protection-area/8504/conservation-and-management-advice.pdf

Protected Site	Distance from the Project (km)	Qualifying feature	Impact Pathway and Project Phase (C,O,D) C = construction; O = operations and maintenance; D = decommissioning
		Guillemot, breeding Razorbill, breeding Puffin, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Fowlsheugh SPA[43]*	327	Kittiwake, breeding	Collision risk (O) In-combination effects
		Guillemot, breeding Razorbill, breeding Puffin, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Hermaness, Saxa Vord and Valla Field SPA[44]*	681	Kittiwake, breeding	Collision risk (O) In-combination effects
		Gannet, breeding	Collision risk (O) Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
		Guillemot, breeding Puffin, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Hoy SPA[45]*	530	Kittiwake, breeding	Collision risk (O) In-combination effects
		Guillemot, breeding Puffin, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Marwick Head SPA[46]*	564	Kittiwake, breeding	Collision risk (O) In-combination effects

[43] https://sitelink.nature.scot/site/8505, https://www.nature.scot/sites/default/files/special-protection-area/8505/conservation-and-management-advice.pdf
[44] https://sitelink.nature.scot/site/8512, https://www.nature.scot/sites/default/files/special-protection-area/8512/conservation-and-management-advice.pdf
[45] https://sitelink.nature.scot/site/8513, https://www.nature.scot/sites/default/files/special-protection-area/8513/conservation-and-management-advice.pdf
[46] https://sitelink.nature.scot/site/8544, https://www.nature.scot/sites/default/files/special-protection-area/8544/conservation-and-management-advice.pdf

Protected Site	Distance from the Project (km)	Qualifying feature	Impact Pathway and Project Phase (C,O,D) C = construction; O = operations and maintenance; D = decommissioning
		Guillemot, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
North Caithness Cliffs SPA[47]*	506	Kittiwake, breeding	Collision risk (O) In-combination effects
		Guillemot, breeding Razorbill, breeding Puffin, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Noss SPA[48]*	616	Kittiwake, breeding	Collision risk (O) In-combination effects
		Gannet, breeding	Collision risk (O) Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
		Guillemot, breeding Puffin, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Rousay SPA[49]*	540	Kittiwake, breeding	Collision risk (O) In-combination effects
		Guillemot, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
	590	Kittiwake, breeding	Collision risk (O) In-combination effects

[47] https://sitelink.nature.scot/site/8554, https://www.nature.scot/sites/default/files/special-protection-area/8554/conservation-and-management-advice.pdf
[48] https://sitelink.nature.scot/site/8561, https://www.nature.scot/sites/default/files/special-protection-area/8561/conservation-and-management-advice.pdf
[49] https://sitelink.nature.scot/site/8573, https://www.nature.scot/sites/default/files/special-protection-area/8573/conservation-and-management-advice.pdf

Protected Site	Distance from the Project (km)	Qualifying feature	Impact Pathway and Project Phase (C,O,D) C = construction; O = operations and maintenance; D = decommissioning
Sumburgh Head SPA[50]*		Guillemot, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
Troup, Pennan and Lion's Heads SPA[51]*	395	Kittiwake, breeding	Collision risk (O) In-combination effects
		Guillemot, breeding Razorbill, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects
West Westray SPA[52]*	570	Kittiwake, breeding	Collision risk (O) In-combination effects
		Guillemot, breeding Razorbill, breeding	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects

Notes: *these sites were screened out in table 4-10 of the HRA Screening Report [APP-049], however, the RIAA Part 1 [REP5-007] confirmed that the sites had been subsequently screened in. Impacts on these sites during the non-breeding season were assessed in the RIAA Part 4 [REP6-008].

[50] https://sitelink.nature.scot/site/8582, https://www.nature.scot/sites/default/files/special-protection-area/8582/conservation-and-management-advice.pdf
[51] https://sitelink.nature.scot/site/8587, https://www.nature.scot/sites/default/files/special-protection-area/8587/conservation-and-management-advice.pdf
[52] https://sitelink.nature.scot/site/8589, https://www.nature.scot/sites/default/files/special-protection-area/8589/conservation-and-management-advice.pdf

3.2 Likely Significant Effects Alone Assessment

The Secretary of State agrees with the recommendations of the ExA [ER C.2.26] and concludes that likely significant effects cannot be excluded for the protected sites listed in Table 1, when the Project is considered alone. These sites are taken forward to the AA to consider whether the Project will result in an adverse effect upon the integrity of these sites.

3.3 Likely Significant Effects In-Combination Assessment

Under the Habitats Regulations and the Offshore Habitat Regulations, the Secretary of State is obliged to consider whether other plans or projects in-combination with the Project might affect protected sites. The Applicants selected projects within a 90km radius which could affect the designated site feature under consideration. The relevant projects were selected using the tiered approach as detailed in Natural England's *Phase III Best Practice for Data Analysis and Presentation at Examination* guidance note[53]. The Applicants noted the decreasing certainty associated with lower tier projects, and noted that those in Tier 5 to 7 would be considered to the extent that the available data allows meaningful consideration, with the consideration likely qualitative rather than quantitative.

The other projects within the 90km search area are:

- Dogger Bank A offshore wind farm
- Dogger Bank B offshore wind farm
- Sofia offshore wind farm
- Dogger Bank C offshore wind farm
- Dogger Bank D offshore wind farm
- Hornsea 1 offshore wind farm
- Hornsea Project 2 offshore wind farm
- Hornsea Project 3 offshore wind farm
- Hornsea Project 4 offshore wind farm
- Westermost Rough offshore wind farm
- Humber Gateway offshore wind farm
- Eastern Green Link 2 (SEGL2) interconnector
- Third Eastern Link HVDC cable (TGDC)
- Fourth Eastern Link HVDC cable (E4L5)
- Viking Link Interconnector
- National Grid HND Bootstrap Cable Network

[53] The advice documents are currently stored on a SharePoint Online site

The ExA considered that where the Applicants concluded no LSE from the proposed Project alone, the subsequent in-combination assessment lacked detail or transparency [ER C.2.24]. However, no evidence was put forward by IPs to suggest that any in-combination LSEs were missing from the Applicants' assessment. The ExA was otherwise satisfied with the Applicants' approach to the assessment of alone and in-combination LSE as presented in the final versions of the RIAA and that the correct sites, features and impacts have been screened in. The Secretary of State agrees with the ExA and concludes that likely significant effects cannot be excluded at the sites listed in Table 1 when the impacts of the Project are also considered in-combination with other plans or projects.

The relevant sites listed in Table 1 are taken forward to the AA to consider whether the Project in-combination with other plans or projects will result in an adverse effect upon the integrity of these sites.

4 Stage 2: Appropriate Assessment

The requirement to undertake an AA is triggered when a competent authority, in this case the Secretary of State, determines that a plan or project is likely to have a significant effect on a protected site either alone or in-combination with other plans or projects. Joint guidance issued by Defra, Welsh Government, Natural England and Natural Resources Wales on Habitats regulations assessments[5], states that AA should assess the likely significant effects of a proposal on the integrity of the site and its conservation objectives, and, consider ways to avoid or reduce (mitigate) any potential for an 'adverse effect on the integrity of the site'. The focus is therefore specifically on the species and/or habitats for which the protected site is designated[54].

In line with the requirements of Regulation 63 of the Habitats Regulations and Regulation 28 of the Offshore Habitats Regulations:

In considering whether a plan or project will adversely affect the integrity of the site, the competent authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which it proposes that the consent, permission or other authorisation should be given.

The purpose of this AA is to determine whether adverse effects on the integrity of the features of the sites identified (Table 1) can be ruled out as a result of the Project alone or in-combination with other plans or projects in view of the site's conservation objectives and using the best scientific evidence available.

In accordance with the precautionary principle embedded in the integrity test and established through case law, the Secretary of State as the competent authority (subject to regulation 64 of the Habitats Regulations and regulation 24 of the Offshore Habitats Regulations) may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the protected site, and this must be demonstrated beyond all reasonable scientific doubt[55]. If the Secretary of State cannot exclude AEoI of the affected protected sites, then he can only agree to a plan or project if it complies with the requirements of regulation 64 of the Habitats Regulations and regulation 24 of the Offshore Habitats Regulations. These regulations provide that the Secretary of State may agree to the plan or project only if satisfied that there are no alternative solutions, and that the plan or project must be carried out for IROPI. In addition, regulation 68 of the Habitats Regulations, and regulation 36 of the Offshore Habitats Regulations, requires compensatory measures to be secured which maintain the overall coherence of the national site network.

The Secretary of State has undertaken an objective scientific assessment of the implications of the Project on the qualifying features of the protected sites identified in the screening assessment, using best scientific evidence available. The assessment considers the site's conservation objectives, which are set out in Section 3 (Table 1) and subsequent sections of this

[54] https://www.gov.uk/guidance/appropriate-assessment#what-must-an-appropriate-assessment-contain

[55] CJEU Case C-127/02 Waddenzee 7 September 2004, Reference for a preliminary ruling from the Raad van State (Netherlands) in the proceedings: Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij.

HRA Report. Table 2 presents the Secretary of State's high level conclusions on the relevant sites subject to AA, with more detail provided in Sections 4.2-4.14.

4.1 Approaches to Assessment

The Secretary of State has considered all of the information before him to come to his conclusions on the potential for the project to affect site integrity alone, and in-combination with other plans or projects. The AA has taken account of the Applicants RIAA [REP6-008, REP5-009, including post-examination updates**Error! Bookmark not defined.**], relevant representations by IPs (primarily NE, RSPB and TWT), the ExA's recommendations, and any relevant post-examination submissions and clarifications. For clarity, the Secretary of State has set out some considerations that have informed his assessment below.

4.1.1 Displacement mortality

Unless otherwise stated, the Secretary of State considers that based on current evidence, values of displacement and mortality of 70% and 2% respectively are suitably precautionary for the assessment of impacts on guillemot and razorbill and are in line with what was adopted on previous offshore wind decisions. The Secretary of State, however, notes that this does not preclude him from accepting alternative parameters in future decisions.

4.1.2 Prey availability

The impacts on prey availability, primarily for marine mammals and birds, was a source of disagreement between NE and the Applicants during the Examination. These included impacts related to habitat loss and temporary effects from underwater noise and physical disturbance. The Applicants referred to a number of assessment documents as the basis for their conclusion that in each case, it did not contribute to AEoI for affected sites. This included reference to their assessment on fish and shellfish ecology [REP7-042] and sandeel habitat within Dogger Bank SAC and the Southern North Sea SAC (''SNS'') SAC [APP-050], and a technical note on effects on prey species [REP6-049]. The Applicants considered that: the mortality assumed to result from displacement of animals is related to a reduction in access to prey, so considering the impact separately partly double counts the impact, and that any impact related to habitat loss is small in the context of the wider foraging area available to species. With regards to the latter, NE contended that areas within the Dogger Bank that have a high abundance of sandeels are likely to represent a consistent source of food for foraging seabirds, and that whilst they could forage elsewhere, they are choosing to forage in this location. NE did however acknowledge that it would be unlikely that the impacts from prey availability could be quantified, though still considered that they could intensify impacts on features for which AEoI could not be ruled out [REP9-031] (see Section 4.11 in relation to Flamborough and Filey Coast SPA), however, the Applicants did not agree [REP9-021] due to the minimal footprint of the infrastructure. The ExA was satisfied that the Applicants' assessment demonstrated that any impacts on their populations would not result in significantly reduced prey availability, and does not result in an AEoI. The Secretary of State has considered the Applicants' evidence and the representation of NE in relation to effects on prey availability, and agrees with the Applicants and the ExA that the impact of the Project will not result in significant effects on prey availability that would affect the qualifying interests of sites relying on this resource, and also accepts the position that displacement effects effectively include this impact as related mortality is connected with a

reduction in foraging resource. The Secretary of State addresses the related issue of ongoing monitoring for indirect effects in his decision letter.

4.1.3 Hotspot modelling

There was disagreement between the Applicants and NE on whether hotspot modelling could be used to inform reductions in ornithological impact, for example through array reduction or design. The Applicants undertook hotspot modelling [REP8-040], noting that the potential for mitigation was limited within the confines of the lease area [REP9-021], and that variation within the data limited the usefulness of such modelling. At the close of Examination, NE considered the modelling to be insufficient to address its concerns [REP8-051] [REP9-029]. The Applicants updated the modelling and its associated report post-examination[56] and sought to address NE's outstanding comments. It is noted that in the SoCG between the Applicants and NE updated post Examination, that NE provisionally agreed during a meeting held on 16th September 2025 that the proposed outputs would be sufficient to enable further consideration on this matter by the Secretary of State and other IPs, but that NE did not have sufficient time to review the updated report prior to formal submission. The Secretary of State wrote to NE on 6th November 2025 as part of the first consultation and invited their view on the modelling. NE responded [C1-012][57] that they consider that the Applicant has adequately addressed their previous comments [REP9-029] regarding the use of species-specific seasons, colour scales, the provision of monthly maps, and the provision of additional detail on the modelling methods and parameters used, however, maintained their position in relation to the use of the data to support changes to the array area. RSPB[58] agreed with NE in their response to the Secretary of State's third consultation that the modelling could be used to reduce impacts through changes to the design, size, or layout of the arrays.

The Applicants [REP8-040] examined site-specific aerial survey data to understand areas of higher and lower usage by seabirds, which they indicated supported refinement of the array areas. While the Applicants noted that, when considered annually, the abundance of most species was reasonably evenly distributed across each array area, there were instances where higher densities were noted at the previous boundary between the leasing areas for Dogger Bank South, for example, with gannet and kittiwake in the non-breeding season. The Applicants used these data to refine the array areas following submission of the PEIR, but prior to submission of their ES. The Applicants did not consider that further refinement was possible within the confines of the lease area and, as noted above, within the limitations of such modelling exercises [REP9-021].

Following further consideration of the Applicants updated analysis[56], the response of NE[57], and the recommendations of the ExA [ER C.10.39-C.10.40], the Secretary of State considers that there is limited potential for the modelling to inform further array layout refinement that would

56 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002466-20.4%20Spatial%20modelling%20of%20baseline%20seabird%20data%20for%20Dogger%20Bank%20South(1).pdf

57 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002521-C1-012%20-%20Natural%20England%20-%20EN010125%20532559%20DBS%20SoS%20RFI%2006%20November%202025%20-NE%20Response.pdf

58 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002603-RSPB_20050122_Dogger%20Bank%20South_Response%20to%20February%202026%20consultation_5%20March%202026%20(FINAL).pdf

result in significantly different outcomes for the Project, and agrees with the ExA [ER C.10.39] that the Applicants have adhered to the mitigation hierarchy to reduce the array areas as far as reasonably possible, whilst maintaining economic viability of the Project [REP7-137].

4.1.4 Interpretation of PVA results

NE indicate that the results of Population Viability Analyses (''PVA'') should be interpreted based on current and future population trends, considering all relevant evidence, referring to uncertainties about the long-term population impacts of Highly Pathogenic Avian Influenza (''HPAI'') and those from other environmental pressures, including climate change. The RSPB [REP9-016] similarly raised concerns over the impacts of HPAI and advised this had not been adequately considered by the Applicants. There remained disagreement between the Applicants and NE [REP9-031, G49] at the close of Examination as to whether potential future changes in seabird population trends should be considered. The ExA was disappointed that the Applicants had not considered a range of possible future growth rates to be considered as part of the decision making process, however, also noted that NE indicated that such an assessment would not materially impact its own assessment. The ExA considered HPAI to be a source of uncertainty.

The Secretary of State has considered the views of NE and the RSPB, as well as the ExAs consideration on this matter [ER C.10.60]. It is the view of the Secretary of State that while a range of future growth rates could have been provided, their selection and assessment would have been largely speculative based on the level of uncertainty associated with the impacts of HPAI and climate change, and that an attempt to quantify these is unlikely to have informed the assessment in a meaningful way. The Secretary of State therefore agrees with the Applicants, that while these are relevant factors, the ability to consider these in the interpretation of the PVA results is presently limited, however, he also accepts the ExA's view that this introduces a level of uncertainty, and this has been considered in making decisions in relation to the effects on relevant sites set out in Sections 4.11-4.14. In their response to the Secretary of State's third consultation, the RSPB[58] highlighted that a seabird wreck had taken place in winter 2025/2026, with a large number of auks washing up on the west coast of the UK and noted that such wrecks reduce resilience in colonies which would be impacted by the Proposed Projects. The Secretary of State acknowledges the impacts of seabird wrecks, and while he considers this to be a source of uncertainty, analogous to the above impacts, since wrecks are natural periodic occurrences, he does not consider that its can be quantified within the assessment in a meaningful way. The Secretary of State notes that this does not preclude him from accepting that such factors may be considered in more detail in future decisions if new evidence is presented.

4.1.5 In-combination effects

Due to the range of receptors being assessed, the projects which are relevant to the in-combination assessments are different for each receptor. Due to the uncertainty around the final parameters of some future projects, the Secretary of State considers that the impacts relating to collision and displacement on birds, and the physical disturbance of the seabed, should be limited to offshore infrastructure projects that are operational, under-construction, consented, or in determination. Whilst several projects have issued PEIRs (e.g. Dogger Bank D), the predicted effects are subject to change and there is a high level of uncertainty in any assessment which includes these figures.

Table 2: Secretary of State's summary conclusions on Protected Sites

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
Flamborough Head SAC	Reefs submerged or partially submerged sea caves	Smothering and siltation rate changes (heavy and light) (C, O, D) In-combination effects	NE [RR-039, C38] initially queried the Applicants' assessment of effects on reefs or submerged or partially submerged sea caves from the LSE pathway of smothering and siltation rate changes. Following these updates and information provided in [REP3-025], NE confirmed it was in agreement with the Applicants' conclusions of no AEoI of all Annex I habitat features of the Flamborough Head SAC [REP5-053] [REP5-062, BE.2.6]. ExA recommended that AEoI can be excluded both alone and in-combination.	The Secretary of State is satisfied, having had regard to the Applicants case, the views of all IPs and the recommendation of the ExA, that an AEoI of the Flamborough Head SAC can be excluded for the Project alone and in-combination. See Section 4.2 of this HRA
River Derwent SAC	River lamprey and sea lamprey	Underwater noise and vibration impacts due to UXO clearance (C) In-combination effects	NE [REP3-057, HRA.1.7] concluded that no AEoI would occur. The ExA recommended that AEoI can be excluded both alone and in-combination.	The Secretary of State is satisfied, having had regard to the Applicants case and mitigation measures secured in the DCO, the views of all IPs and the recommendation of the ExA, that an AEoI of the River Derwent SAC can be excluded for the Project alone.

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
				See Section 4.4 of this HRA
Humber Estuary SAC and Ramsar	River lamprey and sea lamprey	Underwater noise and vibration impacts due to UXO clearance (C) Indirect impacts through effects on preferred prey availability (C, O, D)[59] In-combination effects	NE [RR-039, table 5.1] initially did not agree that AEoI could be excluded from indirect impacts through effects on preferred prey availability, but acknowledged that the uncertainties and data poor environment would prevent a reliable assessment being made [REP3-059]. NE had no outstanding concerns in terms of potential AEoI at DL3 [REP3-059] [REP5-053]. The ExA recommended that AEoI can be excluded both alone and in-combination.	The Secretary of State is satisfied, having had regard to the Applicants case and mitigation measures secured in the DCO, and the recommendation of the ExA, that an AEoI of the Humber Estuary SAC can be excluded for the Project alone. See Section 4.3 of this HRA
	Grey seal	Behavioural impacts resulting from underwater noise (C, O, D) Physical or auditory injury resulting from underwater	NE initially did not agree that AEoI could be ruled out due to the predicted scale of disturbance impact associated with piling. Following updates to the DCO at DL7, which included a condition relating to the provision of primary and	

[59] NE [RR-039, E34] [REP3-059] [REP4-129] [REP7-152] advised that in addition to the other impact pathways assessed, indirect impacts on sea lamprey and river lamprey of the Humber Estuary SAC and Ramsar site from effects on prey availability during the construction phase should be considered. The Applicants [AS-048, table 2.6.1] [REP2-058, table 2-7] advised that, given the wide range of prey types, determining any source-pathway-receptor relationship specific to the proposed development was not possible. NE [REP3-059] [REP4-129] [REP7-152, Q3] acknowledged that the uncertainties and data poor environment would prevent a reliable assessment being made, but maintained the pathway should be screened in. The ExA agreed, and noted that the information provided by the Applicants is sufficient to inform the Appropriate Assessment.

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
		noise (C, O, D) (in-combination) Disturbance from vessels due to presence and underwater noise (C, O, D) Barrier effects from underwater noise (C, O, D) Vessel interaction (increase in risk of collision) (C, O, D) Disturbance to seals foraging at sea (C, O, D) Barrier effects due to the physical presence of offshore infrastructure (O) Changes to prey availability (C, O, D) In-combination effects	secondary noise mitigation, NE were satisfied that AEoI could be ruled out.	
	Coastal lagoons	Smothering and siltation rate changes (heavy and light) (C, O, D) Introduction of other substances (solid, liquid or gas) (C) In-combination effects	No concerns raised during Examination.	
	Estuaries, mudflats and sandflats not covered by seawater at low tide, sandbanks which are slightly covered by sea		NE advised that cable protection within the active nearshore environment could impact on benthic habitats of the Humber Estuary SAC by impacting nearshore sediment transport processes (see Section 4.3), and at the end of examination could not agree that an AEoI could be excluded.	

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
	water all the time		The ExA recommended that AEoI can be excluded both alone and in-combination.	
Dogger Bank SAC	Sandbanks which are slightly covered by sea water all the time	Physical change (to another seabed type) (C, O, D) Physical change (to another sediment type) (C, O, D) Abrasion/ disturbance of the substrate on the surface of the seabed (C, O, D) Habitat structure changes – removal of substratum (extraction) (C) Penetration and/ or disturbance of the substratum below the surface of the seabed, including abrasion (C, O, D) Changes in suspended solids (water clarity) (C, O, D) Smothering and siltation rate changes (heavy) (C, O, D) Smothering and siltation rate changes (light) (C, O, D) Indirect effects (impacts on sandeel leading to impacts on the characteristic community and ecological function of the Dogger Bank SAC)	The Applicants, NE and TWT, agreed that an AEoI would occur from the construction activities, but disagreement remained at the end of the examination on the nature and scale of impact contributing to this conclusion (see Section 4.7). The main disagreement related to the permanence of disturbance, which the Applicants considered to be temporary and therefore not contributing to AEoI, whereas NE and TWT considered this source of effect to be permanent due to the potential for longer recovery timescales (10-25 year). NE and TWT considered that the outcome of the Round 4 leasing HRA should be followed, such that disturbance should contribute to the area associated with the AEoI. The Applicants calculated areas of impact based on a range of scenarios to be considered. The ExA accepted that some habitats may well recover after a short time period but considered that doubt	The Secretary of State has considered all the information presented by the Applicants, and the representations of the IPs. He considers that the HRA for the Round 4 plan and the assessment for the proposed project have been undertaken at different scales, and that significantly more site-specific information is available to make a more nuanced conclusion at the project level. The Secretary of State finds that an AEoI cannot be excluded for the Project alone or in-combination with other plans or projects for the Dogger Bank SAC from permanent habitat change associated with the deposition of hard substrates, and also

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
		In-combination effects	remains that recovery for some depressions may take longer and considered there to be a reasonable chance recovery would take time and amount to permanent damage. The ExA recommended that the maximum area of predicted disturbance would be most appropriate for the assessment of habitat loss.	accepts the potential for some "halo effect" to be associated with this. However, he also considers that the Applicants have provided sufficient information to demonstrate that for the majority of the project area, impacts from disturbance are likely to be shorter term. The Secretary of State therefore concludes that there would be a smaller area of impact. See Section 4.7 and Section 9 of this HRA
Southern North Sea ("SNS") SAC	Harbour porpoise	Physical or auditory injury resulting from underwater noise (C, O, D) Behavioural impacts resulting from underwater noise (C, O, D) Disturbance to porpoise foraging at sea (C, O, D) Disturbance from vessels due to presence and underwater noise (C, O, D)	NE did not initially agree that it could rule out an AEoI for the SNS SAC as the seasonal and daily disturbance thresholds would be significantly breached in-combination, and due to an over-reliance on the SIP process and securing additional mitigation post-consent, and also due to a lack of consideration of indirect effects on prey species from permanent spawning habitat loss. Following updates to the	The Secretary of State is satisfied, having had regard to the Applicants case and mitigation measures secured in the DCO (oMMMP, in principle SIP for the SNS SAC and oPEMP), the views of all IPs and the recommendation of the ExA, that an AEoI of the

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
		Barrier effects from underwater noise (C, O, D) Vessel interaction (increase in risk of collision) (C, O, D) Barrier effects due to the physical presence of offshore infrastructure (O) Changes to prey availability (C, O, D) Indirect effects (spawning habitat loss for prey species during operation) (O) In-combination effects	DCO at DL7, which included a condition relating to the provision of primary and secondary noise mitigation, NE were satisfied that AEoI could be ruled out for underwater noise impacts, and that indirect impacts on prey was not sufficient to drive a conclusion of AEoI alone. The ExA recommended that AEoI can be excluded alone and in-combination with other plans or projects.	SNS SAC can be excluded for the Project alone and in-combination. See Section 4.8 of this HRA
Wash and North Norfolk Coast ("WNNC") SAC	Harbour seal	Physical or auditory injury resulting from underwater noise (C, O, D) Behavioural impacts resulting from underwater noise (C, O, D) Disturbance from vessels due to presence and underwater noise (C, O, D) Barrier effects from underwater noise (C, O, D) Vessel interaction (increase in risk of collision) (C, O, D) Disturbance to seals foraging at sea (C, O, D)	NE was initially unable to rule out AEoI for the harbour seal qualifying feature, however, following updates to the DCO at DL7, which included a condition relating to the provision of primary and secondary noise mitigation, NE were satisfied that AEoI could be ruled out for underwater noise impacts. The ExA recommended that AEoI can be excluded alone and in-combination with other plans or projects	The Secretary of State is satisfied, having had regard to the Applicants case and mitigation measures secured in the DCO (oMMMP, In Principle SIP for the SNS SAC and oPEMP), the views of all IPs and the recommendation of the ExA, that an AEoI of the WNNC SAC can be excluded for the Project alone and in-combination.

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
		Barrier effects due to the physical presence of offshore infrastructure (O) Changes to prey availability (C, O, D) In-combination effects		See Section 4.5 of this HRA
Berwickshire and North Northumberland Coast ("BNNC") SAC	Grey seal		NE did not initially agree that it could rule out AEoI as more than 5% of the population could be disturbed by piling at the DBS West array area, and in the offshore export cable corridor. BNNC SAC is jointly managed by NE and NatureScot. As NatureScot did not engage with the Examination, the ExA relied upon the advice from NE. Following updates to the DCO at DL7, which included a condition relating to the provision of primary and secondary noise mitigation, NE were satisfied that AEoI could be ruled out for underwater noise impacts. The ExA recommended that AEoI can be excluded alone and in-combination with other plans or projects.	The Secretary of State is satisfied, having had regard to the Applicants case and mitigation measures secured in the DCO (oMMMP, In Principle SIP for the SNS SAC and oPEMP), the views of all IPs and the recommendation of the ExA, that an AEoI of the BNNC SAC can be excluded for the Project alone and in-combination. See Section 4.6 of this HRA
Moray Firth SAC	Bottlenose dolphin	Physical or auditory injury resulting from underwater noise (C, O, D) Behavioural impacts resulting from underwater noise (C, O, D) Barrier effects from underwater noise (C, O, D)	NatureScot did not engage with the Examination. Therefore, the ExA did not have its view on impacts on the Moray Firth SAC, however, noting the Applicants' commitment to mitigation measures, secured in the DCO, the ExA recommended AEoI could be ruled out	The Secretary of State is satisfied, having had regard to the Applicants case and mitigation measures secured in the DCO, the views of all IPs and the recommendation of the ExA, that an AEoI of

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
		Vessel interaction (increase in risk of collision) (C, O, D) Changes to prey availability (C, O, D) In-combination effects	alone and in-combination with other plans or projects.	the Moray Firth SAC can be excluded for the Project alone and in-combination. See Section 4.8 of this HRA
Greater Wash SPA	Red-throated diver (over winter) Common scoter (over winter)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects	NE initially advised the Applicants consider avoidance or restriction of cable installation works within 2km of the Greater Wash SPA during the over-wintering period. The Applicants did not agree this was needed, confirmed that they included embedded mitigation for red-throated diver and adhered to NE's 'Best Practice Protocol for Minimising Disturbance' including the use of existing shipping lanes, which was incorporated into the oPEMP. The Applicants also noted few modelled red-throated diver were present in the location of the landfall exit pits, and that installation vessels for the subtidal exit pits and cable pull works would remain effectively stationary while works were undertaken. NE agreed with the Applicants that there would be no AEoI alone or in-combination. The ExA concluded that provided the PEMP was adhered to AEoI could be excluded	The Secretary of State is satisfied, having had regard to the Applicants case and the views of all IPs, particularly NE, that the mitigation measures secured in the DCO and detailed in the PEMP, are such that an AEoI of the Greater Wash SPA can be excluded for the Project alone and in-combination. See Section 4.10 of this HRA

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
			alone and in-combination for all site features.	
Flamborough and Filey Coast ("FFC") SPA	Gannet (breeding)	Disturbance/ displacement (C, O) Collision risk (O) Barrier effects (O) Indirect impacts through effects on habitats and/ or prey species (C, O)	NE advised the Applicants on the avoidance rate and macro-avoidance correction factor to use, and confirmed the matter to be resolved, however, RSPB disagreed, indicating seasonal variation and habituation as matters affecting macro avoidance, and also disagreed with the assumption gannets would have the same reactive flight response as gulls. NE agreed that an AEoI for the FFC SPA gannet could be ruled out alone and in-combination, however, RSPB maintained throughout the Examination that it could not rule out AEoI. The ExA recommended that AEoI can be excluded alone and in-combination with other plans or projects.	The Secretary of State is satisfied, having had regard to the Applicants case and the views of all IPs, that an AEoI of the FFC SPA can be excluded for the Project alone and in-combination. See Section 4.11.1-4.11.2 of this HRA
	Kittiwake (breeding)	Collision risk (O) Indirect impacts through effects on habitats and/ or prey species (C, O) In-combination effects	NE advised that the proposed development was the highest impacting project on the FFC SPA kittiwake to date and would likely result in an AEoI alone. RSPB also considered there to be an AEoI as a result of collision mortality. The ExA considered that the additional mortality from the proposed	The Secretary of State agrees with the ExA that an AEoI cannot be excluded for the Project alone or in-combination with other plans or projects.

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
			development alone could risk undermining the restore conservation objective for kittiwake, and was unable to exclude AEoI. The Applicants, NE, RSPB and the ExA, all agreed that AEoI could not be excluded in-combination.	See Section 4.11.3-4.11.4 and Section 9 of this HRA
	Guillemot (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) Indirect impacts through effects on habitats and/ or prey species (C, O) In-combination effects	NE indicated that it agreed that AEoI could be ruled out for the project alone, however, the RSPB disagreed based on the outcome of the PVA modelling. The ExA was confident that the predicted reduction in growth rate would not undermine the site's conservation objective in relation to the breeding population size, and did not consider that RSPB had provided sufficient evidence to refute this position. The Applicants' concluded AEoI due to in combination disturbance and displacement, which was not disputed during the examination, and that the ExA saw no reason to disagree.	The Secretary of State agrees with NE, RSPB, the Applicants, and the ExA, that an AEoI cannot be excluded for the Project alone or in-combination with other plans or projects. The Secretary of State notes significant differences in the level of mortality predicted by the Applicants and NE, which is discussed in Section 4.1.1, and 4.11.5-6. See Section 4.11.5-4.11.6 and Section 9 of this HRA
	Razorbill (breeding)		NE was satisfied that AEoI could be ruled out for the project alone, however, they could not rule out AEoI due to displacement in combination with other plans and projects, noting uncertainty in the potential for the growth rate to be	The Secretary of State is satisfied, having considered the Applicants' case and the representations of IPs, in addition to data relating to

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
			maintained for the next 30 years, and additional uncertainty from impacts related to HPAI and climate change. RSPB also considered there to be an AEoI in-combination based on the PVA results. The ExA considered that NE had not provided persuasive evidence that the growth rate is likely to decline to levels below which the most recent colony count cannot be maintained, and did not consider that the level of predicted disturbance/displacement mortality would undermine the conservation objectives. The ExA concluded that an AEoI could be excluded for the project alone and in-combination.	the growth rate of razorbill at FFC SPA, in the context of the impacts on the population from displacement as predicted, that an AEoI for the Project alone or in-combination can be excluded. See Section 4.11.7-4.11.8 of this HRA
	Breeding seabird assemblage	Disturbance/ displacement (C, O) Barrier effects (O) Collision mortality (O) Indirect impacts through effects on habitats and/ or prey species (C, O) In-combination effects	NE indicated that due to effects on kittiwake and guillemot, which are features of the seabird assemblage, they could not conclude that the overall abundance of the assemblage would be maintained, and as such could not rule out a conclusion of AEoI. The RSPB also maintained throughout the Examination that an AEoI could not be ruled out.	The Secretary of State agrees with NE, RSPB and the ExA, that an AEoI cannot be ruled out for the seabird assemblage, as an AEoI has not been excluded for the kittiwake and guillemot component features.

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
			The ExA was unable to exclude an AEoI on the FFC SPA seabird assemblage as a result of the proposed development alone or in combination with other plans or projects.	See Section 4.11.9 of this HRA
Farne Islands SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects	The Applicants concluded that there was no AEoI alone or in-combination for the kittiwake feature of the Farne Islands SPA from collision risk. NE and the ExA agreed with this conclusion.	The Secretary of State concludes that AEoI can be excluded for the Project alone and in-combination. See Section 4.12.1-4.12.2 of this HRA
	Guillemot (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects	The Applicants concluded that there was no AEoI alone or in-combination for the guillemot feature of the Farne Islands SPA from displacement/disturbance. NE agreed AEoI could be ruled out for the project alone. NE advised that it could not rule out an in-combination effect due to the large effects of Berwick Bank offshore wind farm. RSPB considered there to an AEoI alone and in-combination. The ExA relied on NE's advice and considered that there would be no AEoI alone, but agreed that there would be an AEoI in-combination.	The Secretary of State agrees with NE and the ExA, that while AEoI can be excluded for the project alone, due to the site condition and the predicted level of impacts, AEoI cannot be ruled out in-combination with other plans and projects. See Section 4.12.3-4.12.4 and Section 9 of this HRA
Coquet Island SPA	Puffin, breeding	Disturbance/ displacement (C, O) Barrier effects (O)	Due to methodological concerns, RSPB were unable to reach conclusions as to the significance of in-combination	The Secretary of State agrees with NE and the ExA that an AEoI can be

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
	(assemblage feature)	In-combination effects	impacts on the puffin feature of Coquet Island SPA. NE did not identify an AEoI for Coquet Island SPA, and the ExA agreed with the Applicants that an AEoI could be excluded.	ruled out alone and in-combination for Coquet Island SPA. See Section 4.13.1 of this HRA
St Abbs Head to Fast Castle SPA	Guillemot (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects	The ExA sought the views of NatureScot on the Applicants' assessment for these sites [PD-014, HRA.1.4] [PD-022, HRA.2.3], and also asked NatureScot to review annex 1 of the RIES [PD-025] and provide any corrections if necessary [RIES Q48, PD-025], however, NatureScot did not engage in the Examination. The RSPB [REP1-087] [REP5-065] indicated that they were unable to reach conclusions as to the significance of in-combination impacts for the Scottish sites. The ExA agreed with the Applicants that that whilst there is a theoretical risk of extremely small impacts on the breeding colonies located several hundred kilometres distance from the proposed development under highly precautionary assumptions, an AEoI can be excluded.	The Secretary of State notes that a LSE was identified for 17 sites in Scotland which were assessed by the Applicants [REP6-008], however, NatureScot has not engaged with the examination, and NE have not raised concerns in relation to the Applicants' assessment or conclusions. The Secretary of State has considered the representations of RSPB in relation to their methodological concerns, however, he agrees with the ExA, that the predicted impacts would not result in
	Razorbill (breeding)			
	Kittiwake (breeding)	Collision risk (O) In-combination effects		
Forth Islands SPA	Gannet (breeding)	Disturbance/ displacement (C, O) Collision risk (O) Barrier effects (O) In-combination effects		
	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Puffin (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
	Razorbill, breeding (assemblage feature)			
	Kittiwake (breeding)	Collision risk (O) In-combination effects		

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
Buchan Ness to Collieston Coast SPA	Guillemot (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		an AEoI for any of the 17 Scottish sites considered. See Section 4.13.2 of this HRA
Calf of Eday SPA	Kittiwake, breeding (assemblage feature)	Collision risk (O) In-combination effects		
	Guillemot, breeding (assemblage feature)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
Copinsay SPA	Kittiwake, breeding (assemblage feature)	Collision risk (O) In-combination effects		
	Guillemot, breeding (assemblage feature)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
East Caithness Cliffs SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Guillemot (breeding) Razorbill (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
Fair Isle SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
	Guillemot (breeding) Razorbill (breeding) Puffin (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
	Gannet (breeding)	Disturbance/ displacement (C, O) Collision risk (O) Barrier effects (O) In-combination effects		
Foula SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Guillemot (breeding) Razorbill (breeding) Puffin (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
Fowlsheugh SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Guillemot (breeding) Razorbill (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
	Kittiwake (breeding)	Collision risk (O) In-combination effects		

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
Hermaness, Saxa Vord and Valla Field SPA	Guillemot (breeding) Puffin (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
	Gannet (breeding)	Disturbance/ displacement (C, O) Collision risk (O) Barrier effects (O) In-combination effects		
Hoy SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Guillemot (breeding) Puffin (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
Marwick Head SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Guillemot (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
North Caithness Cliffs SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Guillemot (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
Noss SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Guillemot (breeding) Puffin (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
	Gannet (breeding)	Disturbance/ displacement (C, O) Collision risk (O) Barrier effects (O) In-combination effects		
Rousay SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Guillemot (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
Sumburgh Head SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Guillemot (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		
Troup, Pennan and Lion's Heads SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Guillemot (breeding)	Disturbance/ displacement (C, O) Barrier effects (O)		

Protected Site	Qualifying Feature	Impact Pathway (C,O,D) C = construction; O = operations and maintenance; D = decommissioning	Views of Interested Parties and the ExA	Secretary of State conclusions
	Razorbill (breeding)	In-combination effects		
West Westray SPA	Kittiwake (breeding)	Collision risk (O) In-combination effects		
	Guillemot (breeding) Razorbill (breeding)	Disturbance/ displacement (C, O) Barrier effects (O) In-combination effects		

4.2 Appropriate Assessment: Flamborough Head SAC

Flamborough Head SAC is designated for the Annex I habitats reefs, vegetated sea cliffs of the Atlantic and Baltic Coasts and submerged or partially submerged sea caves, and is located 3km to the north of the proposed project's offshore export cable corridor.

The conservation objectives[60] are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the Favourable Conservation Status of its qualifying features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of the qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of the qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of each of the qualifying species
- the distribution of qualifying species within the site

LSE was identified (Table 1) for Annex I reef and sea cave features, from smothering and siltation rate changes (heavy and light), from the project alone and in-combination during construction, operation, and decommissioning.

4.2.1 Reefs: alone

The assessment of effects on site integrity was presented by the Applicants in their RIAA[61], and it was concluded that the proposed project alone would not adversely affect the integrity of the site based on impacts on the reef feature. Project specific physical processes modelling [REP7-035] indicated that sediment disturbed by the construction activities will primarily be deposited within 1km of the source. Due to the Flamborough Head SAC being approximately 3km at its closest point from the offshore export cable corridor, the Applicants considered there to be no pathway for effect between heavy smothering and siltation rate changes and the SAC. There does exist the potential for light smothering and siltation rate changes to occur with sediment plumes exceeding 0.5mg/l being dispersed up to 28.5km from the point of disturbance in the nearshore. Any sediment disturbed by project related activities that reaches the Flamborough Head SAC would be expected to settle at a minimal overlaying depth and be dispersed within a matter of days, representing a temporary increase over the natural baseline.

NE [RR-039, C38] initially queried the Applicants' assessment of effects on reefs due to a lack of sufficient evidence relating to the baseline (sensitivity of biotopes) to allow for a robust

[60] https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK0013036

[61] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002471-6.1%20RIAA%20HRA%20Part%202%20of%204%20%E2%80%93%20Annex%20I%20Offshore%20Habitats%20and%20Annex%20II%20Migratory%20Fish%20(Revision%206)%20(Clean)(1).pdf

assessment. Following provision of further supporting evidence in a Benthic Ecology Technical Note which incorporated the anticipated worst-case scenario of cable repairs and burials [REP3-025], which informed the RIAA[61], NE confirmed it was in agreement with the Applicants' conclusions of no AEoI [REP5-053] [REP5-062, BE.2.6].

The ExA concluded that AEoI from the Project could be excluded for all qualifying features of the Flamborough Head SAC as a result of smothering and siltation rate changes. The Secretary of State is satisfied that based upon the Applicants' evidence, as accepted by NE, an AEoI on the Flamborough Head SAC from smothering and siltation rate changes on the reef feature, can be excluded.

4.2.2 Reefs: In-combination

The Applicants assessed the cumulative effects of increases in suspended sediment concentrations [REP7-035] and determined that any increases in suspended sediment concentrations, in-combination with Hornsea Project Four, Eastern Green Link 2, 3 and 4 and the Bridlington A disposal site would not result in any significant impacts due to the likely minimal overlap in disturbed sediment plumes and minimal potential for these events to overlap temporally with each other. The Applicants concluded that there was no potential for an AEoI of the Annex I reef habitat of Flamborough Head SAC in-combination with other relevant plans and projects. NE confirmed its agreement with the Applicants' conclusions of no AEoI [REP5-053] [REP5-062, BE.2.6], and the ExA similarly recommended that AEoI from the Project could be excluded in-combination with other plans or projects.

The Secretary of State is satisfied that based upon the likely temporal and spatial separation of potential in-combination effects, and their scale of potential impact, that AEoI on the Flamborough Head SAC from smothering and siltation rate changes on the Annex I reef feature, can be excluded for the Project in-combination with other plans and projects.

4.2.3 Submerged and partially submerged sea caves: alone

The Applicants considered that given the minimal settling depth and short-term nature of any sediment deposition within the SAC resulting from projects activities, it was expected that any sediment that may enter cave features would be rapidly dispersed, with any effects being temporary and localised[61]. NE confirmed it was in agreement with the Applicants' conclusions of no AEoI of all Annex I habitat features of the Flamborough Head SAC [REP5-053] [REP5-062, BE.2.6], and the ExA similarly concluded that AEoI from the Project could be excluded for the submerged and partially submerged sea cave feature of the Flamborough Head SAC as a result of smothering and siltation rate changes.

The Secretary of State is satisfied that based upon the limited and temporary impact on the submerged and partially submerged sea caves feature, that an adverse effect on the integrity of the Flamborough Head SAC from smothering and siltation rate changes from the project can be excluded.

4.2.4 Submerged and partially submerged sea caves: in-combination

The Applicants' assessment of in-combination effects on the submerged and partially submerged sea caves feature was analogous to that for reefs, and both NE and the ExA concluded that AEoI could be excluded for the feature in-combination with other plans and projects. The Secretary of State is satisfied that based upon the limited and temporary impact on the submerged and partially submerged sea caves feature, and the limited scope for temporal

and spatial overlap of impacts from the projects considered (see 4.2.2), that an AEoI of the Flamborough Head SAC from smothering and siltation rate changes from the project in-combination with other plans or projects, can be excluded.

4.3 Appropriate Assessment: Humber Estuary SAC and Ramsar

The Humber Estuary SAC is designated for the Annex I habitats mudflats and sandflats not covered by seawater at low tide, sandbanks which are slightly covered by sea water all the time, coastal lagoons, *Salicornia* and other annuals colonising mud and sand, Atlantic salt meadows (*Glauco-Puccinellietalia maritima*), and a number of dune features, and the Annex II features, sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*), and grey seal (*Halichoerus grypus*). The site is located ~45km to the south of the proposed project's offshore export cable corridor and landfall.

The conservation objectives[62] are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the Favourable Conservation Status of its qualifying features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of the qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of the qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of each of the qualifying species
- the distribution of qualifying species within the site

A LSE was identified (Table 1) for Annex I Estuaries, Mudflats and sandflats not covered by seawater at low tide, Sandbanks which are slightly covered by seawater all the time, Coastal lagoons, and, *Salicornia* and other annuals colonising mud and sand Atlantic salt meadows (*Glauco-Puccinellietalia maritima*) features from smothering and siltation rate changes (Heavy and Light) alone and in-combination with other plans or projects, during the construction, operation, and decommissioning phases of the Project. Additionally, LSE was identified for these features from the introduction of other substances (solid, liquid or gas), in this case, from potential effects of oxides of nitrogen (NO_x) and ammonia (NH_3).

A LSE was also identified for Annex II fish (sea and river lamprey) as a result of underwater noise and vibration impacts due to UXO clearance during construction, and indirect impacts through effects on preferred prey availability during all project phases, alone and in-combination. LSE for Annex II grey seal was also concluded, as a result of a range of behavioural effects, risk

[62] https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK0030170

of auditory and physical injury, changes to prey availability, alone and -in combination with other plans or projects.

4.3.1 Estuaries, Mudflats and sandflats not covered by seawater at low tide, Sandbanks which are slightly covered by seawater all the time, Coastal lagoons, *Salicornia* and other annuals colonising mud and sand Atlantic salt meadows (*Glauco Puccinellietalia maritima*): alone

The Applicants considered there to be the potential for indirect effects on the Annex I habitat features of the SAC from suspended sediment disturbed during construction, operation and maintenance, and decommissioning activities, or changes to nearshore sediment transport processes from project infrastructure (including potential cable protection and cofferdams). Noting the changes made to the Project during Examination (Section 2.2), the Applicants removed a short trenchless crossing at landfall, avoiding the need for exit pits in the intertidal area. The Applicants could not exclude the potential for cable protection to be required in the nearshore area due to the possible presence of shallow chalk bedrock, and noted the presence of such material could have an impact on the sediment transport processes and sediment sources in the area which contribute to the Humber Estuary SAC.

NE [RR-039] was concerned that there was an allowance for up to 10% of the cables to be subject to protection measures from 350m seaward of mean low water springs (MLWS) to the 10m depth contour, advising that this could result in the restriction of sediment transport to the Humber Estuary SAC, and Spurn Point[61]. In order to minimise the requirements for protection, the Applicants committed to the bundling of pairs of the export cables, as secured in the Cable Statement [AS-080, updated as Revision 6[63]], further noting, that each DML in the DCO contains a condition which restricts the commencement of construction until a final Cable Statement is submitted. This final statement would need to be approved by the MMO, in consultation with statutory bodies. The Applicants undertook an assessment of coastal processes in relation to the landfall [REP5-040], which they noted demonstrated that there will be no significant interruption of wave-driven alongshore sediment supply to the Humber Estuary SAC, with changes likely to be in the order of a 1% reduction in sediment transport when compared to baseline conditions. The Applicants noted that following Marine Guidance Note 654[64] in relation to cable protection, the protection materials would not exceed 5% of water depth, which at the 10m depth contour would be a maximum of 0.5m in height. NE maintained a position that there remained uncertainty in the assessment of nearshore cable protection on sediment transport processes and coastal morphology and so concluded that an AEoI could not be ruled out [REP9-031].

The ExA acknowledged NE's outstanding concerns [REP6-071] regarding the Applicants' sediment transport modelling [REP5-040] but was satisfied that they were not relevant to the potential impacts on the Humber Estuary SAC. The ExA accepted that, based on the Applicants' modelling and evidence, that no cable protection would be located within the zone of greatest longshore sediment transport potential and that there would be no material change to sediment supply to Spurn Point and the Humber Estuary SAC. The ExA concluded that the conservation objectives of maintaining or restoring the extent, distribution, structure of function of qualifying

63 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002514-8.20%20Cable%20Statement%20(Revision%206)%20(Clean).pdf

64 https://www.gov.uk/government/publications/mgn-654-mf-offshore-renewable-energy-installations-orei-safety-response

natural habitats of the Humber Estuary SAC, or the supporting processes on which they rely, would not be undermined, and that AEoI could be excluded [ER C 7.31].

The Secretary of State has considered the recommendations of the ExA in relation to the potential impacts of nearshore cable protection on sediment transport pathways to the Humber Estuary SAC, and Spurn Point, and has concluded that should cable protection be used, it will not result in complete bedload sediment blockage, and will be minimised as far as possible through the application of the measures set out in the Cable Statement, which will be finalised in consultation with the MMO and statutory consultees before construction can commence. The Secretary of State therefore considers that an AEoI of the site from the Project alone can be excluded from smothering and siltation rate changes (heavy and light), on the relevant Annex I features which are 40 km away from the landfall point. The Secretary of State notes the recommendation of the ExA to consider NE's suggestion to include an additional condition to undertake physical remediation to address the sediment blockage and also repair any breach at Spurn Point, however, in view of the evidence presented on the potential scale of effect, and the mitigation secured in the Cable Statement, he does not consider it necessary to include such a condition.

With regards to air quality effects during onshore construction from the introduction of other substances (solid, liquid or gas), the Applicants referred to their air quality assessment [AS-048], and noted that when considered alone, the project's combustion emissions do not result in impacts in excess of 1% of the Critical Levels for NO_x or NH_3, based on a worst case assumption for vehicle movements[61]. Additionally, they noted that total Predicted Environmental Concentrations (''PEC''s) of NO_x and NH_3 experienced at the Humber Estuary SAC, do not exceed the upper Critical Levels of 30µg m^{-3} and 3µg m^{-3} respectively. The Applicants concluded that there would be no AEoI for the project alone for any of the Annex I habitats from air quality impacts.

NE clarified [REP7-152, Q25] that its advice on air quality related to relevant habitats associated with the Humber Estuary SAC and Ramsar site (as well as supporting habitat for Humber Estuary SPA species), and made a conclusion of no AEoI for all of these sites in relation to air quality impacts [REP1-066] [REP7-152]; East Riding of Yorkshire Council ("ERYC") concurred that AEoI could be ruled out [REP7-144]; a view shared by the ExA.

The Secretary of State is satisfied that based upon the limited and temporary air quality impacts on the Annex I habitats of the Humber Estuary SAC, that an AEoI of the site from the project alone can be excluded.

4.3.2 Estuaries, Mudflats and sandflats not covered by seawater at low tide, Sandbanks which are slightly covered by seawater all the time, Coastal lagoons, *Salicornia* and other annuals colonising mud and sand Atlantic salt meadows (*Glauco Puccinellietalia maritima*): in-combination

The Applicants' air quality assessment [AS-048] noted that when considered in-combination with other plans and projects (i.e. DBS project traffic, growth from the base year (2022) to future year (2026) and Environmental Impact Assessment (''EIA'') committed developments), that an area of mudflat and sandflat habitat not covered by seawater at low tide could potentially be affected by a Process Contribution increase over 1% of the upper Critical Level for NH_3 (the lower Critical Level of NH_3 not being relevant for this habitat because no lichens or bryophytes are present)[61]. Total PEC in-combination did not exceed the Critical Levels noted above for NO_x and NH_3. The

Applicants noted that the effects arising from a potential small increase in NH_3 would occur only in a localised area of mudflat and sandflat habitat not covered by seawater at low tide along the River Hull, adjacent to the A63 trunk road, equivalent to 0.18% of the total habitat area. It was noted that any effects related to exceedances of 1% of the Critical Level for NH_3 would only occur during a short period of construction, resulting in a short-term peak in airborne pollutants from construction vehicles, and are only marginally above 1%.

The views of NE, ERYC and the ExA for the in-combination effects are as above for the project alone. The Secretary of State is satisfied that based upon the limited and temporary air quality impacts on the Annex I habitats of the Humber Estuary SAC that an adverse effect on the integrity of the site from the project in-combination can be excluded.

With regards to smothering and siltation rate changes, the Applicants considered available information for Hornsea Project Four, and Eastern Green Link 2, 3 and 4. They noted that the assessment for Hornsea Project Four did not account for infrastructure in the nearshore, and that construction for Hornsea Project Four and Eastern Green Link 2 had been due to commence in advance of the proposed Project, such that there will be no overlap in construction. It was also noted that Eastern Green Link 3 and 4 were at an early stage with no publicly available information. With regards to these latter projects, and in keeping with Section 4.1.5, the Secretary of State agrees that these are at too early a stage of consideration to be included in the in-combination assessment for this HRA, and he also notes the uncertainty with regards to the potential timing for any construction related to Hornsea Four. It is noted that NE were unable to rule out an AEoI for the project alone for this source of effect as it considered that uncertainties remained regarding impacts on the shoreline [REP8-052], however, as noted in Section 4.3.1, the ExA and the Secretary of State have concluded that an AEoI can be excluded on the basis of the information provided by the Applicants (see Section 4.3.1 above), including the scale of any possible change in sediment transport, the potential maximum level of cable protection (length and height) that could be used, with the final design being subject to further consideration post-consent in the Cable Statement. The Secretary of State agrees with the ExA that the conservation objectives the Humber Estuary SAC would not be undermined (C.7.31), and concludes that the effects from those other projects considered, in-combination with the proposed Dogger Bank South Project, will not result in an AEoI for the Humber Estuary SAC.

4.3.3 Sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*): alone

The Applicants noted in their assessment[61] that lamprey species lack specialist hearing structures and are considered to have low noise sensitivity (Popper 2005)[65], being defined as fishes lacking swim bladders that are sensitive only to sound particle motion and show sensitivity to a narrow band of frequencies (includes flatfishes and elasmobranchs). The Applicant predicted that up to five UXO may require clearance in the nearshore environment (<10km of Lowest Astronomical Tide), where migratory fish species from the Humber Estuary SAC/Ramsar may be found. The Applicants noted that low-order or low-yield UXO detonation methods would be used where possible to further reduce the distance at which any individuals could be impacted. While the Applicants did not rely on this to make a conclusion that there would be no AEoI, the ExA noted that this mitigation is secured through the MMMP [REP7-117]. No concerns were raised regarding the Applicants' assessment of effects from underwater noise and vibration impacts on river and sea lamprey of the Humber Estuary SAC and Ramsar site.

[65] Popper AN (2005). A Review of Hearing by Sturgeon and Lamprey. Environmental BioAcoustics, LLC. 23pp.

With regards to indirect impacts through effects on preferred prey availability, the Applicants considered that the conclusions of no significant effect on fish species reached in their Environmental Statement [REP7-042] could be used as the basis to determine that there was no potential for impacts on preferred prey availability for the Annex II fish species associated with the Humber Estuary SAC and Ramsar. NE had no outstanding concerns in terms of potential AEoI for the site [REP3-059] [REP5-053], and the ExA was content (ER C.8.6) that AEoI from the Project could be excluded alone for river and sea lamprey of the Humber Estuary SAC and Ramsar site.

The Secretary of State is satisfied that based upon the low noise sensitivity of the relevant qualifying features that the impacts on the Annex II sea and river lamprey of the Humber Estuary SAC from the project alone will not result in an AEoI. He further notes, while not relied upon to make this conclusion, that mitigation in the form of low order UXO disposal will be in place, where possible..

4.3.4 Sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*): in-combination

The Applicants considered other projects which are likely to require UXO clearance in its in-combination assessment, including: Aminth subsea cable; Continental Link; Dogger Bank D; Eastern Green Link (EGL) 2, EGL3 and EGL4; Hornsea Project Four; Northern Endurance carbon capture and storage (CCS) project; CCS projects within leasing areas CS020; CS025 and CS028; and Outer Dowsing offshore wind farm. The Applicants noted that there was no publicly available information regarding the potential number of UXO planned to be cleared by other plans and projects, however, they noted it was likely to be minimal and assumed that industry standard approaches to mitigating for UXO detonation would be expected to be required by the other plans and projects.

As noted in Section 4.3.2, NE had no outstanding concerns in terms of potential AEoI for the site [REP3-059] [REP5-053], and the ExA was content that AEoI from the Project could be excluded in-combination for river and sea lamprey of the Humber Estuary SAC and Ramsar site. The Secretary of State is satisfied that based upon the low noise sensitivity of the relevant qualifying features, that the impacts on the Annex II sea and river lamprey features of the Humber Estuary SAC from the project in-combination with other plans and projects will not result in an AEoI. He further notes, while not relied upon to make his conclusion, that mitigation in the form of low order UXO disposal will be in place, where possible.

4.3.5 Grey seal: alone

The Applicants identified the potential for effects from auditory injury and disturbance or behavioural impacts resulting from underwater noise, including piling (and due to Acoustic Deterrent Device “ADD” activation), and other construction operations [REP5-009]. They undertook underwater noise modelling for the installation of monopiles and jacket pin piles and presented the predicted effect ranges and areas for Permanent Threshold Shift (‘‘PTS’’) from a single strike of the maximum hammer energy for the worst case location, and for cumulative exposure including for two monopiles and four pin piles in 24 hours. The maximum number of individuals that could be subject to PTS from concurrent installation of monopiles or pin piles in the two array areas was estimated to be 40.5 (0.26% of the SAC population). The implementation of primary and secondary mitigation as set out in the MMMP [REP7-117], commit to fully mitigating PTS. This mitigation, along with the low level of predicted effect, is such that

the Applicants concluded there would be no AEoI of the Humber Estuary SAC related to auditory injury on grey seal. For other activities associated with the installation of the wind farms, e.g. cable laying, trenching, rock placement, dredging, vessel movements, the potential for PTS was estimated to be very small, with significantly less than 1% of the population being affected for any activity (e.g. 0.002-0.00008% for up to eight activities taking place at the same time). It was concluded that there would be no AEoI of the Humber Estuary SAC from auditory injury from these activities.

The Applicants noted a range of possible behavioural responses from underwater noise associated with the Project, and noted a lack of agreed thresholds or criteria to define impacts. In relation to piling, the Applicants considered that a distance of 25km was suitable (impact area of 1,963.5km^2), based on Russell *et al.* (2016)[66], or 15km for pin piles based on Graham *et al.* (2019)[67]. A behavioural disturbance dose-response analysis was also undertaken for piling, and did not consider ADD use[61]. Assuming pile installation at two concurrent locations in both array areas, it was estimated that between 125.8 and 349.5 grey seals could be disturbed from monopile and pin pile installation respectively (0.1-0.9% of the SAC population).

JNCC published updated Effective Deterrent Ranges ("EDRs") for assessing the significance of noise disturbance in harbour porpoise SACs in September 2025[68], which was too late to be considered in the Examination. They indicate a reduced EDR for monopiles without noise abatement from 26km to 20km, and an increase EDR for pin-piles from 15km to 20km, and in both cases, a reduction to 11km with the application of >10bD noise abatement. As the Applicants were not able to consider this evidence, the Secretary of State will base his conclusions only on the assessment of monopile installation, as the 26km EDR used by the Applicants is precautionary in the context of the updated EDRs, whereas the use of 15km for pin piles is less so.

Based on the dose-response analysis, a worst-case installation of two piles in each array area would result in disturbance of up to 558 individuals (3.6% of the SAC population). Population modelling was undertaken using the Interim Population Consequences of Disturbance ("iPCoD"), model including the worst-case piling scenario which involves sequential array installation over four years. The modelling indicated a <1% change per year for the first six years after first disturbance, and <1% over the full 25 year period modelled. Any disturbance and any barrier effects were considered to be temporary and for a relatively short duration (i.e. during active piling), and that animals would return once the activity had been completed.

Disturbance from other wind farm construction related noise was estimated based on a 4km potential disturbance range[69] with eight activities taking place at the same time (as above, e.g. cable laying, trenching, rock placement, dredging, vessel movements). It was estimated that disturbance in the array areas would impact 0.14-0.23% of the SAC population, or 1.89% from

[66] Russell DJF, Hastie GD, Thompson D, Janik VM, Hammond PS, Scott-Hayward LA, Matthiopoulos J, Jones EL, McConnell BJ & Votier S (2016). Avoidance of wind farms by harbour seals is limited to pile driving activities. *Journal of Applied Ecology* **53**: 1642-1652.

[67] Graham IM, Merchant ND, Farcas A, Barton TR, Cheney B, Bono S, Thompson PM (2019). Harbour porpoise responses to pile-driving diminish over time. *Royal Society Open* Science **6**: 190335.

[68] https://jncc.gov.uk/resources/2e60a9a0-4366-4971-9327-2bc409e09784#jncc-report-803.pdf

[69] This was informed by Benhemma-Le Gall A, Graham IM, Merchant ND & Thompson PM (2021). Broad-Scale Responses of Harbor Porpoises to Pile-Driving and Vessel Activities During Offshore Windfarm Construction. *Frontiers in Marine Science* **8**: 664724, in relation to harbour porpoise, and it was assumed that given the higher sensitivity of that species, that 4km could be used to inform a worst case disturbance for grey seal.

activities within the export cable corridor. When considering vessel presence, the Applicants noted that up to 59 vessels may be on site at any one time, with 12 of those in the cable corridor. Assuming a 4km buffer, it was estimated that disturbance in the array areas would impact 0.49-0.81% of the SAC population, or 2.83% from activities within the export cable corridor. The Applicants concluded that the scale of impacts from disturbance were such that they would not result in AEoI of the Humber Estuary SAC.

The Applicants estimated that up to three seals (0.02% of the SAC population) could be at increased risk of collision with construction vessels, if both array areas are constructed concurrently. Additionally, mitigation is secured through the MMMP and DMLs to adopt best practice approaches to vessel movement to reduce collision risks; the Applicants concluded that there would be no AEoI of the Humber Estuary SAC from collision risk.

Effects from underwater noise during operation from turbines and vessels (injury, disturbance and related barrier effects) were all predicted to affect very small numbers of seals, all at levels significantly less than 1% of the population.

NE agreed with the Applicants' conclusions [REP9-031], and the ExA was content that the Project would not result in further deterioration of the sites' condition. The Secretary of State agrees that based on the low level of predicted effect, and noting the proposed mitigation which has been secured in the DCO, that there would be no AEoI of the Humber Estuary SAC, from underwater noise related injury, disturbance or barrier effects, or from collision risk on grey seal, at all Project phases.

4.3.6 Grey seal: in-combination

The Applicants considered other relevant plans and projects within the Management Unit ("MU") for grey seal, and concluded those for piling and construction were relevant. Grey seal was considered against the SAC population where they showed overlap with other OWF projects or were within a distance of 25km from them (after Carter *et al.* 2022)[70], or for projects with installation schedules which could result in piling at the same time as at Dogger Bank South. It was estimated that the maximum number of individuals that would potentially be disturbed during piling in-combination with other projects would be 2,238; 385 of which relate to Dogger Bank South, and overall ~14.4% of the site population. iPCoD modelling was undertaken which indicated that the population was at 100% of the unimpacted population one year after piling had commenced, and remained at 98.96% by the end of the modelling period (2052). As noted above, mitigation for the Project will include primary and/or secondary noise abatement (if required)[71], secured in the DMLs and to be finalised in the MMMP [REP7-117]. The Applicants concluded there would be no AEoI of the Humber Estuary SAC from in-combination piling activities.

The nature and timing of many underwater noise producing activities are uncertain because project schedules may not be known, or consenting timescales (e.g. for geophysical surveys) are relatively short, however, the Applicants have undertaken in-combination underwater noise

[70] Carter MID, Boehme L, Cronin MA, Duck CD, Grecian WJ, Hastie GD, Jessopp M, Matthiopoulos J, McConnell BJ, Miller DL, Morris CD, Moss SEW, Thompson D, Thompson PM & Russell DJF (2022). Sympatric Seals, Satellite Tracking and Protected Areas: Habitat-Based Distribution Estimates for Conservation and Management. *Frontiers in Marine Science* **9**: 875869.

[71] Includes systems such as casings, resonators and bubble curtains to help reduce noise propagation in the water column during pile driving. Also see REP8-037, Illustrative Noise Reduction Technical Note (Revision 4).

assessments assuming a range of scenarios for possible geophysical and seismic surveys, aggregate extraction, pipeline and cable installation projects and UXO clearance which could affect the Humber Estuary SAC population [REP5-009]. Up to 15.6% of the SAC population was predicted to be potentially disturbed, however, the majority of disturbance was from piling using a highly precautionary scenario that all schemes would be piling using monopiles at the same time. The Applicants concluded there would be no AEoI on the Humber Estuary SAC from in-combination underwater noise effects, and related barrier effects. Additionally, no AEoI was predicted from vessel collision risk and disturbance from haul outs, with vessel management forming part of the mitigation to be included in the final PEMP [REP2-041], secured in the conditions within the DMLs.

NE agreed with the Applicants' conclusions [REP9-031], and the ExA [ER C.9.15] was content that the Project would not result in further deterioration of the condition of the Humber Estuary SAC and Ramsar. The Secretary of State agrees that based on the low level of predicted effect, and noting the proposed mitigation which has been secured in the DMLs, that there would be no AEoI of the Humber Estuary SAC or Ramsar, from underwater noise related injury (e.g. mitigation through the use of primary and/or secondary noise abatement systems to be confirmed in the MMMP and the default use of low order UXO disposal methods), disturbance or barrier effects, or from collision risk (with mitigation, as noted above, through vessel management) at all Project phases, in-combination with other plans and projects.

4.4 Appropriate Assessment: River Derwent SAC

The River Derwent SAC represents one of the best British examples of the classic river profile, with its source in the high-energy upland valleys of the North York Moors whose energy dissipates as the channel becomes wider and deeper as it passes through the flat and wide lowland floodplain valleys to its confluence with the Ouse and out into the Humber Estuary. Only the lower reaches of the river are however designated SAC.

The site is designated for the Annex I habitat Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation, and Annex II features, sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*), bullhead (*Cottus gobio*) and otter (*Lutra lutra*). The site is located ~43km west of the proposed project's offshore export cable corridor and landfall.

The objectives[72] are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the Favourable Conservation Status of its qualifying features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of the qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of the qualifying species

[72] https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK0030253

- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of each of the qualifying species
- the distribution of qualifying species within the site

A LSE was identified (Table 1) for Annex II fish (sea and river lamprey) as a result of underwater noise and vibration impacts due to UXO clearance during construction, during construction, alone and in-combination.

4.4.1 Sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*): alone

The Applicants noted in their assessment[61] that lamprey species lack specialist hearing structures and are considered to have low noise sensitivity (Popper 2005), being defined as fishes lacking swim bladders that are sensitive only to sound particle motion and show sensitivity to a narrow band of frequencies (includes flatfishes and elasmobranchs). While no impacts would occur to fish within the River Derwent SAC due to its location inland, its connectivity to the Humber Estuary SAC is such that there exists the potential for individuals from the site to be found in coastal waters near the Humber, located approximately 46km from the offshore export cable corridor. The worst-case impact range for UXO clearance (based on Popper *et al.* 2014) was estimated to be 890m, though is substantially smaller for low yield (210m) and low-order (65m) approaches.

While the Applicants are yet to undertake specific surveys to identify potential UXO locations, estimates were made using past potential UXO quantities for similar projects, site-specific geophysical data and historic use of the offshore Project area. Up to 41 UXOs were estimated to require clearance across the array area and cable corridor, with perhaps five in the nearshore area (<10m LAT). To mitigate any potential impacts of UXO detonation, low-order or low-yield UXO clearance methods would be used as the default to further reduce the distance at which any individuals could be impacted by UXO detonation events. This mitigation is included in the oMMMP [REP7-117] which is a certified document within Schedule 19 of the DCO.

The Applicants concluded that there would be no AEoI on the lamprey features of the River Derwent SAC, which was not disputed by any IP and the ExA [ER C.5.4] was satisfied that on the basis of the information provided, an AEoI of the River Derwent SAC could be excluded[73]. The Secretary of State is satisfied that based upon the low noise sensitivity of the relevant qualifying features, and that low order UXO disposal will be used as the default method, where viable, that impacts on the Annex II sea and river lamprey of the River Derwent SAC from the project alone, will not result in an AEoI, and while not relied upon, notes that low order UXO disposal will be used as the default method, where viable.

4.4.2 Sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*): in-combination

The Applicants noted that there was a lack of publicly available information regarding the potential number of UXO planned to be cleared by other plans and projects within the vicinity of

[73] The ExA confirmed with NE [REP3-057] that NE considered there would be no AEoI on the River Derwent SAC (and other sites not listed in NE's Table 5.1 [RR-039]).

the offshore Project area, but also noted the minimal numbers of UXO estimated to require clearance in this area for the Project, and the likelihood that the other nearby plans and projects will also require similar levels of clearance. The Applicants noted that, given the low sensitivity of lamprey, levels of UXO clearance likely required and mitigation employed across projects and lack of evidence of the species presence within the Project area, a minimal number of individuals could be impacted by UXO detonation events.

The Applicants' concluded that there was no potential for AEoI on the lamprey features of the River Derwent SAC in-combination with other plans and projects, which was not disputed by any IP. The ExA was satisfied that on the basis of the information provided, an AEoI of the River Derwent SAC could be excluded in-combination. The Secretary of State is satisfied that based upon the low noise sensitivity of the relevant qualifying features, that impacts on the Annex II sea and river lamprey of the River Derwent SAC from the project in-combination with other plans and projects, will not result in an AEoI, and while not relied upon, notes that low order UXO disposal will be used as the default method, where viable.

4.5 Appropriate Assessment: The Wash and North Norfolk Coast SAC

The Wash and North Norfolk SAC encompasses the largest embayment in the UK and includes extensive intertidal sand and mudflats, subtidal sandbanks, biogenic and geogenic reef, saltmarsh and a barrier beach system, unique in the UK. The site is also important for harbour seals (*Phoca vitulina*), providing key habitat for breeding and hauling-out. The site is home to the largest colony of harbour seals in the UK, which haul out on sand and mudflats in areas such as Blakeney Point, and is located at least 168km from the offshore array area.

The conservation objectives[74] are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the Favourable Conservation Status of its qualifying features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of the qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of the qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of each of the qualifying species
- the distribution of qualifying species within the site

The site is designated for a number of Annex I habitats, including coastal lagoons, mudlfats and sandflats, reefs, and Annex II species including otter and harbour seal. A LSE was identified (Table 1) for Annex II harbour seal as a result of auditory injury and disturbance or behavioural

[74] https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK0017075

impacts resulting from underwater noise and physical presence of vessels and offshore infrastructure, and changes in prey availability, during all project phases.

4.5.1 Harbour seal: alone

The Applicants undertook underwater noise modelling, and indicated the potential for permanent injury (i.e. permanent threshold shift "PTS") on harbour seal from piling activities during construction [REP5-009]. They indicated that the maximum predicted impact range for PTS was 1.6km, for cumulative Sound Exposure Level (including soft-start and ramp-up) for a monopile with maximum hammer energy of 6,000kJ. An assessment was undertaken of the maximum number of individuals that could be at risk of instantaneous PTS due to a single strike at the maximum hammer energy (for monopiles and pin piles), and cumulative exposure of a single pile installation or sequential pile installations in 24 hours. It was estimated that less than 1% of the population of the site could be affected by PTS, both from a single pile strike and cumulatively. Mitigation measures are secured in the oMMMP [REP7-117], to be finalised post-consent in consultation with the MMO and relevant SNCBs, which, alongside the commitment to fully mitigate PTS through primary design and secondary measures such as Noise Mitigation Systems ("NMS") and Noise Abatement Systems ("NAS"), are such that the Applicants concluded there would be no AEoI for the WNNC SAC from impact piling during construction.

Behavioural disturbance was considered possible out to 25km from piling events (after Russell 2016), and the Applicants undertook population modelling based on a worst case of 6.5 seals being disturbed, with risk of a worst case sequential installation of the array areas with impact every piling day with a piling schedule of four years, and assuming that the WNNC SAC population was declining. The modelling indicated that there would be less than 1% annual decline over the first six years after disturbance, and <1% over the 25-year period modelled. The Applicants concluded that there would be no AEoI from behavioural disturbance related to piling.

The Applicants considered that any disturbance from other noise producing activities during construction and vessel noise during operation would be localised and temporary, and would not result in AEoI. Similarly, it was not considered that barrier effects from underwater noise would result in AEoI, due to the low numbers of seals present in the project area (Carter *et al.* 2022) and the temporary nature of any disturbance, and similarly, the Applicants' estimated that less than one animal (up to 0.5) may be at risk of collision with vessel traffic, and therefore considered this was not a source of AEoI.

Effects from underwater noise during operation from turbines and vessels (injury, disturbance and related barrier effects) were all predicted to affect very small numbers of seals, all at levels significantly less than 1% of the population.

NE agreed with the Applicants' conclusion of no AEoI for the harbour seal feature of WNNC SAC [REP8-051, REP8-056], and the ExA concluded that the Project would not result in further deterioration of the sites' condition, noting that the site population is in decline and that a restore target has been set for the population conservation objective.

The Secretary of State agrees that based on the low level of predicted effect, and noting the proposed mitigation which has been secured in the DCO, that there would be no AEoI of the WNNC SAC, from underwater noise related injury, disturbance or barrier effects, or from collision risk, at all project phases.

4.5.2 Harbour seal: in-combination

The Applicants considered other relevant plans and projects within the MU for harbour seal, and concluded those for piling and construction were relevant. Harbour seal were considered against the SAC population where they showed overlap (after Carter *et al.* 2022) with other OWF projects and within a distance of 25km from them, and for projects with installation schedules that could result in piling at the same time as at Dogger Bank South. It was estimated that the maximum number of individuals that would potentially be disturbed during piling in-combination with other projects would be 152.7, 6.5 of which relate to Dogger Bank South, and overall <4% of the site population. Population modelling was undertaken which indicated that the population is at 99.7% of the unimpacted population one year after piling had commenced, and remains at 100% by the end of the modelling period (2052). As noted above, mitigation for the project will include primary and secondary noise abatement, secured in the DCO and to be finalised in the MMMP. The Applicants concluded there would be no potential for AEoI of the WNNC SAC from in-combination piling activities.

The nature and timing of many underwater noise producing activities are uncertain because project schedules may not be known, or consenting timescales (e.g. for geophysical surveys) are relatively short, however, the Applicants have undertaken in-combination underwater noise assessments assuming a range of scenarios for possible geophysical and seismic surveys, aggregate extraction, pipeline and cable installation projects and UXO clearance which could affect the WNNC SAC population [REP5-009]. Up to 6.2% of the SAC population was predicted to be potentially disturbed, however, the majority of disturbance was from piling with schemes closer to the site contributing a large proportion of disturbance. The Applicants concluded there would be no AEoI on the WNNC SAC from in-combination underwater noise effects, and related barrier effects. Additionally, no AEoI was predicted from vessel collision risk and disturbance from haul outs, with vessel management forming part of the mitigation secured in the PEMP and in DMLs.

NE agreed with the Applicants' conclusion of no AEoI for the harbour seal feature of WNNC SAC [REP8-051, REP8-056], and the ExA concluded that the Project would not result in further deterioration of the sites' condition in-combination with other plans or projects.

The Secretary of State is satisfied that based upon the low number of individuals predicted to be subject to injury or disturbance impacts, and the proposed mitigation to be finalised in the MMMP, including the use of secondary measures such as NAS, that impacts on the Annex II harbour seal of the WNNC SAC from the project in-combination with other plans or projects, will not result in an AEoI.

4.6 Appropriate Assessment: Berwickshire & North Northumberland Coast SAC

The Berwickshire and North Northumberland Coast SAC is one of the most varied coastlines in the UK, stretching from Alnmouth to north of St Abbs head and contains a complex mix of marine habitats, associated species and communities which is unusually diverse for the North Sea. The site contributes to an important range and variation of intertidal mudflats and sandflats and has one of the best examples of east coast clean sand and seagrass beds, and of moderately exposed reefs. Intertidal and submerged sea caves also contribute significantly to the site's overall habitat diversity and international importance. The site also provides important habitats

for grey seal. Breeding, hauling out and moulting occurs in areas such as Staple Island within the Farne Islands. A large number of seals also haul out around Holy Island sands, Lindisfarne.

The conservation objectives[75] are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the Favourable Conservation Status of its qualifying features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of the qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of the qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of each of the qualifying species
- the distribution of qualifying species within the site

The site is designated for a number of Annex I habitats, including mudflats and sandflats, reefs, sea caves and the Annex II species grey seal. A LSE was identified (Table 1) for Annex II grey seal as a result of auditory injury and disturbance or behavioural impacts resulting from underwater noise and physical presence of vessels and offshore infrastructure, and changes in prey availability, during all project phases.

4.6.1 Grey seal: alone

Underwater noise modelling was undertaken to estimate the maximum number of individuals that could be at risk of instantaneous PTS due to a single strike at the maximum hammer energy for monopiles and jacket pin piles, and also cumulative exposure over 24 hours. In all cases less than 1% of the population would be affected [REP5-009]. As noted in Section 4.5, the commitment to mitigation in the form of primary and secondary noise reduction measures, which the Applicants have indicated would fully mitigate PTS, will be detailed in the final MMMP, secured in the DMLs.

Behavioural effects were considered possible within 25km of a piling event for monopiles, or 15km for pin piles (based on Russell 2016), and these distances were used by the Applicants to estimate the number of seals which may be disturbed by piling based on the mean densities in Carter *et al.* (2022) and a dose-response curve (Whyte *et al.* 2020). The assessment indicated that for a worst-case assumption of two piles being installed in both the project array areas, up to 13.6% of the BNNC population could be impacted, therefore population modelling using iPCoD was undertaken to consider the effect further. The outcome of the modelling was that there was less than a 1% average annual decline over the first six years after first disturbance, and a <1% decline over the 25 year modelling period, which the Applicants considered was not significant, but did acknowledge that animals may incur some energetic cost during the construction period.

[75] https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK0017072

The Applicants also considered the potential for effects from underwater noise and disturbance from other construction activities and vessel presence, and in all cases concluded that the scale of effect on the population was not significant (in all cases <1% of the population), and concluded that injury or disturbance related impacts from piling and other underwater noise sources would not result in AEoI for the BNNC SAC.

The Applicants considered the potential impact of collision risk during construction based on a worst-case concurrent programme of installation, and estimated that up to three seals may be at risk of collision (0.02% of the population). The Applicants further considered that any reductions in prey availability would be small scale, localised and temporary, and considered it to be highly unlikely that potential reductions in prey availability as a result of construction activities would result in detectable changes to grey seal populations. They noted that grey seals had a large foraging range, and feed opportunistically on a variety of prey species, and that there would be no AEoI of the BNNC SAC due to changes in prey availability.

NE agreed with the Applicants' conclusions that an AEoI could be ruled out for the grey seal feature of the BNNC SAC [REP9-018, REP9-031], on the basis of the primary and secondary mitigation secured in relation to piling. The ExA noted that the BNNC SAC was in unfavourable recovering condition, but concluded that the Project would not result in further deterioration of the site condition alone. The Secretary of State has also concluded that there would not be an AEoI on the BNNC SAC, noting that the underwater noise reduction mitigation measures have been secured in the DMLs, and will be developed for the final MMMP.

4.6.2 Grey seal: in-combination

The Applicants considered other relevant plans and projects within the MU for grey seal, and concluded those for piling and construction were relevant. Grey seal was considered against the SAC population where they showed overlap (after Carter *et al.* 2022) with other OWF projects and within a distance of 25km from them, and for projects with installation schedules that could result in piling at the same time as at Dogger Bank South. It was estimated that the maximum number of individuals that would potentially be disturbed during piling in-combination with other projects would be 2,492.5, 1435.8 of which relate to Dogger Bank South, and overall ~14.7% of the site population. Population modelling was undertaken which indicated that the population was at 100% of the unimpacted population one year after piling has commenced, and remains at 99.92% by the end of the modelling period (2052). As noted above, mitigation for the project will include primary and secondary noise abatement, secured in the DCO and to be finalised in the MMMP. The Applicants concluded there would be no AEoI of the BNNC SAC from in-combination piling activities.

The nature and timing of many underwater noise producing activities are uncertain because project schedules may not be known, or consenting timescales (e.g. for geophysical surveys) are relatively short, however, the Applicants have undertaken in-combination underwater noise assessments assuming a range of scenarios for possible geophysical and seismic surveys, aggregate extraction, pipeline and cable installation projects and UXO clearance which could affect the BNNC SAC population [REP5-009]. Up to 15.3% of the SAC population was predicted to be potentially disturbed, however, the majority of disturbance was from piling using a highly precautionary scenario that all schemes would be piling using monopiles at the same time. The Applicants concluded there would be no AEoI on the BNNC SAC from in-combination underwater noise effects, and related barrier effects. Additionally, no AEoI was predicted from

vessel collision risk and disturbance from haul outs, with vessel management forming part of the mitigation secured in the DMLs, to be developed in the final PEMP.

NE agreed with the Applicants' conclusions [REP9-031], and the ExA was content (C.9.15) that the Project would not result in further deterioration of the site's condition. The Secretary of State agrees that based on the low level of predicted effect, and noting the proposed mitigation which has been secured in the DCO, that there would be no adverse effects on the integrity of the BNNC SAC, from underwater noise related injury, disturbance or barrier effects, or from collision risk, at all project phases, in-combination with other plans and projects.

4.7 Appropriate Assessment: Dogger Bank SAC

The Dogger Bank SAC was formed by glacial processes before being submerged through sea level rise during the last marine transgression (by *ca*. 8,000 years BP). A large part of the southern area of the bank is covered by water seldom deeper than 20m below chart datum (JNCC 2024). The site is designated for the Annex I feature, Sandbanks which are slightly covered by sea water all the time, and the Applicants noted four related biological communities [REP7-038], along with sandeel.

The condition of the Annex I sandbank feature for which the site is designated is considered to be unfavourable (Eggleton *et al.* 2017)[76], such that the SACO for the Dogger Bank SAC[77] advises that the site feature extent and distribution, and structure and function should be restored, while supporting processes be maintained. A factor contributing to this judgement in relation to the extent, distribution and structure of the habitat, is the installation and operation of mainly offshore energy infrastructure. The Applicants noted (Section 6.4 of their RIAA[61]) that the scale of such habitat change is estimated to be in the order of 7.41km^2, based on final refined design estimates for the Dogger Bank A, B and C and Sofia OWFs, and those of the Department for Business, Energy and Industrial Strategy (2019) for other infrastructure (oil and gas, cables). Former fishing activity also contributed to the unfavourable status of the site. A fisheries byelaw came into force in June 2022 which prohibits the use of bottom towed fishing gear across the entirety of the SAC[78], and there was a wider closure of the sandeel fishery in UK waters in 2024, however, the conservation status of the Dogger Bank SAC remains unfavourable at this time.

The conservation objective[79] for the site, is for the feature to be in favourable condition thus ensuring site integrity in the long term and contribution to Favourable Conservation Status of Annex I Sandbanks which are slightly covered by seawater all the time. The contribution would be achieved by maintaining or restoring, subject to natural change:

- The extent and distribution of the qualifying habitat in the site

[76] Eggleton J, Murray J, McIlwaine P, Mason C, Noble-James T, Hinchen H, Nelson M, McBreen F, Ware S & Whomersley P (2017). Dogger Bank SCI 2014 Monitoring R&D Survey Report. JNCC/Cefas Partnership Report, No. 11.

[77] https://hub.jncc.gov.uk/assets/26659f8d-271e-403d-8a6b-300defcabcb1#DoggerBank-3-SACO-v1.0.pdf

[78] https://www.gov.uk/government/publications/the-dogger-bank-special-area-of-conservation-specified-area-bottom-towed-fishing-gear-byelaw-2022

[79] https://jncc.gov.uk/resources/26659f8d-271e-403d-8a6b-300defcabcb1#dogger-bank-conservation-objectives-v2.pdf

- The structure and function of the qualifying habitat in the site
- The supporting processes on which the qualifying habitat relies

A LSE was identified for those sources of effect indicated in Table 1.

4.7.1 Sandbanks which are slightly covered by seawater all the time: alone

The Applicants indicated that construction, operation and maintenance and decommissioning activities will result in the following pressures: introduction of Invasive Non-Indigenous Species (INIS), physical change (to another seabed/sediment type), abrasion/disturbance of the substrate on the surface of the seabed/penetration and/or disturbance of the substratum below the surface of the seabed. In addition, dredging or sandwave clearance could result in habitat structure changes – removal of substratum (extraction), which were grouped by the Applicants under abrasion and disturbance of the seabed.

4.7.1.1 Introduction of Invasive Non-Indigenous Species (INIS)

The Applicants noted that hard substrates introduced as part of the Project could act as potential stepping stones or vectors for INIS, noting it had been widely recognised in the southern North Sea[62]. NE [REP7-152] considered that the introduction of INIS pathway will contribute to AEoI conclusions, as it includes the introduction of species non-native to soft-substrate habitats so is associated with the colonisation of hard infrastructure and ecological "halo" effects (see below). The Applicants referred to a range of embedded and standard mitigation measures to control the risk of spreading INIS, and did not consider that this risk contributed to AEoI. The ExA noted that the outline Project Environmental Management Plan (oPEMP [REP2-041]) contained relevant regulations and guidance to be complied with to reduce risk of spreading INIS. It also identifies control measures to be undertaken in accordance with latest available guidance. The ExA [ER C.7.116] also considered that adherence to the PEMP adequately controls the risk from INIS and therefore does not consider that this would contribute to an AEoI. The Secretary of State has considered the contents of the oPEMP and notes that the DMLs require the PEMP to be made in accordance with this. The Secretary of State agrees with the ExA that the risk from INIS is suitably controlled and would not lead to an AEoI of the Dogger Bank SAC.

4.7.1.2 Physical change to another seabed/sediment type

While NE agreed with the Applicants that the application of cable and scour protection would contribute to AEoI from habitat loss [RR-039, C1], it regarded that it was not clear how realistic the Maximum Design Scenario (''MDS'') was for the cable protection, and did not feel that the Applicants had sufficiently mitigated down the environmental risk. The Applicants noted that they would use burial as the primary method of cable protection, with 10% cable protection assumed as a worst case, consistent with the Round 4 Plan Level HRA[80]. While the location and final quantities of cable protection are not known, the Applicants noted that they would not exceed the worst case values as presented in the DCO, and which are the basis of assessment, and that the final Cable Statement would include this information, which would be submitted to the decision-maker approval prior to the commencement of construction under each DML.

[80] Note that the figure of 10% is detailed in the Round 4 Plan RIAA and is not mentioned in the HRA record: https://www.marinedataexchange.co.uk/details/TCE-3582/2022-the-crown-estate-2020-offshore-wind-round-4-plan-habitats-regulations-assessment

The ExA referred to paragraph 4.3.18 of NPS EN-1, "the Secretary of State should consider the worst-case impacts in its consideration of the application and consent, providing some flexibility in the consent to account for uncertainties in specific project details", and while acknowledging NE's position, accepted the Applicants' explanation as to how they derived the worst-case cable and scour protection scenario, and reasons for why they are presently unable to refine this figure further [ER C.7.44-C.7.45]. The Applicants noted that [REP5-036] they could not accurately predict the level of cable protection required at the time of Examination, as site information continued to be acquired, and cable routes, design and installation methods had not been developed. As a result, the Applicants indicated that they had developed a worst case scenario consistent with the Rochdale envelope, noting that the level of cable protection required was based on experience of developing offshore wind farms in Europe and internationally over a number of decades. The Applicant also considered that 10% of cable protection may not all be required, but that a lower number may also risk not being able to complete the necessary protection if it were to be needed. They also note that burial is the primary protection method, and the Cable Statement requires the minimisation of the use of protection materials where practicable[81]. The Applicant referred to the complexity of offshore wind farm development, and the wording of Section 2.6 and paragraph 2.8.74 of NPS EN-3 (2023 version at the time of Examination), which notes that many of the details of a proposed scheme may be unknown to the applicant at the time of the application to the Secretary of State. The Secretary of State also notes that it is indicated in (Section 2.6) of EN-3 that, where flexibility is sought, that the applicants should, to the best of their knowledge, assess the worst case-environmental, social and economic effects.

The ExA was content that the final Cable Statement[81], which is secured through conditions in the DMLs as part of the DCO, would present the technical justification for cable protection, and that Schedules 10 and 11, condition 14(2), Schedules 12 and 13, condition 12(2) and Schedules 14 and 14A, condition 10(2) adequately secure a maximum 10% cable protection deployment. The Secretary of State has considered the views of NE, and the ExA's recommendation and agrees that the Applicants have provided a sufficient justification for why flexibility should remain in the final scale and position of cable protection, consistent with NPS EN-3. The Secretary of State is content that the Applicants have applied the mitigation hierarchy in this instance, by maintaining both a MDS for the purposes of assessment and flexibility, but also committing to minimising cable protection [REP7-130].

NE [RR-039, A19] raised concerns that there was no timeframe for when protection materials could be deployed, allowing for material to be installed throughout project life. The Applicants noted that the MDS captured all material that would be required during construction and operation, and that while a new marine licence would not be needed in the case of repair, replacement or replenishment of materials deposited during construction, it would be needed for any new areas during operation. The ExA agreed provided that the total volumes placed remain within the worst case assessed. The ExA was reassured that the DMLs (Schedules 10 and 11, Part 2, condition 16, Schedules 12 and 13, Part 2, condition 14 and Schedule 14 and 14A, Part 2, condition 12 [REP9-003]) secure that the licenced activities cannot commence until an Offshore Operations and Maintenance Plan ("OOMP"), substantially in accordance with the oOOMP, has been approved by the MMO, and subject to a review approved by the MMO every

[81] See Section 1.4.9: https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002514-8.20%20Cable%20Statement%20(Revision%206)%20(Clean).pdf

three years. The Secretary of State agrees that for the purposes of construction, that the above assessed MDS and Cable Statement provide assurance as to the final scale and location of protection, and that for the purpose of operation, that repair, replacement or replenishment, if required, would not exceed the amount assessed. The Secretary of State also agrees with NE, the Applicants and the ExA that should protection materials be required within the Dogger Bank SAC to parts of the cables not protected during construction, these would be subject to a new marine licence, which would require its own HRA.

NE recommended that the DCO secure the removal of all on and above seabed infrastructure on decommissioning, with reference to renewable energy decommissioning guidance[82]. The Applicants indicated they would comply with relevant guidance in relation to decommissioning, and paragraph 7 of Part 1, Schedule 12 of the DCO requires the submission of a decommissioning programme to the Secretary of State for approval before the East Project offshore works can be commenced. The Cable Statement was updated to confirm that the removability of external cable protection at decommissioning will be considered as part of the development of the final Cable Statement(s), and that an assessment of different types of cable protection will be included in the final Cable Statement(s) and the Decommissioning Programme(s), to be produced for submission to the Secretary of State prior to the commencement of construction. The Applicants indicated that they could not commit to fully removing cable protection at this time, as this would be subject to detailed design post consent. NE emphasised the need to apply the mitigation hierarchy to avoid and reduce impacts prior to compensating. The ExA agreed with the Applicants that since removability of cable protection could not be secured at this stage, that habitat loss from scour and cable protection should be considered permanent (ER C.7.61). The Secretary of State agrees with the Applicants, NE and the ExA that cable protection should be considered a permanent change to the habitat of Dogger Bank SAC, as at present, it is uncertain whether there will be a commitment to remove this material, and this represents a reasonable worst case scenario on which to assess the impacts. The Secretary of State is reassured that the Applicants will undertake an assessment during its detailed design phase which will consider the feasibility of using removeable methods, and that NE would be able to review these proposals, and considers that this, along with the commitment to minimise protection materials, forms part of the mitigation hierarchy applied by the Applicants.

In addition to cable protection, drill arising may occur as a result of pile installation. The Applicants indicated that these would be within the footprint of the foundation scour protection and so are included in the estimate of habitat loss, however, NE questioned the feasibility of this [REP9-031, C25]. The ExA [ER C.7.97] agreed with the Applicants that the drill arisings would be limited to the area of foundation scour protection and therefore not contribute further impacts such that an AEoI could be excluded.

4.7.1.3 Indirect effects

In addition to the direct effect of permanent habitat change related to the installation of structures, and cable and scour protection, NE [RR-039] and TWT [REP1-088] indicated that the Applicants should consider potential “halo” effects, which are changes to the physical or biological structures beyond the immediate footprint of the proposed infrastructure. NE also considered that this would represent permanent habitat loss. The Applicants disagreed that such an effect would result in habitat loss in a dynamic environment such as Dogger Bank to such a degree

[82] https://www.gov.uk/government/publications/decommissioning-offshore-renewable-energy-installations

that it would amount to a loss of Annex I habitat[62], and also noted that change would be difficult to determine within the context of the variability of communities on the Dogger Bank, and ongoing recovery following cessation of bottom trawling [REP6-051, Table 2-14] [REP7-128]. The Applicants provided further detail in a technical note [REP7-127], in which they summarised a range of North Sea relevant research on effects close to offshore wind farm structures which inform the potential nature and scale of any halo effect. They indicated that recent evidence suggests that in European scenarios, and in sediments similar to the Dogger Bank, there would be no effect (APEM 2021, 2022, Moray Offshore Wind Farm (East) Limited 2024), or effects would be limited to the immediate vicinity from the foundations (Lefaible *et al.* 2019[83], De Backer *et al.* 2020[84], Breackman *et al.* 2020[85], Li *et al.* 2023[86]) to a distance of <50m. NE agreed that based on current evidence, that 50m was an appropriate buffer to use to assess the potential area of impact [REP6-073]. However, the Applicants continued to argue that there was no definitive evidence for such an effect, and not at a scale of 50m. The Applicants did note that at most, there could be a change in habitat but that any change would still be Annex I sandbank [REP7-127], however, NE considered this to point towards a change in habitat that would take the site further from achieving its conservation objectives [REP4-127].

NE acknowledged that any halo effects around cable protection would likely be less than 50m [REP8-052, REP9-029], and provided an indicative figure of 20m for the Applicants to explore but clarified in response to the Secretary of State's first consultation [C1-012][57], that NE made no recommendation with regards to this figure, and that it was for the Applicants to provide the necessary evidence. NE did recommend, however, that should no further evidence be forthcoming, that monitoring and remediation should be secured. The Secretary of State considers that the Applicants' In-Principle Monitoring Plan [REP7-115] already includes monitoring of impacts relevant to Dogger Bank SAC which would inform the evidence base in relation to a possible halo effect, these include, a programme of benthic sampling and visual monitoring collected using drop down video or remotely operated vehicles. Further monitoring requirements are also included in the Dogger Bank Compensation Plan [REP7-020]. The Secretary of State notes the approach to monitoring will be finalised post-consent in monitoring plans in accordance with the In-Principle Monitoring Plan, in consultation with the SNCBs, which is secured in the DCO.

[83] Lefaible N, Colson L, Braeckman U & Moens T (2019). Evaluation of turbine-related impacts on macrobenthic communities within two offshore wind farms during the operational phase, in: Degraer, S. et al. Environmental impacts of offshore wind farms in the Belgian part of the North Sea: making a decade of monitoring, research and innovation. Memoirs on the Marine Environment: pp. 47-63.

[84] De Backer A, Buyse J & Hostens K (2020). A decade of soft sediment epibenthos and fish monitoring at the Belgian offshore wind farm area. In: Degraer, S. et al. Environmental Impacts of offshore Wind Farms in the Belgian Part of the North Sea: Empirical Evidence inspiring Priority Monitoring. p. 79-113.

[85] Braeckman U, Lefaible N Bruns E & Moens T (2020). Turbine-Related Impacts on Macrobenthic Communities: An Analysis Of Spatial And Temporal Variability. In Degraer, S., Brabant, R., Rumes, B. & Vigin, L. (eds). 2020. Environmental Impacts of Offshore Wind Farms in the Belgian Part of the North Sea: Empirical Evidence Inspiring Priority Monitoring, Research and Management. Series 'Memoirs on the Marine Environment'. Brussels: Royal Belgian Institute of Natural Sciences, OD Natural Environment, Marine Ecology and Management, 131 p.

[86] Li C, Coolen JWP, Scherer L, Mogollón J, Braeckman U, Vanaverbeke J, Tukker A & Steubing B (2023). Offshore Wind Energy and Marine Biodiversity in the North Sea: Life Cycle Impact Assessment for Benthic Communities. *Environmental Science & Technology* **57**: 6,455-6,464.

The Applicants maintain that halo effects should not be considered as significant, but provided[87] a "without prejudice" estimate of their contribution to a range of impact scenarios considered below in relation to seabed abrasion/disturbance and habitat loss. The ExA [ER C.7.77] concluded that ecological halo effects should be recognised as a contributing factor to AEoI from the LSE pathway of habitat change or loss, noting that there appeared to be scope to refine this post-examination, which is documented above.

The Secretary of State has considered the Applicants' position and the evidence they have provided in their technical note [REP7-127], and further evidence including the output of the ORJIP Benthic habitat changes postconstruction of offshore wind (BenCH) project (APEM *et al.* 2025)[88], and the studies of Dannheim *et al.* (2025)[89] and Lefaible *et al.* (2023)[90], along with the representations of NE and its' contention that halo effects contribute to habitat change, and loss, such that they will undermine the conservation objectives of the site. Dannheim *et al.* (2025) reported that the presence of turbine structures in the Belgian, Dutch and German sectors of the southern North Sea resulted in a strong addition of local secondary production through the development of fouling communities[91] on the turbine foundations; production being on average 80 times higher than in the surrounding soft substrates. Production on the turbines was highest at the first metre below sea level and decreased strongly towards the seabed. Biomass loss from the turbines caused by species mortality, predation by higher trophic levels and abrasion/dislodging by wind/waves or under its own weight, was highest at the upper part of the turbines with much of the annual fouling production (71%) transferred from the turbines to the surroundings. Highest biomass export was in winter which may be related to species abrasion/dislodgement by winter storms and associated strong waves. Modelling suggested a production increase around wind turbines up to 250m from the turbines but this was not significant due to scarce data close to the turbines and high variability of the data. Site and turbine-specific factors are also important, as noted by Lefaible *et al.* (2023), who found detectable effects at a wind farm in the Belgian North Sea with jacket-type foundations, and no discernible effects at a wind farm using monopiles, with other contributing factors likely being hydro-meteorological conditions and native infaunal community composition.

On the basis of the evidence, the Secretary of State considers that there is the potential for limited and highly localised habitat change close to the wind farm foundations, but that current evidence is highly variable in terms of the presence of an effect, and its scale, which is linked to site-specific factors, and that in view of the exposed, shallow nature of the Dogger Bank SAC (Klein *et al*. 1999, Diesing *et al*. 2013), any impact is likely to be limited in terms of its scale and

[87] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002481-6.2.3%20Appendix%203%20-%20Project%20Level%20Dogger%20Bank%20Compensation%20Plan%20(Revision%205)%20(Clean).pdf

[88] APEM Group, the National Oceanography Centre (NOC) & Bangor University (2025). ORJIP BenCH: Benthic habitat changes postconstruction of offshore wind. Final Report. 50pp.

[89] Dannheim J, Beermann J, Coolen JWP, Vanaverbeke J, Degraer S, Birchenough SNR, Garcia C, Lacroix G, Fiorentino D, Lindeboom H, Krone R, Pehlke H, Braeckman U, & Brey T (2025). Offshore wind turbines constitute benthic secondary production hotspots on and around constructions. *Journal of Environmental Management* **393**: 126922.

[90] Lefaible N, Braeckman U, Degraer S, Vanaverbeke J & Moens T (2023). A wind of change for soft-sediment infauna within operational offshore windfarms. *Marine Environmental Research* **188**: 106009.

[91] Fouling involves colonisation of a structure by plants and animals with successional growth that may take years to develop, with typically mussels, macroalgae and barnacles near the surface, filter-feeding arthropods at intermediate depths and anemones at the deeper depths (see BEIS (2022) Offshore Energy SEA 4: Environmental Report).

significance. While the Secretary of State accepts that the evidence indicates an impact from the halo effect in relation to the wind farm and platform foundations, he does not consider that it would be an AEoI, as he does not consider it would undermine the conservation objectives of the site. Additionally, he does not consider that there is evidence to indicate the potential for such an effect in relation to cable protection material, as evidence indicates that the most significant source of impact associated with the halo effect is likely from fouling growth at shallower depths in the water column.

NE advised that impacts on sandeel were a contributing factor to AEoI as they are a characteristic part of the communities present. The Applicants undertook an assessment of the area of high potential habitat for sandeel in the Dogger Bank SAC [REP3-057] and concluded that the Project would affect: 0.23% and 0.018% of the medium to high potential habitat for sandeel of the SAC with regard to disturbance and permanent habitat loss respectively, and further noted that such habitat extended beyond the SAC [REP6-049]. NE confirmed a satisfactory assessment had been provided [REP9-031], which the ExA noted, as well as considering that impacts on sandeel spawning habitat would not contribute to AEoI (C.7.114). The Secretary of State agrees with the Applicants and the ExA that impacts on sandeel habitat does not lead to AEoI, and further notes that sandeel habitat will be monitored, as secured in the In-Principle Monitoring Plan [REP7-115].

4.7.1.4 Smothering and siltation rate change

NE [RR-039, REP7-152] considered that changes to the wave and tidal energy regime could result from the presence of the wind farm, resulting in changes to sediment bedload transport, seabed morphology and sediment composition. The Applicants undertook physical processes modelling [REP2-018, REP7-035], noting it predicted a less than 1.2% change in tidal regime, which is limited to within 3.5km of the foundations. With regards to changes in wave regime, the Applicants' assessment indicated that during a 1 in 1 year event, changes of 0.01 to 0.02m (<1% of baseline conditions) occur within a zone of influence that extends 60km south and west of the array areas, or, between 0.04 and 0.06m (<1.5% of baseline conditions) occur over a much smaller area extending up to 8km south and 13km west, depending on the prevailing wave direction. The Applicants further noted that changes to bed shear stress would be <3% of the baseline, and considered that this was not significant and that any changes to would occur within the footprint already assessed [REP8-042]. NE maintained its position at the end of the Examination [REP9-031] that it felt there remained uncertainty with regards to long-term implications from changes to bed shear stress. The ExA agreed with the Applicants that both changes to the wave regime and bedload sediment transport would not significantly alter seabed morphology, composition or mobility, and that they would not cause an AEoI. The Secretary of State acknowledges the uncertainty referred to by NE as to the changes over the life of the Project, noting that the predicted scale of impact on the wave and tidal regime, and bedload transport, indicate deviations from prevailing conditions rather than the potential effect over the whole Project life. The Secretary of State has considered the Applicants' evidence, including the predicted scale of change in bed shear stress relative the thresholds for the movement of sediment types found within the site, and also the scale of predicted changes in wave and tidal regime [REP7-035], and has concluded that these would not result in an AEoI.

The Applicants assessed changes to sediment concentrations from construction, operation and maintenance, and decommissioning, in their RIAA[62], and referred to their physical process modelling [REP2-018]. They indicated that in the worst case (trenching activities within the

Offshore Export Cable Corridor) suspended sediment concentrations of up to 5mg/l occur within 1km of disturbance and return to background levels within 5-7km. The Applicants noted that average surface suspended sediment concentrations in the area were typically between 2 and 3mg/l[92], reflecting the distance from the Project to any terrestrial sources of sediment [REP7-035]. The Secretary of State also observes that winter (December and January) average suspended sediment concentrations in the Dogger Bank South are in the range 1.5-3.8, and 1.4-5.3mg/l[92], and that yearly annual anomalies from this mean are often of a similar scale, suggesting the short-term increase in suspended sediments will not be significantly different to that experienced episodically in the project area. The maximum predicted deposition was up to 5cm within and immediately adjacent to the area of trenching, with a maximum change of up to 0.25m occurring in localised hotspots. It was noted that a similar increase may occur during foundation installation, returning to background levels within 5km, and with a deposition thickness of <0.5cm immediately adjacent to the foundation installation area. The Applicants [REP8-042] disputed that changes in suspended sediment concentrations or smothering could contribute to AEoI, and stated that any non-trivial changes in these would occur within the footprint already assessed for abrasion and disturbance. The Secretary of State agrees with the Applicants that any increase in suspended sediments and sediment deposition would be minor and not lead to AEoI for the sandbank feature of the Dogger Bank SAC.

4.7.1.5 Abrasion/ disturbance of the substrate on the surface of the seabed, penetration and/ or disturbance of the substratum below the surface of the seabed, including abrasion

The removal of sediment by dredging and material deposition, was considered in the RIAA[61], with the Applicants proposing that all material dredged would be deposited within the Dogger Bank SAC. At the end of Examination, the Applicants had committed to route selection and micro-siting to minimise the requirement for seabed preparation, which is set out in the Cable Statement [REP6-043, Revision 6[93]]. NE advised that any seabed material dredging (e.g. as part of seabed preparation) should be deposited to the seabed by fall pipe vessel, upstream of its extraction location, and NE and the MMO indicated deposition should be onto the same sediment type. The Applicants committed to deposition on like for like sediment and also to the preparation of a plan as an appendix to the final Cable Statement, should sandwave levelling be required [REP9-009], however, they indicated that they were unaware of any fall pipe vessels which could deposit sediment in the way NE suggested, and there remained disagreement on this point at the end of Examination. In response to the Secretary of State's first consultation, the Applicants indicated that following discussion with prospective dredging contractors, that they remain confident that the use of a "fall pipe" to deposit material to the seabed following dredging was not possible, and that while the return of seabed sediment using a Trailing Suction Hopper Dredger was technically feasible by reversing the flow through the draghead, it was regarded as uncommon and with a potentially high risk of failure. The Applicants considered that deposition through the Trailing Suction Hopper Dredger doors would allow for deposition close to the seabed. The Secretary of State has considered the Applicants commitments to deposit material in like for like areas, and the further work completed to understand technical

92 After Cefas (2016). Suspended Sediment Climatologies around the UK. 25pp + appendices.

93 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002514-8.20%20Cable%20Statement%20(Revision%206)%20(Clean).pdf

solutions to depositing material in a manner close to the seabed, and concludes that dredged sediment would not result in an AEoI of the Dogger Bank SAC.

The Applicants indicated that depositing material upstream of the dredge locations could result in additional disturbance to the site, as the material could infill the dredged area prior to works being completed; NE and the Applicants remained in disagreement at the close of Examination. The Applicants responded to the Secretary of State's first consultation with an updated Cable Statement (Version 6)[93] and updated its commitments register (Revision 5)[94] such that deposition upstream is now considered to be secured, as well as deposition, *"…via a discharge pipe, a down pipe or similar…*". In response to the Secretary of State's third consultation, NE suggested a change to the wording in the Applicant's commitment register such that any sediment be, "…[returned to the seabed within the] Dogger Bank SAC as close to the sandwave as practicable whilst within like sediment and 'upstream' [of the direction of net sediment transport]'. The Secretary of State does not consider that this additional wording is necessary in view of the commitments already made in relation to returning any dredged sediment to the seabed, within the site, in like for like sediment, and upstream of the net sediment transport direction. The Secretary of State considers that these commitments effectively mitigate against the deposition of dredged material resulting in an AEoI for the project.

The Applicants and NE disagreed at the end of Examination on the scale, duration and significance of effects resulting from disturbance. The Applicants argued there would be no AEoI noting that seabed disturbance would be limited and temporary, and with rapid recovery, however, NE disagreed and considered that abrasion would contribute to adverse effects.

The Applicants indicate that the biotopes found within the array areas, inter-platform cable corridor and offshore export cable corridor within the Dogger Bank SAC are characteristic of highly disturbed environments, and typically have medium to high recoverability and will recover rapidly from disturbance. It was noted that all the biotopes were stated to have high (full recovery within two years) or medium (full recovery within 2 to 10 years) recovery rates, using the MarESA sensitivity criteria, with the exception of 'piddock' biotopes associated with a small area of the DBS East array area [REP3-021].

The worst-case footprint of activities that may result in abrasion/disturbance of the seabed will be during construction, and is estimated to impact approximately 25km² within DBS East and DBS West array areas combined, representing 0.2% of the area of the Dogger Bank SAC and 0.2% of the medium to high potential habitat for sandeel of the SAC. The Applicants noted that this disturbance would be temporary, and would not be repeated other than in the case of the need for remediation.

NE [RR-039, C27, C49] and TWT [RR-057] [REP1-088] [REP1-041] [REP4-072] disagreed with the Applicants, referencing the HRA for the Round 4 leasing plan, which indicated the recovery timescale could be up to 25 years. NE agreed that plan level conclusions could be superseded by project level assessment where more information is available, however, concluded that the Applicants had not provided sufficient additional detail to warrant a different conclusion [REP4-128]. NE indicated that UXO and jack-up vessel depressions may need to be considered as permanent habitat change or loss unless it could be otherwise evidenced that they would backfill with similar sediment types [RR-039, C21 and C31]. While NE acknowledged there would be

94 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002512-8.6%20Commitments%20Register%20(Revision%205)%20(Clean).pdf

variability in recovery depending on the biotope considered, it indicated full site recovery would take longer and would delay restoration of the SAC. NE [REP4-127] [REP5-055] consistently advised these impacts should be considered as permanent habitat change or loss (rather than temporary disturbance or damage).

The Applicants did not consider that NE had provided evidence for its advice on recovery times, and considered that habitat damage was not adequately assessed in the Round 4 Plan Level HRA. The Applicants presented information to support their conclusion that these effects would be temporary [REP3-021] which incorporated data from seabed surveys relating to meteorological mast removal and UXO disposal, and also included site-specific habitat data on the range of European Nature Information System ("EUNIS") habitat classifications across the wider Dogger Bank South area.

While not accepting that abrasion and disturbance would result in AEoI, the Applicants updated their RIAA [REP7-016] on a "without prejudice" basis, and again post-examination[61] to account for a refined "halo" effect, with five possible scenarios of effect presented:

Scenario 1: Habitat loss from infrastructure only: 1,606,336m^2

Scenario 2: Habitat loss from infrastructure, UXO clearance activities and jack-up footprint: 2,943,656m^2

Scenario 3: Halo Effect (Encompassing Scenario 1 - Habitat Loss from Infrastructure Only): 9,845,241.13m^2

Scenario 4: Disturbance (Encompassing Habitat Loss): 25,018,254m^2

Scenario 5: Halo Effect + Disturbance (Encompassing Habitat Loss): 30,072,390m^2

While the Applicants and NE agreed AEoI could not be discounted, disagreement remained on the scale of the effect at the end of Examination, between the Applicants' position, Scenario 1, and NE's position, which the Secretary of State assumes to be equivalent to Scenario 5 as it encompasses all those elements NE consider contribute to AEoI. The ExA accepted that some habitats may recover after a short period but considers that doubt remains that recovery for some depressions may take longer, given the evidence presented by NE that some at other OWFs have remained for up to 10 years after installation [REP4-127]. Given the extent of potential damage from the installation of up to 200 turbines, all within the SAC, the ExA considered there to be a reasonable chance that recovery would take time, amount to permanent damage, and is supported by the plan level HRA. The ExA [ER C.7.90] therefore concluded that habitat disturbance should be considered as permanent habitat change or loss on a precautionary basis contributing to AEoI. The ExA [ER C.7.90] considered that Scenario 4 would be the most appropriate for the assessment of habitat loss, however, changes to the scenarios listed above mean that the ExA's conclusions are most closely aligned with Scenario 5.

The Secretary of State has considered the Applicants' latest RIAA[61] and their evidence for recovery [REP3-021], along with the representations of NE [REP8-052] and the Round 4 plan level HRA[95]. The Secretary of State notes the naturally comparatively high level at which the Round 4 plan level HRA was undertaken, and considers that the Applicants have provided sufficient additional information on the nature of the seabed within the project area, and its

[95] https://www.marinedataexchange.co.uk/details/TCE-3582/2022-the-crown-estate-2020-offshore-wind-round-4-plan-habitats-regulations-assessment

potential for recovery, such that that a broad conclusion that all disturbance amounts to a permanent change in habitat is not appropriate, particularly across large areas of the proposed project area which include sandy sediments subject to frequent disturbance by waves and tides (Diesing *et al*. 2013) and where the fauna is characterised by species well adapted to frequent disturbance (e.g. typically opportunistic species with short life histories (typically two years or less), rapid maturation and extended reproductive periods) and able to recover rapidly[96]. The Secretary of State accepts that for certain areas, e.g. those which are dominated by coarser sediments or which are characterised by piddocks, recovery could take longer. It is noted that in relation to the piddock habitat, the Applicants have indicated that the DCO includes provision to micro-site to avoid the feature [REP3-021]. The Secretary of State considers that the location of this habitat would be confirmed through the surveys detailed in condition 29 of Schedules 10 and 11, condition 27 of Schedules 12 and 13, and condition 23 of Schedules 14 and 14A to the DCO, and that this would be considered in the relevant construction programme and monitoring plans. With regards to UXO clearance and jack-up footprints, the Secretary of State agrees with the ExA that these may take longer to recover, particularly in areas of coarse sediment, which are located primarily to the west and south of the array area.

The Secretary of State agrees that the Project results in an AEoI of the Dogger Bank SAC, however, he disagrees with the ExA and NE in terms of the scale of the adverse effect identified. It is concluded that the scale of effect should be based on the Applicants' Scenario 2, which incorporates habitat loss from infrastructure, including cable protection, and from UXO clearance activities and jack-up footprints. The scale of impact of the AEoI, is therefore concluded to be 2,943,656m^2 (2.9km^2). The Secretary of State notes that this does not preclude him from determining alternative scales of impact in future decisions if new evidence is presented, or taking into account the specific nature of future projects in question.

4.7.2 Sandbanks which are slightly covered by seawater all the time: in-combination

The Applicants considered a range of other projects that could overlap spatially or temporally in their RIAA[61], including Dogger Bank A, Dogger Bank B, Dogger Bank C, Sofia, and Dogger Bank D. The Applicants considered there to only be the potential for overlap in construction activities with Dogger Bank D, however, as noted in Section 4.1, the Secretary of State considers it to be too early in its consenting process to consider in relation to in-combination effects. The Applicants considered that an AEoI in relation to physical change (to another seabed/sediment type) could not be ruled out, but in keeping with its conclusions for the project alone, did not consider that impacts from abrasion and disturbance would result in AEoI, as these would be temporary. The ExA agreed with the Applicants that there would be an AEoI from in-combination impacts related to physical change (to another seabed type), but disagreed that these could be ruled out for abrasion. The Secretary of State agrees that the Project will result in an AEoI of the Dogger Bank SAC, however, he disagrees with the ExA and NE in terms of the scale of effect of the AEoI based on abrasion impacts, as noted above. The Secretary of State therefore concludes that while an AEoI cannot be ruled out in-combination with other plans and projects for physical change (to another seabed type), it can be ruled out for abrasion/disturbance for the reasons provided above.

[96] https://www.marlin.ac.uk/habitats/detail/154/nephtys_cirrosa_and_bathyporeia_spp_in_infralittoral_sand

4.8 Appropriate Assessment: Southern North Sea (SNS) SAC

The SNS SAC has been recognised as an area with persistent high densities of harbour porpoise (Heinänen & Skov 2015[97]). The SNS SAC covers an area of 36,951km^2, with both winter and summer habitats of importance to harbour porpoise (JNCC 2017). Approximately 27,028km^2 of the site is important in the summer period (183 days from April to September inclusive) and 12,696km^2 of the site is important in the winter period (182 days from October to March inclusive). The majority of the site is less than 40m in depth, reaching up to 75m in the northernmost areas. The array areas of the proposed project are located within the summer area of the SAC, and the export cable corridor is located within 18km of the winter area.

The Applicants undertook site specific surveys, which indicated no particular spatial preference, but did show a seasonal pattern of abundance, with higher numbers in the summer months. The summer average density within the array areas was estimated to be 0.6 animals/km^2 in the East array area, and 0.662 animals/km^2 in the West array area, which were used to inform the assessment. The SNS SAC is located within the North Sea harbour porpoise Management Unit (MU), which the Inter-Agency Marine Mammal Working Group ("IAMMWG") (2023)[98] estimated to have a population of 346,601 (CV = 0.09; 95% CLs = 289,498-419,967), which is the reference population used in the Applicants' assessment. The SNS SAC therefore supports an estimated 17.5% of the UK North Sea MU population.

The conservation objectives are to ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for harbour porpoise in UK waters. In the context of natural change, this will be achieved by ensuring that:

- Harbour porpoise is a viable component of the site.
- There is no significant disturbance of the species.
- The condition of supporting habitats and processes, and the availability of prey is maintained.

With regards to disturbance, the current SNCB guidance[99] is to consider the noise disturbance within an SAC from a plan/project individually or in-combination is significant if it excludes harbour porpoises from more than:

- 20% of the relevant area of the site in any given day, and,
- an average of 10% of the relevant area of the site over a season[100].

[97] Heinänen S & Skov H (2015). The identification of discrete and persistent areas of relatively high harbour porpoise density in the wider UK marine area. JNCC Report No. 544, Joint Nature Conservation Committee, Peterborough, UK, 108pp.
[98] https://jncc.gov.uk/resources/b48b8332-349f-4358-b080-b4506384f4f7

[99] JNCC (2020). Guidance for assessing the significance of noise disturbance against Conservation Objectives of harbour porpoise SACs (England, Wales & Northern Ireland). JNCC Report No. 654, 14pp.
[100] Summer defined as April to September inclusive, winter as October to March inclusive.

A LSE was identified for the harbour porpoise feature of the SNS SAC (Table 1) for physical or auditory injury and behavioural impacts, including barrier effects, resulting from underwater noise, physical disturbance from vessels, and changes to prey availability.

4.8.1 Harbour porpoise: alone

The Applicants considered a worst-case scenario that all of the wind farm foundations would be piled, and undertook underwater noise propagation modelling at four representative locations to cover the extent of the proposed Project, including the deepest water location where piling tends to produce the greatest propagation. To determine the potential for permanent auditory injury (PTS) the soft-start, hammer energy profile, total active piling duration, and strike rate were taken into account, and it was assumed that all piles would require 100% hammer energy, which is unlikely. The assessment was informed by thresholds of effect as noted in Southall *et al.* (2019).

The Applicant's assessment of the maximum number of harbour porpoise that could be at risk of instantaneous PTS, due to the cumulative exposure to a sequential piling event for both monopiles and jacket pin piles across both array areas, was between 792 (0.23% of the MU population) and 942 (0.266% of the MU population) [REP5-009]. The Applicants have committed to implementing mitigation to ensure that the potential PTS effects would be fully mitigated by using noise reduction methods through primary design and secondary measures such as NAS, and set out evidence of the scale of noise reduction that could be achieved [REP8-037]. The Applicants indicated that assuming a -10dB reduction in noise levels, that the impact area for potential PTS for harbour porpoise decreased from 1,400km^2, to 180km^2. The mitigation will be developed in the MMMP [REP7-117], secured through the DMLs, and are additionally presented in the In-Principle Site Integrity Plan for the SNS SAC [REP7-119]. Both the PEMP and Site Integrity Plan ("SIP") would be finalised in consultation with the MMO and SNCBs prior to any piling taking place. This mitigation, along with the low level of impact at the MU population level, was such that the Applicants concluded there would be no AEoI on the SNS SAC in relation to auditory injury on harbour porpoise (PTS). NE agreed [RE9-031] that an AEoI could be ruled out due to the mitigation commitments made by the Applicants [REP9-031].

With regards to disturbance from underwater noise, as there are no agreed criteria or thresholds for disturbance, the advice from the SNCBs at the time of Examination was that an EDR of 26km around piling locations for monopiles (without noise abatement), and 15km for pin piles (with and without noise abatement) should be used to determine the area that harbour porpoise may be disturbed from a relevant SAC. The Applicants noted that not all harbour porpoise would be disturbed within the EDR, nor would the EDR necessarily encompass the entire area of potential disturbance, but also referenced evidence (Benhemma-Le Gall *et al.* 2023)[101] which suggests that smaller EDRs for monopiles could be justified. The Applicants noted that for two simultaneous piling events (based on the worst case density) the potential impact for the 26km EDR for monopiles is 0.81% (2,803.3) of the MU population, and 15.71% of the SNS SAC summer area. For the 15km EDR for jacket pin piles the potential impact is 0.27% of the reference population and 5.23% of the SNS SAC summer area. The Applicants noted that this does not assume any overlap between disturbance areas from the piling events and is therefore precautionary. Considering a dose response approach for pile driving noise only, 2.7% (9,393.2) of the MU population, and 15.72% of the SNS SAC summer area were assessed to be affected.

[101]Benhemma-Le Gall A, Thompson P, Merchant N & Graham I (2023). Vessel noise prior to pile driving at offshore windfarm sites deters harbour porpoises from potential injury zones. *Environmental Impact Assessment Review* **103**: 107271; doi.org/10.1016/j.eiar.2023.107271.

The Secretary of State notes that this represents less than 20% of the summer area, which is less than the daily threshold limits for significance noted above in relation to the conservation objectives, and that the In-Principle SIP indicates that for each array area of the project, the seasonal effect on the site alone, is 2.11%.

The Applicants undertook population modelling using iPCoD on the basis that the installation of monopiles would occur sequentially over four years at the array areas, which they considered a worst case as it results in the most disturbance days. The modelling indicated that there was a less than 1% average annual decline over the first six years after first disturbance and less than 1% over the 25-year period modelled, such that effects are were not considered to be significant.

JNCC published updated EDRs for assessing the significance of noise disturbance in harbour porpoise SACs in September 2025[102], which was too late to be considered in the Examination. They indicate a reduced EDR for monopiles without noise abatement from 26km to 20km, and an increase EDR for pin-piles from 15km to 20km, and in both cases, a reduction to 11km with the application of >10bD noise abatement. While the Applicants were not able to consider this evidence, based on their worst case assessment (26km EDR for unabated monopile installation), it is considered that sufficient information is available to make a decision in relation to AEoI.

The Applicants considered the potential for impacts to prey resources from: underwater noise, habitat loss and temporary effects (e.g. disturbance, elevated suspended sediment concentrations and deposition), EMF and, changes in fishing activity. This included reference to their assessment on fish and shellfish ecology [REP7-042] and sandeel habitat within Dogger Bank SAC and the SNS SAC [APP-050]. They concluded that the loss of habitat would be small relative to the wider available area of habitat and prey resource (also see the Applicants' technical note on effects on prey species [REP6-049]), and/or the effects were not significant. While NE initially indicated that it was not satisfied that an AEoI could be excluded due to a lack of consideration of indirect effects on prey species from permanent spawning habitat loss, they later considered that the risk from impacts on prey alone was not sufficient to drive a conclusion that AEoI could not be excluded [REP7-152].

The Secretary of State notes the concern raised by NE [REP9-030] that the wind turbine generators assessed in the Underwater Noise Modelling Report [AS-138] to inform the operational noise modelling were considerably smaller (0.2-6.15 MW) than those proposed to be used (15-26.5 MW) as no empirical data is available for turbines of the larger size. NE advocated for underwater noise monitoring during the operational phase of the Proposed Project to validate the predicted impacts of the ES, in particular noise and disturbance impacts on marine mammals. In line with paragraph 5.8.85 of National Policy Statement EN-3, the Secretary of State requested that the Applicant updated the In-Principle Monitoring Plan to incorporate underwater noise monitoring within the first information request dated 6 December 2025.

On 19 December 2025 the Applicant responded to this issue and set out their reasoning as to why the IPIMP had not been updated as requested. The Applicant provided additional evidence that the approach taken to the underwater noise modelling was precautionary, emphasising that the empirical data and the Tougaard *et al*. (2020)[103] study to derive the calculation was all that was available at the time of the assessment. This method has also been applied in other recently

[102] https://jncc.gov.uk/resources/2e60a9a0-4366-4971-9327-2bc409e09784#jncc-report-803.pdf
[103] Tougaard, J., Hermannsen, L., Madsen, P.T. (2020) How loud is the underwater noise from operating offshore wind? J. Acoust. Soc. Am. 148(5):2885–289

consented, or soon to be determined, offshore windfarms. The Applicant cited two further studies; Holme *et al*. (2024)[104] and Bellmann *et al*. (2023)[105], which covered underwater noise during the operational phase and came to similar conclusions, noting that the linear increase in underwater noise with turbine size may be overestimated, by 8dB. The studies inferred that this correlation may be weaker than initially thought due to advances in turbine technology, and a move from gearbox to modern direct drive (gearboxless) designs, which are generally quieter.

The Applicant argued that there is a lack of evidence to suggest that underwater noise increases with turbine size, and that recent studies validate the precautionary element of their assessment, which resulted in minor adverse effects as a result of underwater noise. The Secretary of State is reassured by the further information provided by the Applicant in this instance, and although he notes the evidence gap in relation to larger turbines, he is content that the Applicant has undertaken a precautionary assessment with the latest information available, and that knowledge gathering on this subject may be better placed within a strategic, industry wide approach rather than at the individual project level.

The Secretary of State notes that at the end of the Examination, NE agreed that an AEoI could be ruled out for the SNS SAC, and that the ExA agreed with this conclusion. The Secretary of State agrees with the Applicants, NE and the ExA, and that mitigation has been secured to ensure that AEoI will not result from the proposed project alone for the harbour porpoise feature of the SNS SAC. As noted in Section 4.1, the Secretary of State notes the issue of indirect effects in relation to prey species, and has therefore included wording in the relevant DMLs to include reference to indirect effects monitoring.

4.8.2 Harbour porpoise: in-combination

The Applicants approach to the in-combination assessments for the disturbance of harbour porpoise used the recommended EDRs for activities that could generate underwater noise, which are those that have a high likelihood of occurring at the same time as piling activity associated with the proposed project, however, it is noted that the in-combination assessment would be reviewed and updated for the SIP, and when there is better understanding of the scheduling for the proposed project and other relevant projects. The in-combination effect assessment considered OWFs within, or within 26km of, the summer area of the SAC, based on the worst case unabated noise production. Additionally, up to one geophysical survey, two seismic surveys and two UXO clearance events (one high order and one low order, or high order with abatement). The output of the in-combination effects assessment was that up to 55.3% of the summer area of the SNS SAC would be affected, or 35.2% on a seasonal basis. These significantly exceed the thresholds associated with daily or seasonally significant effects for the site, however, mitigation measures are outlined in the oMMMP [REP7-117] and in the in-principle SIP [REP7-119], such that the Applicants have indicated that there would be no AEoI for the harbour porpoise feature of the SNS SAC from the proposed project in-combination with other plans and projects.

[104] Holme, C.T., Simurda, M., Gerlach, S. & Bellmann, M.A. (2024). Relationship between underwater noise and operating offshore wind turbines. In: Popper, A.N., Sisneros, J.A., Hawkins, A.D., Thomsen, F. (eds) The Effects of Noise on Aquatic Life. Springer, Cham. https://doi.org/10.1007/978-3-031-50256-9_66

[105] Bellmann MA, Müller T, Scheiblich K & Betke K (2023) Experience report on operational noise - Cross-project evaluation and assessment of underwater noise measurements from the operational phase of offshore wind farms, itap report no. 3926, funded by the German Federal Maritime and Hydrographic Agency, funding no. 10054419

The Secretary of State notes that at the end of the Examination, NE agreed that an AEoI could be ruled out for the SNS SAC in-combination with other plans or projects, and that the ExA agreed with this conclusion. The Secretary of State notes that the SIP will be finalised post-consent to provide a robust understanding of the Project's in-combination effects, and that this will also allow the Applicants to reconsider the EDRs used based on those more recently published in September 2025. He is also reassured that PTS will be fully mitigated, and that the mitigation will also result in significantly smaller area of disturbance. The Secretary of State therefore agrees with the Applicants, NE and the ExA, that the mitigation, which has been secured, ensures that AEoI will not result for the SNS SAC from the proposed project in-combination with other plans or projects.

4.9 Appropriate Assessment: Moray Firth SAC

The Moray Firth SAC in north-east Scotland supports the only known resident population of bottlenose dolphin in the North Sea. The Moray Firth is approximately 487km from the proposed project at its closest point. Individuals are present all year round within the Moray Firth SAC with over 50% of the east coast population utilising the area (Arso Civil *et al.* 2019)[106]. The population generally maintain a coastal distribution which extends south to the Firth of Forth (Hague *et al.* 2020)[107], though individuals have been sighted along the north east coast of England. The population estimate for the Moray Firth SAC is 224 individuals (Coefficient of Variation (CV) = 0.02; 95% Confidence Interval (CI) = 214-234) (Arso Civil *et al.* 2019; IAMMWG, 2023).

The conservation objectives[108] for the Moray Firth SAC are:

- To ensure that the qualifying features of Moray Firth SAC are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.
- To ensure that the integrity of Moray Firth SAC is maintained or restored in the context of environmental changes by meeting the following objectives:
    - The population of bottlenose dolphin is a viable component of the site.
    - The distribution of bottlenose dolphin throughout the site is maintained by avoiding significant disturbance.
    - The supporting habitats and processes relevant to bottlenose dolphin and the availability of prey for bottlenose dolphin are maintained.

[106] Arso Civil M, Quick NJ, Cheney B, Pirotta E, Thompson PM & Hammond PS (2019). Changing distribution of the east coast of Scotland bottlenose dolphin population and the challenges of area-based management. *Aquatic Conservation: Marine and Freshwater Ecosystems* **29**: 178-196.

[107] Hague EL, Sinclair RR & Sparling CE (2020). Regional baselines for marine mammal knowledge across the North Sea and Atlantic areas of Scottish waters. *Scottish Marine and Freshwater Series* **11(12)**. Marine Scotland Science, Aberdeen, 305pp.

[108] https://www.nature.scot/sites/default/files/special-area-conservation/8327/conservation-and-management-advice.pdf

A LSE was identified for the bottlenose dolphin feature of the Moray Firth SAC (Table 1), for injury, behavioural impacts and barrier effects from underwater noise, and vessel collision risk.

4.9.1 Bottlenose dolphin: alone and in-combination

No bottlenose dolphins were sighted in the site specific digital aerial surveys undertaken in 2021 and 2022. The density estimate from SCANS-IV survey block NS-C (0.0419 animals/km^2) was used in the Applicants assessment. The Applicants did not consider the potential for PTS from piling during construction due to the coastal nature of the sensitivity, and the distance of the array area offshore. Auditory injury (PTS/Temporary Threshold Shift, "TTS") and disturbance was considered for other construction activities which could occur closer to shore, such as for export cable installation. Site specific underwater noise modelling was undertaken to estimate the noise levels and determine the potential effects ranges for bottlenose dolphin from dredging, trenching, cable laying and rock placement, which indicated that animals would need to be within 100m of a continuous noise source for 24 hours to be exposed to noise levels that could induce PTS or TTS. The maximum number of individuals estimated to be at risk of injury was 0.005 (0.002% of the SAC population). It was estimated that up to 8.4 individuals (3.74% of the population) could be disturbed by nearshore activities taking place at the same time (cable laying, trenching, rock placement, dredging), or 6.3 individuals (2.82%) from the presence of up to three vessels. The Applicants noted that vessel best practice measures would be used to reduce the potential for disturbance, including the use of established routes and minimising movements, which are secured through the PEMP and in DML conditions. The Applicants concluded that such a scale of effect was such that there would be no adverse effect on the integrity of the Moray Firth SAC from auditory injury and disturbance, and related barrier effects.

The Applicants considered the potential rate of vessel collision risk based on information from strandings data and UK vessel movements, along with the number of vessel movements associated with construction within the cable corridor. The Applicants estimated that there would be no increase in collision risk from the project, and also referred to the mitigation that would be in place to reduce marine mammal disturbance. The Applicants, therefore, concluded that there would be no adverse effect on the integrity of the Moray Firth SAC due to potential collision risk.

The ExA noted that NatureScot did not engage with the Examination (C.1.7), however, was satisfied that on the basis of the information provided, an AEoI of the Moray Firth SAC can be excluded, alone and in-combination. NE [REP9-030] considered that the Applicants' characterisation of bottlenose dolphin baseline distribution relied on the assumption that their distribution along the northeast English coast was the same as in Scotland, and that this was a significant assumption as it directly affected the prediction of the number of animals potentially affected. The Secretary of State notes the sources of information used by the Applicants to characterise the potential density of animals relevant to the Project, which included site-specific surveys, and results from the latest SCANS survey[62]. The Secretary of State notes that NE recommended that post-consent monitoring should be used by the Applicants, and the ExA [ER 5.8.77] considered that the need for written approval of the IPMP by the MMO, in consultation with the relevant SNCB, provides oversight over the monitoring that would be undertaken. The Secretary of State agrees that based on the low number of expected animals and vessel movements, their temporary nature and noting the proposed mitigation which has been secured in the DMLs, that there would be no AEoI of the Moray Firth SAC, from underwater noise related injury, disturbance or barrier effects, or from collision risk.

4.10 Appropriate Assessment: Greater Wash SPA

The Greater Wash SPA is located off the east coast of England, and its boundary stretches from Bridlington Bay in the north to the existing boundary of the Outer Thames Estuary SPA in the south. The Greater Wash SPA was designated in 2018 to protect important areas of sea used by waterbirds during the non-breeding period, and for foraging in the breeding season. This site is designated for three non-breeding species: red-throated diver, little gull and common scoter. The SPA provides important habitat for these species including shallow sandbanks and other sandy substrates. This site is also designated for three breeding tern species: sandwich tern, little tern and common tern. During the breeding season populations of all three of these tern species forage within the Greater Wash SPA.

The conservation objectives[109] are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the populations of each of the qualifying features
- the distribution of qualifying features within the site

A LSE was identified for the over-wintering red-throated diver and common scoter features of the site (Table 1).

4.10.1 Red-throated diver: alone and in-combination

The export cable route will pass through the northern most end of the Greater Wash SPA, therefore the presence of vessels undertaking the installation of the export cable could result in the direct disturbance and displacement of red-throated diver [REP6-008]. The SACO for the site indicates a target to maintain the size of the non-breeding population at a level which is above 1,407, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent, and to reduce the frequency, duration and / or intensity of disturbance affecting birds. The Applicants' assessment concluded that a maximum of 0.4 individuals would be expected to die as a result of disturbance related to cable installation, assuming that activities took place over two non-breeding seasons [REP6-008]. The Applicants noted that during operation, vessels would travel within designated shipping lanes, and be subject to best practice guidance on minimising disturbance to red-throated divers, a commitment which will be developed for the final PEMP, secured in conditions within the DMLs.

NE agreed with the Applicants that with the mitigation in place, displacement impacts on red-throated diver during construction, operation and maintenance from the Project would not adversely affect the integrity of the Greater Wash SPA, and there would be no measurable

[109] https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK9020329

contribution to in-combination effects on red-throated diver at the Greater Wash SPA [REP8-053].

The ExA concluded that AEoI from the Project could be excluded, both alone and in-combination with other plans or projects as a result of disturbance/displacement and barrier effects, provided that the proposed mitigation measures in the PEMP were adhered to (C.10.106). The Secretary of State agrees with the ExA that the Applicants' assessment and proposed mitigation support a conclusion of no AEoI on the red-throated diver feature of the Greater Wash SPA, alone and in-combination with other plans or projects.

4.10.2 Common scoter: alone and in-combination

The export cable route will pass through the northern most end of the Greater Wash SPA, therefore the presence of vessels undertaking the installation of the export cable could result in the direct disturbance and displacement of common scoter [REP6-008]. The Applicants noted that the data underlying the distribution of scoter within the Greater Wash SPA at the time of designation indicates a very low density of birds in the area where the export cable will cross the site. The Applicants considered that the risk of mortality during construction for the project alone and in-combination, was negligible to zero, and that the adoption of best practice in relation to red-throated diver for operational vessel movements (see above) was such that there would be no AEoI. This conclusion was not disputed by NE, and the ExA agreed that AEoI could be ruled out for common scoter alone and in-combination with other plans or projects. The Secretary of State agrees with the Applicants and the ExA, and considers that the potential for displacement and mortality of common scoter is sufficiently low, and the added benefits from the mitigation adopted for red-throated diver secured through the PEMP and DMLs, are such that there will be no AEoI for the Greater Wash SPA in relation to impacts on common scoter.

4.11 Appropriate Assessment: Flamborough and Filey Coast (FFC) SPA

The Flamborough and Filey Coast SPA straddles the border of East Yorkshire and North Yorkshire at the western coast of the North Sea. It has two sections - Flamborough to the south, and Filey to the north - both encompassing clifftop, sea cliff and intertidal rock habitats and offshore to 2km. It extends inland in the sections running from Cunstone Nab in the north to Carr Naze at the corner of Filey Brigg, then from the south of Filey Bay at Reighton to its southernmost point at Sewerby Steps. The expanse of Filey Bay divides these two inland sections, but is not included in the designation.

The site is highly protected both for its wildlife and unique chalk cliff habitats and the numerous ledges, crevices and caves provide ideal nesting and roosting sites for seabirds, supporting a colony of national and international importance, currently the largest mainland seabird colony in England. The SPA supports the only mainland gannetry in England, the largest kittiwake colony in the UK and the largest guillemot and razorbill colonies in England. The colonies are situated along the cliffs on the southern and northern sides of Filey Bay and the north and south sides of Flamborough Head. They support over 200,000 seabirds during the breeding season, many of which are extremely limited in breeding range throughout the UK. In addition to providing nest sites, the sheer cliffs also act as a deterrent to mammalian predators and provide a focal point for migrating seabirds.

The waters adjacent to the colonies are used by large numbers of seabirds for a wide range of activities, including bathing, preening, displaying, loafing and local foraging.

The conservation objectives[110] are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the populations of each of the qualifying features
- the distribution of qualifying features within the site

A LSE was identified for the breeding gannet, kittiwake, guillemot and razorbill features of the site, as well as the puffin feature of the breeding seabird assemblage [REP6-008] (Table 1). The ExA queried why the RIAA had only assessed the puffin feature of the seabird assemblage [PD-016]. The Applicants considered this a technical point as all the other features of the assemblage had been screened out of the assessment, and it was challenging to assess the assemblage as a feature in its own right [REP3-027]. RSPB [REP5-065] referred to the target for abundance of the assemblage in the SACO and considered that adverse effects for individual species would contribute to collective undermining the achievement of the abundance target. The ExA [ER C.10.44] was satisfied that the Applicants had adequately assessed impacts on the assemblage through their assessment of impacts on qualifying features and relevant component species of the assemblage. The Secretary of State agrees and takes this approach with regards to his conclusions on the seabird assemblage feature of the FFC SPA below.

4.11.1 Gannet: alone

The SACO[111] for the site includes a target to maintain the breeding population at a level which is above 8,469 breeding pairs (the population at the time of site classification) whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. The Applicants noted that the population of gannet at the site was 15,223 apparently occupied nests in 2023 (Butcher *et al.* 2023)[112], or 13,125 in 2022 (Clarkson *et al.* 2022)[113] which is the closest to the period that the surveys for the project were undertaken. The Applicants noted that the mean maximum foraging range of gannet, plus one standard deviation, is 509.4km (after Woodward *et al.* 2019)[114], such that there was connectivity between the FFC SPA and Dogger

[110] https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK9006101

[111] https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK9006101

[112] Butcher J, Aitken D & O'Hara D (2023). Flamborough and Filey Coast SPA Seabird Monitoring Programme 2023 report. 42pp + appendices.

[113] Clarkson K, Aitken D, Cope R & O'Hara D (2022). Flamborough and Filey Coast SPA seabird colony count 2022. RSPB, 53pp + appendices.

[114] Woodward I, Thaxter CB, Owen E & Cook ASCP (2019). Desk-based revision of seabird foraging ranges used for HRA screening. Report of work carried out by the British Trust for Ornithology on behalf of NIRAS and The Crown Estate. BTO Research Report No. 724, 139pp.

Bank South, but also with Bass Rock which is part of the Forth Islands SPA. They referred to the foraging space partitioning of gannet colonies presented in Wakefield *et al.* (2013)[115], and therefore assumed that all of the gannets recorded in the project area during the breeding season could be breeding adult birds from FFC SPA.

The Applicants [REP6-008] calculated disturbance and displacement mortality during construction, using half of the operational displacement values (30% and 40%) and assumed a 1% mortality. The maximum total combined seasonal construction displacement mortalities apportioned to the SPA were 6.6 (100% adults) during the breeding season, and 0.36 and 0.05 for autumn and spring respectively. Operational displacement mortality was estimated to be 12.48 (100% adults), 0.61 and 0.08 for the breeding, autumn and spring seasons respectively, based on an operational displacement value of 80%, and 1% mortality.

The Applicants undertook collision risk modelling following NE's interim advice note[116], and also followed the advice of NE in choosing to use a single macro-avoidance rate of 70% in their collision risk assessments. The RSPB disagreed with NE's advice on macro-avoidance [REP9-016] and stated that it did not take account of seasonal variation in macro-avoidance and assumed that gannet would have the same reactive flight response as gulls, despite having lower flight manoeuvrability. It also highlighted the potential for habituation to the presence of turbines which results in lower macro-avoidance and an elevated risk of collision. During the Examination, JNCC [REP5-047] supported NE's advice, and indicated it was content with the use of a 70% macro avoidance rate. The ExA considered all the approaches put forward by the IPs on macro-avoidance, and notwithstanding RSPB's concerns, accepted the Applicants' approach, as supported by NE and JNCC, to apply a 70% macro avoidance rate for gannet. The Applicants' mean estimate of collision risk mortality indicated that 8.4 birds could die each year, with the majority of mortality (8.2) taking place in the breeding season.

Combined, these impacts (13.3-21.6 individuals per year) were predicted to result in a change in adult mortality of up to 1%, and therefore the Applicants undertook PVA to consider the impact further. At the maximum annual mortality of 21.6 birds (range 13.3-21.6), the mean Counterfactual Growth Rate ("CGR") was estimated to be 0.9990 and mean Counterfactual Population Size ("CPS") was 0.9701, after 30 years, i.e. a reduction in population growth rate of 0.1%. The Applicants conclude that such an impact would not result in AEoI for gannet as a result of the project alone, which was similarly advised by NE [REP8-053].

The ExA [ER C.10.63] agreed with the Applicants and NE that there would be no AEoI for gannet associated with the FFC SPA, from the proposed project alone. The Secretary of State bases his conclusion on NE's advised rates for displacement (80%) and related mortality (1%), and the use of a 70% macro-avoidance rate in relation to collision risk with 100% adult apportioning, and the impact on the population growth rate of the colony based on the maximum annual predicted annual mortality. The Secretary of State agrees with the ExA [ER C.10.63], and the conclusions of the Applicants and NE [REP8-053], and where relevant, JNCC [REP5-047], and therefore

[115] Wakefield ED, Bodey TW, Bearhop S, Blackburn J, Colhoun K, Davies R, Dwyer RG, Green JA, Grémillet D, Jackson AL, Jessopp MJ, Kane A, Langston RHW, Lescroël A, Murray S, le Nuz M, Patrick SC, Péron C, Soanes LM, Wanless S, Votier S & Hamer KC (2013). Space partitioning without territoriality in gannets. *Science* **341**: 68-70.

[116] https://data.jncc.gov.uk/data/9aecb87c-80c5-4cfb-9102-39f0228dcc9a/joint-sncb-interim-displacement-advice-note-2022.pdf

concludes that the proposed Project alone would not lead to an AEoI for the gannet feature of FFC SPA from disturbance and displacement, and collision risk.

4.11.2 Gannet: in-combination

The Applicants presented seasonal and annual abundance estimates of gannets, both total values and apportioned to Flamborough and Filey Coast SPA, reported for all OWFs in their in-combination assessment, which totalled between 11,055 and 11,679 birds. Based on operational displacement rates of 60-80%, and a mortality rate of 1%, they estimated that 70-93 birds would die each year, with an associated increase in adult mortality rate of 3.2-4.4%, relative to a background mortality for FFC SPA of 2,126, based on the most recent population estimate of 26,250 birds, and an annual mortality rate of 0.081. In relation to collision risk, the Applicants estimated that between 75 and 79 breeding adults from FFC SPA are at risk, with a further increase in mortality rate of 3.5-3.7%. The combined effect is a mortality of 145-172 birds per year. As the resulting level of mortality was greater than 1%, the Applicants undertook PVA based on these combined figures, which indicated that the population growth rate would be reduced by up to 0.77% per year (mean CGR of 0.9923), resulting in a population size reduction of 21.4% after 30 years (mean CPS 0.7858) [REP6-009] at the upper displacement level of 80%.

As with the consideration of the impact of the project alone, the Applicants used NE's advised rates when considering displacement and collision risk mortality in-combination with other projects. With regards to the impact on colony growth rate, NE [REP8-053] noted that the average growth rate of the breeding gannet population at FFC SPA between 2000 and 2023 was 9.5% per annum, and while it is not known what the growth rate of the colony will be over the next 30 years, a review they conducted in relation to the Hornsea 4 project concluded it would be unlikely to reduce to below 1% per annum for the next 35 years, however, uncertainties in relation to the impacts of HPAI were noted (also see Section 4.1.4). The Secretary of State has considered the impact on annual growth rate of the Project in-combination with other projects (0.77%) relative to the recent growth rate presented by NE (9.5%), and while acknowledging uncertainties in relation to how this growth rate may change over the next 30 years, considers that the impacts will not result in AEoI. This is because they will not undermine the conservation objective relating to site population, and its related target to maintain the breeding population at a level above that of 8,469 pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.

The Secretary of State agrees with the recommendation of the ExA [ER Table C.7], and the conclusions of the Applicants and NE [REP8-053], and therefore concludes that the proposed Project would not lead to an AEoI for the gannet feature of FFC SPA from disturbance and displacement, and collision risk, in-combination with other plans or project.

4.11.3 Kittiwake: alone

The SACO[117] for the site includes a target to maintain the breeding population at a level which is above 83,700 breeding pairs (the population at the time of site classification) whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. The Applicants noted that Clarkson *et al.* (2022) reported the 2022 population was 44,574 apparently occupied nests, or 89,148 breeding adults, while Burnell *et al.* (2023) reported a slightly higher

117 https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK9006101

size of 45,504 apparently occupied nests, 91,008 individuals (that the latter was based on a count from 2017). The Applicants noted that the mean maximum foraging range, plus one standard deviation, is 300.6km (after Woodward *et al.* 2019), such that there was connectivity between the FFC SPA and Dogger Bank South, and it was calculated that the proportion of kittiwake recorded within the array area during the breeding season that could be adult breeding birds from the FFC SPA was 96.6%. The mean annual collision risk mortality was estimated to be 191 birds (184.6, 4.28 and 2.12 in the breeding, autumn and spring seasons respectively), based on 100% of the birds being breeding adults, which would increase the adult mortality rate by 1.47%. NE agreed that the Applicant had applied their advice on collision risk modelling, as outlined in their interim advice, and did not dispute the annual collision risk mortality value of 191 birds, and the related increase in baseline mortality of 1.47% (REP8-053]. The Applicants undertook PVA, which indicated that the mean CGR would be 0.9975, and mean CPS would be 0.9242. The Applicants, NE and RSPB disagreed on the significance of this effect, which would reduce the annual average growth rate by 0.25% from 2.1%. While the Applicants considered there to be no AEoI alone, NE indicated that the most recent colony count in 2022 was 2% less than the preceding count in 2017, and that other impacts including HPAI and indirect effects on sandeel add uncertainty to the long-term status of the kittiwake feature. NE concluded that the level of impact predicted for the Project was likely to negatively affect the conservation objective relating to the population of the site and so concluded that an AEoI could not be ruled out.

The ExA [ER C.10.70] noted that NE [REP8-053] have indicated that the Project would have the largest impact predicted from any OWF to date, the current population relative to the target in the conservation objectives, and the condition of the feature, which was identified to be in unfavourable declining condition [REP3-027]. The ExA considered that the additional mortality from the Project alone could risk undermining the restore conservation objective for kittiwake, and was unable to exclude AEoI from collision mortality for the project alone. Further, the sufficiency of the air gap proposed by the Applicants as embedded mitigation was questioned by NE. The Applicants submitted that increasing the air gap to beyond 34m was not feasible due to the increased consenting, engineering (foundation scale, vessel availability), and financial risks to such an extent as to potentially make the Projects commercially unviable [REP4-081, REP5-036]. The ExA was satisfied that the Applicants' explanations were sufficiently robust and adhered to the mitigation hierarchy, and noted that the air gap of 34m was secured in the DMLs. The Secretary of State agrees with the ExA that the Applicants have applied the mitigation hierarchy to come to a conclusion on the air gap that provides a level of mitigation while not risking the commercial viability of the Project.

The Secretary of State agrees with the ExA's recommendation [ER C.10.73], and therefore concludes that the Project alone would lead to an AEoI for the kittiwake feature of FFC SPA from collision risk. The Secretary of State bases his conclusion on NE's advised approach to collision risk modelling [REP8-053], and therefore considers that the scale of impact of the AEoI for the Project alone is 191 birds per year.

4.11.4 Kittiwake: in-combination

The Applicants' indicated that they considered collision impact would not result in AEoI for kittiwake in-combination with other plans and projects, however, they conceded that previous decisions for wind farms by the Secretary of State and also The Crown Estate in relation to Round 4 leasing, concluded that AEoI would occur [REP6-009]. The Applicants therefore concluded that an AEoI would occur, estimating that collision risk mortality was 461 adult birds

if other compensated projects were excluded, and 591 adult birds, if other compensated projects were included. PVA was undertaken which indicated a mean CGR of 0.9939-0.9921, and mean CPS of 0.8266-0.7831 after 30 years, for 461 and 591 birds respectively. NE indicated that both scenarios suggested that the population could decline from current levels [REP8-053]. The RSPB also agreed there would be an AEoI on kittiwake from in-combination effects [AS-183].

The ExA saw no reason to disagree with the Applicants' conclusion of an AEoI of the FFC SPA kittiwake from in-combination collision mortality. The Secretary of State agrees with the ExA, and also the conclusions of the Applicants and relevant IPs, that the proposed project will result in an AEoI for the kittiwake feature of the FFC SPA from collision risk mortality, in-combination with other plans or project.

The Secretary of State has set out his consideration in relation to imperative reasons of overriding public interest (IROPI) and compensatory measures for the kittiwake feature of the FFC SPA in Sections 8 and 9.

4.11.5 Guillemot: alone

The SACO[118] for the site includes a target to maintain the breeding population at a level which is above 41,607 breeding pairs (the population at the time of site classification) whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. The most recent published count was of 111,925 individuals in 2023 (Clarkson *et al.* 2023), which once adjusted using standard approaches gives 74,989 apparently occupied nests (or 149,978 breeding adults). The Applicants noted that the mean maximum foraging range, plus one standard deviation, was 153.7km (after Woodward *et al.* 2019), such that there was connectivity between the FFC SPA and Dogger Bank South, and it was assumed that the proportion of guillemot recorded within the array area during the breeding season were entirely attributed to the site.

The Applicants estimated that, based on NE's preferred rates (which are used to inform this HRA as set out in Section 4.1.1 above) of 70% displacement and 2% mortality rates, and that 100% of the birds impacted are adults, that 456 individuals would die per year, which would increase the mortality rate for the FFC SPA, estimated at 9,149 adults per annum, by 4.9% [REP6-008]. This increase in mortality results in a mean CGR of 0.9966, and a mean CPS or 0.8999, after 30 years, against a baseline annual average growth rate of 3.6%. NE confirmed it was satisfied with the assessment provided by the Applicants, and that adverse effects would not result from displacement impacts from the Project alone [REP8-053]. The RSPB, however, disagreed, advising that after a period of 30 years the SPA population was expected to be between 58.8% and 96.3% of what it would have been in the absence of the development. The ExA did not consider that the RSPB had provided sufficient evidence to refute the conclusion of the Applicants, or NE's position which supported a conclusion of no AEoI from the Project alone.

The Secretary of State agrees with the conclusion of NE and the ExA, that an AEoI can be ruled out based on the outcome of the population modelling relating to the displacement mortality impacts from the Project alone, and that the impacts would not undermine the conservation objective to maintain the size of the breeding population.

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4.11.6 Guillemot: in-combination

The Applicants' conclusion of AEoI on guillemot (breeding) due to in-combination disturbance and displacement was not disputed during the Examination, with NE [REP8-053] and RSPB [REP5-065] both supporting such a conclusion. The ExA concluded that NE's preferred figures for annual in-combination displacement mortality should be used, which are based on displacement and mortality rates of 70% and 2% respectively. This results in an annual guillemot mortality of 1,079 individuals excluding projects for which compensation has been established [REP6-008], or 2,219 including compensated projects, and the assumption that for Hornsea Project Four, mortality rates are at 5% [REP6-008, REP8-053]. Such an impact was estimated to result in an increase in baseline mortality of 11.8% using 2022 count data, a reduction in population growth rate of 0.8% (mean CGR of 0.992), and a reduced population size after 30 years of up to 22.1% (CPS of 0.7786), for a mortality of 1,079 [REP6-008], which excludes projects which are already compensated for. NE [REP8-053] ran PVA for the mortality including compensated projects (2,219 individuals), which resulted in an increase in baseline mortality of 24.25%, a reduction in growth rate of 1.7% (mean CGR of 0.983), and a reduced population after 30 years of 40.4% (CPS of 0.596). NE [REP8-053] noted an average annual population growth of 3.8% for guillemot at FFC SPA, however, also noted recent declines in productivity, and considered an AEoI could not be ruled out for in-combination impacts.

The Secretary of State agrees with the ExA [ER C.10.84] and other interested parties, that displacement mortality will result in an AEoI for the guillemot feature of the FFC SPA in-combination with other projects, and that the displacement and mortality rates of 70% and 2% respectively are those which should be applied (as noted in Section 4.1.1). The scale of impact of the AEoI is 456 breeding birds per year.

The Secretary of State has set out his consideration in relation to IROPI and compensatory measures for the guillemot feature of the FFC SPA in Sections 8 and 9.

4.11.7 Razorbill: alone

The SACO[119] for the site includes a target to maintain the breeding population at a level which is above 10,570 breeding pairs (the population at the time of site classification) whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. NE advised during Examination [RR-039] that a population of 61,345 individual adults should be used. The Applicants noted that the mean maximum foraging range, plus one standard deviation was 164.6km (after Woodward *et al.* 2019), such that there was connectivity between the FFC SPA and Dogger Bank South, and it was assumed that the proportion of razorbill recorded within the array area during the breeding season were entirely attributed to the site, and 69.93% in the post-breeding period, as per NE advice [RR-039].

The Applicants indicated an annual baseline mortality of razorbill from FFC SPA of 6,441, based on the most recent colony count data and a mortality rate of 0.105 (Horswill & Robinson 2015). They noted that during operation, mortalities from disturbance and displacement assuming 70% displacement and 2% mortality [based on NE's advice; RR-039] were 125.1 (61.2% adults) or 140.4 (100% adults) per annum which would result in a predicted increase in adult mortality of 1.94% to 2.18%. The results of PVA indicated a reduction in population growth rate of 0.26%

119 https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK9006101

(CGR 0.9974) and a reduction in the size of the population of 7.79% (CPS 0.9221), after 30 years. The Applicants concluded that predicted razorbill mortality due to construction and operational phase disturbance and displacement impacts at Dogger Bank South alone would not adversely affect the integrity of the FFC SPA.

The ExA was content that all parties (including NE, RR-039]) agreed that an AEoI on razorbill of the FFC SPA could be excluded as a result of the Project alone (C.10.94) and agreed with this conclusion. The Secretary of State agrees that AEoI can be excluded based on the level of estimated mortality and the related impact on the population.

4.11.8 Razorbill: in-combination

The Applicants presented in-combination mortality totals at their preferred rates of displacement and mortality or 50% and 1% respectively, and NE's preferred rates of 70% and 2%. While figures for projects including and excluding compensation were presented, NE noted that no project had yet been consented with a conclusion of AEoI for the razorbill feature of FFC SPA, and further noted that for Hornsea Project Four, a 70% displacement and 5% mortality was used [AS-159]. The ExA agreed with this conclusion, and therefore accepted NE's conclusion that the annual in-combination mortality would be 411 birds. The Applicants considered this value in its RIAA [REP6-008], but concluded that since it was within the upper value of what was considered in their in-combination PVA (70% and 10% alone and in-combination), that they did not consider it specifically further, however, PVA was undertaken at this rate by NE, which indicated reductions in growth rate of 0.8% and population size after 30 years of 21.2%. The Applicants and NE used different growth rates, with the Applicants indicating a growth rate of 8% per annum since 2000, and NE indicating a rate of 6% per annum [REP8-053][120] respectively, and using NE's preferred approach, the growth rate could be reduced to 5.2% per annum.

The Applicants concluded that the Project would not adversely affect the integrity of the razorbill feature FFC SPA in-combination on the basis that the population was assessed to continue to grow, despite differing growth rate assumptions and annual mortality rates from displacement being considered. NE did not agree it was possible to rule out AEoI on the basis that the current growth rate may not be maintained, including due to factors such as impacts from HPAI and climate change, which add further uncertainty to the consideration. The RSPB considered there to be an in-combination AEoI on razorbill [REP5-065] [AS-183] due to the potential effects on population size relative to what it would be in the absence of the Project.

The ExA considered that, while any trend in population growth could not be assumed to continue for 30 years, NE had not provided persuasive evidence that the growth rate was likely to decline to levels below which the most recent colony count could not be maintained. More broadly, however, the ExA did note that it considered HPAI to be a source of uncertainty in the assessment. The Secretary of State notes that the Applicants did not consider density dependence in their PVA, as advised by NE, since there is insufficient data to parameterise this aspect of the model, which also introduces some uncertainty in the level of counterfactual values after 30 years. The Secretary of State, however, notes the consistent positive population growth rate from both historic and recent colony counts (average of 6% annually), the favourable

[120] Note NE did not indicate across which years the growth rate was assumed, however, Clarkson *et al.* (2022) Flamborough & Filey Coast SPA: 2022 seabird colony count and population trends, notes a 6% increase per annum in razorbill since 1969.

condition of the colony, and the recent 2023 Seabird Count (Burnell *et al.* 2023) which showed UK-wide razorbill numbers have increased by 18% since the last population count in 2000.

The Secretary of State agrees with the ExA [ER C.10.96], that while the PVA results indicate a reduction in population growth rate, the estimated impacts would not fall outside natural fluctuations or recent growth rates in the population, such that the conservation objectives of the site would not be undermined, as the size of the breeding population would not fall below 10,570 pairs, whilst avoiding deterioration from its current level (27,967 pairs). As adopted in previous decisions on consented offshore wind farms and as noted in Section 4.1.1), the Secretary of State considers that the values for displacement and mortality used in assessing displacement impacts on razorbill (70% and 2%, respectively) are, at the current time and based on current evidence, suitably precautionary for such an assessment. The Secretary of State, however, notes that this does not preclude the acceptance of alternative parameters in future decisions.

While the Secretary of State acknowledges the conclusion of NE that the projected in-combination impacts on the FFC SPA razorbill population have reached a level where an AEoI cannot be ruled out, he notes that no substantive evidence has been presented by NE to support this conclusion. On the other hand, the Secretary of State notes the consistent positive population growth rate from both historic and recent colony counts[121] (average of 6% annually), the positive condition of the colony, and the recent 2023 Seabird Count (Burnell et al. 2023[122]) which showed UK-wide razorbill numbers have increased by 18% since the last population count in 2000. The Secretary of State also notes that, based upon a 70% displacement rate and 2% mortality rate, the annual reduction in population growth rate would equate to 0.8% (a highly precautionary estimate), which would not fall outside natural fluctuations or reverse the observed growth rates of the population.

The Secretary of State also acknowledges the uncertainty surrounding the adverse impact of future climatic and anthropogenic pressures on UK seabird populations but considers that concluding AEoI solely on this basis, and without substantive evidence, would be inappropriate. Similarly, there remains uncertainty surrounding the future beneficial impact of the removal of anthropogenic pressures, namely the 2024 ban on commercial sandeel fishing in the UK waters of the North Sea. Such uncertain and unquantified future impacts on population growth rates are noted by the Secretary of State, but as no substantive evidence has been provided in relation to the razorbill population in question, the Secretary of State does not consider that the level of in-combination disturbance/displacement mortality currently predicted would hinder the achievement of the conservation objectives and targets presented in the SACOs for the razorbill feature of the FFC SPA.

The Secretary of State concludes that an AEoI on the razorbill feature of the FFC SPA from the Project, in-combination with other plans or projects, can be ruled out beyond reasonable scientific doubt. The Secretary of State notes that this is consistent with his conclusions on other recently consented offshore wind farms. In doing so, however, he notes that this decision does not preclude him from adopting an alternative conclusion in future decisions should new evidence or project-specific considerations arise.

[121] Clarkson K, Aitken D, Cope R & O'Hara D (2022). Flamborough & Filey Coast SPA: 2022 seabird colony count and population trends. RSPB, 53pp + appendices.

[122] https://jncc.gov.uk/our-work/seabirds-count/

4.11.9 Breeding seabird assemblage: alone and in-combination

While the Applicants maintained that there would not be an AEoI of the seabird assemblage of the FFC SPA, NE and RSPB both indicated that they considered an AEoI would result due to the significance of the predicted impacts on a number of component species. As kittiwake and guillemot are component species of the assemblage, for which the ExA was unable to exclude AEoI, the ExA was also unable to exclude AEoI on the assemblage feature, as a result of the proposed project alone and in-combination with other plans or projects [ER C.10.11]. The Secretary of State agrees with this conclusion.

4.12 Appropriate Assessment: Farne Islands SPA

The Farne Islands are a group of low-lying islands situated between 2km and 6km off the coast of Northumberland in northeast England, and 210km from the proposed array areas. The islands are important nesting areas for a range of seabirds, especially terns, gulls and auks. Seabirds breeding at the SPA feed outside it in nearby waters, as well as more distantly in the North Sea.

The Farne Island supports an internationally important assemblage of seabirds, supporting a total of 142,490 individual breeding seabirds. During the breeding season the area regularly supports the assemblage which includes kittiwake, shag, cormorant, Atlantic puffin, guillemot, Arctic tern, common tern, roseate tern, and Sandwich tern.

The conservation objectives[123] are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the populations of each of the qualifying features
- the distribution of qualifying features within the site

A LSE was identified for the breeding kittiwake and guillemot features of the site (Table 1).

4.12.1 Kittiwake (assemblage feature): alone

The Applicants noted that the SPA breeding population at classification was cited as 8,241 pairs or 16,482 breeding adults, for the period 2010 to 2014, and the most recent count was 4,402 apparently occupied nests, or 8,804 breeding adults in 2019. The mean maximum foraging range, plus one standard deviation, for kittiwake is 300.6km (after Woodward *et al.* 2019), such that there is connectivity between the Farne Islands SPA and Dogger Bank South. It was calculated that the proportion of kittiwake recorded within the array area during the breeding season was 2.5%, and the Applicants estimated that the mean annual collision risk mortality for

[123] https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK9006021

the project alone was 4.4 birds, assuming that 100% of these are adults, which would result in a change in adult mortality of 0.34%. The Applicants considered that there would not be an AEoI from the project alone on the kittiwake feature of the Farne Islands SPA, which was not disputed by NE, however, the RSPB indicated it was unable to exclude AEoI for kittiwake [REP1-087]. In the absence of substantiated evidence from the RSPB, the ExA relied on the advice of NE, and concluded that an AEoI would not occur (C.10.15). The Secretary of State similarly concludes that based on the level of predicted impact on adult mortality, an AEoI can be excluded for the kittiwake feature of the Farne Islands SPA from the Project alone.

4.12.2 Kittiwake (assemblage feature): in-combination

The Applicants did not make a detailed assessment of in-combination effects for kittiwake, noting that the there was no measurable increase in mortality for the project alone, and concluded that the project would not result in an AEoI. The RSPB disagreed with this conclusion [AS-183], however, it was not disputed by NE and the ExA recommended that an AEoI for the kittiwake feature of the Farne Islands SPA would not result from collision mortality associated with the Project in-combination with other plans or projects. The Secretary of State has considered the Applicants' RIAA [REP6-008] and the recommendations of the ExA, and similarly concludes that based on the level of predicted impact, an AEoI can be excluded for the kittiwake feature of the Farne Islands SPA from the Project in-combination.

4.12.3 Guillemot: alone

The SPA mean peak breeding population was 32,875 pairs (65,750 breeding adults) for the period 2010 to 2014, and Burnell *et al.* (2023) gave an updated count of 64,042 individuals (32,021 pairs) which was used by the Applicants in their assessment. The SACO[124] for the site has a target to maintain the size of the breeding population at a level which is above 32,875 breeding pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. The Applicants noted that the mean maximum foraging range, plus one standard deviation, was 153.7km (after Woodward *et al.* 2019), such that the array areas of the proposed project were outside of the foraging range for breeding guillemot from the Farne Islands SPA, there was no connectivity between the SPA and the Project during the breeding season.

The Applicants therefore only considered impacts in the nonbreeding season, and 3.7% of the birds in the Project area during this period were considered to be from the Farne Islands SPA. Annual displacement mortality was estimated to be 13 birds based on a 70% disturbance rate and 2% mortality rate, which would result in an increase in background mortality of 0.33%. The Applicants concluded that the predicted guillemot mortality due to construction and operation of the proposed project would not adversely affect the integrity of the Farne Islands SPA. NE and the ExA agreed with this conclusion. The Secretary of State also agrees that based on the low number of bids impacted, and the small change to background mortality, that AEoI can be excluded for the guillemot feature of the Farne Islands SPA for the proposed Project alone.

4.12.4 Guillemot: in-combination

The Applicants did not consider that the impact on the Farne Islands SPA alone was sufficient to warrant an in-combination assessment, however, it nonetheless provided an in-combination

124 https://designatedsites.naturalengland.org.uk/ConservationAdvice/SupplementaryAdvice.aspx?SiteCode=UK9006021

displacement assessment which indicated that there could be mortality of 435 birds at a displacement rate of 70% and a mortality rate of 2%, which suggested a mean CGR of 0.9924 and mean CPS of 0.7895 after 30 years. NE [REP5-058] noted that the 2019 count data used by the Applicants was of 32,021 breeding pairs, which was less than the citation population for which the conservation objective have a target to maintain, and referred to a more recent count of 21,446 pairs in 2024 which has been partly attributed to HPAI (Tremlett *et al*. 2024). NE considered that the predicted level of in-combination effects was likely to negatively affect the conservation objectives such that they could not rule out AEoI on the Farne Islands SPA. The ExA acknowledged the in-combination effect conclusions in relation to Rampion 2, and that, impacts from the Project would form a small percentage of the overall in-combination impact, any further impact could contribute further mortalities and to the deterioration of the breeding population. The ExA, therefore, was unable to exclude AEoI from in-combination displacement effects on the guillemot feature from the Farne Islands SPA (C.10.16).

Whilst the Secretary of State recognises the individual contribution of the Project to the overall in-combination is modest, the current overall in-combination impact from the Project with other plans and projects is already over the threshold considered to be an AEoI on the guillemot feature of the Farne Islands SPA. The Secretary of State therefore agrees with NE and the ExA that an AEoI cannot be excluded from in-combination displacement effects on the guillemot feature from the Farne Islands SPA. The Secretary of State considers that the scale of effect of the AEoI is the mortality of 13 adult breeding birds.

The Secretary of State has set out his consideration in relation to IROPI and compensatory measures for the guillemot feature of the Farne Islands SPA in Sections 8 and 9.

4.13 Other protected sites designated for ornithological features

4.13.1 Coquet Island SPA

Coquet Island is a small uninhabited island which lies less than a mile off the coast of Northumberland, near Amble, in the north east of England. The island is managed by the RSPB and consists of a flat grassy plateau, surrounded by low sandstone cliffs and intertidal boulders and rock.

Coquet Island SPA was first classified in 1985 for its breeding seabirds, several of which occur at nationally important numbers. The SPA is classified for the protection of roseate tern (*Sterna dougallii*), common tern (*Sterna hirundo*), Sandwich tern (*Thalasseus sandvicensis*), Arctic tern (*Sterna paradisaea*) and a breeding seabird assemblage of over 20,000 individuals. The main components of the seabird assemblage includes the features above, and Atlantic puffin (*Fratercula arctica*) and the black-headed gull (*Chroicocephalus ridibundus*). Additional assemblage components include: northern fulmar (*Fulmarus glacialis*), herring gull (*Larus argentatus*), lesser black-backed gull (*Larus fuscus*) and the black-legged kittiwake (*Rissa tridactyla*).

The conservation objectives[125] are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- the extent and distribution of the habitats of the qualifying features
- the structure and function of the habitats of the qualifying features
- the supporting processes on which the habitats of the qualifying features rely
- the populations of each of the qualifying features
- the distribution of qualifying features within the site

A LSE was identified for breeding puffin, a component of the seabird assemblage (Table 1).

4.13.2 Puffin (assemblage feature): alone and in-combination

The Applicants noted that the SPA breeding population at classification was 31,686 breeding adults for the period 2010 to 2014, and the most recent count was 25,029 apparently occupied burrows, or 50,058 breeding adults, in 2019. The Applicants noted that the mean maximum foraging range, plus one standard deviation, is 265.4km (after Woodward *et al.* 2019), such that there was connectivity between the Coquet Island SPA and Dogger Bank South, and it was calculated that the proportion of kittiwake recorded within the array area during the breeding season was 5.3%.

The Applicants calculated that the predicted annual mortality during construction was between 1.88 and 2.86 depending on whether it was assumed that the impact was attributed to 54.3% adults, or 100% adults. The worst-case figure of 2.86 is based on 50% of the operational disturbance (35%) and a conservative mortality rate of 10%. Even at these rates, the predicted change in annual adult mortality is up to 0.06%. Operational impacts were calculated by the at their preferred rate of 50% displacement and 1% mortality, and also at a rate of 70% displacement and 10% mortality, with total annual impacts being 0.4 and 5.61 individuals per year respectively, assuming that all birds are adults. Considering the construction and operational impacts together, the Applicants estimated that the increase in background mortality would be in the range 0.005-0.008% at the lower rates of 50% displacement and 1% mortality, or 0.08-0.12% at the higher rates of 70% displacement and 10% mortality, with 50% of the operational displacement rates used for construction in both cases.

The Applicants concluded that even at the most precautionary rates, the impacts would not result in AEoI. The ExA requested updates from NE on their tabulation of sites for which concerns remained [REP3-057, HRA.1.7], with Coquet Island SPA not featuring in these updated tables [REP3-059], such that NE did not raise concerns that an AEoI could not be excluded. The RSPB indicated that it was not able to reach conclusions as to the significance of effects on Coquet Island SPA, and a range of sites in Scotland (see 4.13.3 below) due to the application of a *de minimis* approach to small scale impacts [REP5-065]. The ExA noted that NE had agreed that there would not be an AEoI for Coquet Island SPA, and the ExA also agreed with the Applicants' conclusion. The Secretary of State has considered the Applicants' RIAA [REP4-016], and the

[125] https://designatedsites.naturalengland.org.uk/ConservationAdvice.aspx?SiteCode=UK9006031

representation of RSPB [REP5-065], particularly with regards to *de minimis* effects. While the Secretary of State agrees that small scale impacts still have the potential to result in significant effects, he does not agree that the scale of effects predicted in relation to the puffin feature of Coquet Island SPA would result in AEoI. Even at the most precautionary predicted mortality rates, the impact on the background mortality rate is so low as to be indistinguishable from natural variability.

4.13.3 Scottish sites

A number of SPAs were assessed by the Applicants as a LSE was identified (Table 1). This included 17 sites in Scotland, which were not specifically discussed during the Examination, and while the ExA sought the views of NatureScot on the Applicants' assessment for these sites, they did not engage in the Examination. The ExA noted that the RSPB could not agree to no AEoI for a number of the Scottish sites due the macro avoidance factor used for gannet (as discussed above in relation to the FFC SPA) and the *de minimis* approach taken to the scale of impacts on the site features by the Project. The ExA, however, agreed with the Applicants that while there were some theoretical impacts on sites at several hundreds of kilometres from the Project based on precautionary approaches to assessment, an AEoI could be ruled out (C.10.108).

The Secretary of State agrees with the ExA, and has summarised his consideration in Table 2 in relation to the following sites.

- St Abbs Head to Fast Castle SPA
- Forth Islands SPA
- Buchan Ness to Collieston Coast SPA
- Calf of Eday SPA
- Copinsay SPA
- East Caithness Cliffs SPA
- Fair Isle SPA
- Foula SPA
- Fowlsheugh SPA
- Hermaness, Saxa Vord and Valla Field SPA
- Hoy SPA
- North Caithness Cliffs SPA
- Noss SPA
- Rousay SPA
- Sumburgh Head SPA
- Troup, Pennan and Lion's Head SPA
- West Westray SPA

4.14 Appropriate Assessment Conclusions

As the competent authority for energy NSIPs as defined under the Planning Act 2008, the Secretary of State has undertaken an AA under Regulation 63 of the Habitats Regulations and Regulation 28 of the Offshore Habitats Regulations. The Secretary of State has undertaken an Appropriate Assessment in respect of the conservation objectives of those relevant sites for which a LSE was identified (Section 3) to determine whether the Project, either alone or in-combination with other plans or projects, will result in an adverse effect on site integrity.

The Secretary of State has considered all of the information available to him, including the advice from the SNCBs, the recommendations of the ExA and the views of Interested Parties, and the Applicants.

The Secretary of State is satisfied that, given the relative scale and magnitude of the identified effects on the qualifying features of the protected sites, and where relevant, the measures in place to avoid or reduce potential adverse effects secured in the DCO and DMLs, there would not be any implications for the achievement of site conservation objectives and therefore adverse effects on site integrity can be excluded for:

- Flamborough Head SAC
- Humber Estuary SAC and Ramsar
- River Derwent SAC
- The Wash and North Norfolk Coast SAC
- Berwickshire and North Northumberland Coast SAC
- Southern North Sea SAC
- Moray Firth SAC
- Greater Wash SPA
- Humber Estuary SPA
- Coquet Island SPA
- St Abbs Head to Fast Castle SPA
- Forth Islands SPA
- Buchan Ness to Collieston Coast SPA
- Calf of Eday SPA
- Copinsay SPA
- East Caithness Cliffs SPA
- Fair Isle SPA
- Foula SPA
- Fowlsheugh SPA
- Hermaness, Saxa Vord and Valla Field SPA
- Hoy SPA
- North Caithness Cliffs SPA
- Noss SPA
- Rousay SPA
- Sumburgh Head SPA
- Troup, Pennan and Lion's Head SPA
- West Westray SPA

However, the Secretary of State concurs with ExA that adverse effects on integrity cannot be ruled out beyond reasonable scientific doubt in relation to:

- Flamborough and Filey Coast SPA: kittiwake alone and in-combination for collision risk mortality, guillemot in-combination for disturbance and displacement mortality, breeding seabird assemblage (alone and in-combination)
- Farne Islands SPA: guillemot in-combination for disturbance and displacement mortality
- Dogger Bank SAC: sandbanks which are slightly covered by seawater all the time: alone and in-combination for physical disturbance and habitat change

The Secretary of State has not identified any further mitigation measures that could reasonably be imposed which would avoid or mitigate the potential AEoI identified and has therefore proceeded to consider the derogation provisions of the Habitats Regulations, as presented in Sections 7 to 10 below.

The Secretary of State concludes that the Project does not meet the integrity test and that the further tests set out in the Habitats Regulations and Offshore Habitats Regulations, must be applied. These include Stage Three (an assessment of alternative solutions), Stage Four (Test for Imperative Reasons of Overriding Public Interest), and Stage Five (a consideration of environmental compensation).

The Secretary of State's consideration of information provided to inform these further tests are presented in Section 7 to 10 alongside his conclusions.

5 Transboundary Assessment

Given the potential for this Project to affect mobile features across a wide geographical area, the Secretary of State is of the view that it is important to consider the potential impacts on protected sites in other European Economic Area ("EEA") states, known as transboundary sites, in further detail[126]. The ExA also considered the implications for these sites, in the context of looking at the wider EIA considerations. The results of the ExA's considerations and the Secretary of State's own views on this matter are presented below.

The Planning Inspectorate undertook a transboundary screening [OD-009] on behalf of the Secretary of State pursuant to Regulation 32 of the 2017 Infrastructure Planning (Environmental Impact Assessment) Regulations and the United Nations Environment Programme Convention on Biological Diversity 1992, which identified a requirement to consult with Germany, Norway and the Netherlands, and to notify, Belgium, Denmark and France. Sweden had previously confirmed that it did not require to be consulted.

Responses were received from Denmark [OD-010], Germany [OD-011] and the Netherlands [OD-012]. The Applicants provided a response to these at [AS-117], with HRA relevant matters limited to impacts on marine mammals. No further correspondence regarding transboundary matters was received by the relevant EEA states or other IPs during the Examination.

A LSE was identified for the Klaverbank SAC (Netherlands) and Doggersbank SAC (Netherlands) for harbour porpoise, harbour seal and grey seal (Table 1). With regards to the seal features of both sites, the Applicants noted conclusions of no AEoI in relation to SNS SAC, Humber Estuary SAC, WNNC SAC and BNNC SAC, which have greater connectivity to the proposed project compared to Klaverbank or Doggersbank SACs. Combined with the distance between the Project and the sites, the Applicants considered it was unlikely to result in any significant disturbance or barrier effects for foraging harbour porpoise, harbour seal or grey seal, and they concluded that there would be no AEoI on the Klaverbank SAC or Doggersbank SAC [REP5-009]. The ExA did not note any objections to this conclusion in its recommendation report.

The Secretary of State has not been presented with any substantive evidence to demonstrate that transboundary impacts would have an adverse effect. As such, the Secretary of State is satisfied that the Project, either alone or in-combination with other plans or projects, would not have an AEoI on any transboundary protected site. The Secretary of State is satisfied that further stages of a transboundary assessment are therefore not required.

[126] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/408465/transboundary_guidelines.pdf

6 Consideration of Case for Derogation

Based on the AA the Secretary of State cannot conclude, beyond reasonable scientific doubt, the absence of an adverse effect from the Project on the integrity of:

- Dogger Bank SAC: Sandbanks which are slightly covered by seawater all the time (alone and in-combination)
- Flamborough and Filey Coast SPA: breeding kittiwake (alone and in-combination), guillemot (in-combination), seabird assemblage (alone and in-combination)
- Farne Islands SPA: guillemot (in-combination)

The Secretary of State has therefore reviewed the Project in the context of regulations 64 and 68 of the Habitats Regulations and regulations 29 and 36 of the Offshore Habitats Regulations to determine whether the Project can be consented. References to regulations 29 and 36 below should be read as references to regulations 64 and 68 if applicable.

Regulation 29 allows for the consenting of a project that is required for imperative reasons of overriding public interest even though it would cause a negative adverse effect on the integrity of a protected site.

Consent may only be given under regulation 29 where no alternative solutions to the project are available which are less damaging to the affected protected site and where Regulation 36 is satisfied.

Regulation 36 requires the appropriate authority to secure any necessary compensatory measures to ensure that the overall coherence of the UK's national site network is protected.

This part of the Project review has followed a sequential process whereby:

- alternative solutions to the Project have been considered;
- consideration has been given to whether there are IROPI for the Project to proceed; and
- compensation measures proposed by the Applicants for ensuring that the overall coherence of the UK's National Site Network is protected have been assessed.

The Secretary of State has had regard to guidance on the application of HRA published by the Planning Inspectorate (2017) (Advice Note 10)[127] and the European Commission (2018)[128], together with joint guidance by Defra, NE, the Welsh Government and Natural Resources Wales (2021) on 'Habitats Regulations Assessment: protecting a European site' (the "2021 joint

[127] https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-habitats-regulations-assessments

[128] European Commission (2018) Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC

guidance")[129]. In addition, the Secretary of State has given consideration to the guidance published by Defra in relation to the MRF[130].

[129] Defra, NE, the Welsh Government and Natural Resources Wales (2021) 'Habitats Regulations Assessment: protecting a European site' https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site

[130] Marine Recovery Fund - GOV.UK

7 Stage 3: Assessment of Alternative Solutions

The Secretary of State has given regard to the objectives of the Project as described by the Applicants and has considered how these objectives could be met by alternative means.

The Applicants provided their 'no alternative solutions' case in section 4 of the Derogation Provision of Evidence [APP-051, revised in REP7-018] which:

- defined the aims and objectives of the Project
- included discussion of the 'do nothing scenario'
- included information on alternative solutions (including alternative locations, alternative scale, alternative designs and methods, alternative timing), their feasibility and ability to meet the objectives of the Project
- concluded that there are no feasible alternatives to the Project (and therefore did not undertake a comparison of the alternatives in relation to their potential effects on the European site(s) and feature(s))

No specific concerns were raised by IPs in relation to the Applicants' consideration of alternative solutions.

7.1 Project Objectives

The Applicants identified the need for the Project with reference to its contribution to meeting key national policy aims of [APP-065]:

- achieving Net Zero by 2050 and reducing emissions
- increasing the security of energy supply
- lowering the cost and increasing the affordability of generated electricity
- contributing to sustainable development and economic opportunities

The Applicants noted that the need for the Projects is fundamentally supported by the case presented within NPS EN-1, in relation to energy security, and the need for diversification of the energy-generating infrastructure to include a mix of sources to help the transition to net zero. The Applicants frame their need case around a series of themes:

7.1.1 Climate change

The Applicants reference the IPCC's sixth assessment report, and a range of climate change related impacts, alongside the UK's commitment to net zero under the Climate Change Act 2008, and the related carbon budgets, and the UK's Nationally Determined Contribution under the

Paris Agreement, along with the Climate Change Committee's (''CCC'') Balanced Pathway scenario, which indicates the deployment of low-cost renewables would need to account for 75%-90% of electricity demand in 2050. In this context, the UK Government published the *Clean Power 2030 Action Plan*[131], which includes the ambition to deploy 43-50GW of offshore wind by 2030, with the Applicants noting a potential 3GW contribution from Dogger Bank South. The Applicants note the Project has a design life of approximately 30 years, and may be subject to repowering, and would contribute to national targets on CO_2 reduction to net zero GHG emissions by 2050 and renewable energy production growth. The Applicants estimated that the Project would lead to the avoidance of approximately 91.9 million and 183.5 million tonnes of CO_2 for a single array scenario or a sequential one with both arrays respectively, which they considered to be significant in EIA terms.

7.1.2 Energy security

The Applicants set out the importance of energy security with reference to UK Government policy, including how the offshore wind capacity targets for 2030 contribute to reducing the vulnerability international oil and gas prices. The Applicants note that the project has the potential to generate enough electricity to power approximately 3 million homes per year.

7.1.3 Economic opportunity

The Project is estimated support up to 2,390 full-time equivalent jobs during construction, and 1,120 full-time jobs during operation (under the assumption that all direct operations and maintenance employment would be directly employed by the Projects and based in the UK for the lifetime of the Projects) [APP-065, APP-217]. It was also noted that the project would contribute to the development of the supply chain and skilled workforce and the associated economic benefits, along with indirect effects, for example, from workforce expenditure.

Together, the Applicants indicated that the Project has an estimated overall construction cost of £7 billion (in current pricing). Operation and Maintenance amounts to around £177 million per annum, and in total, the Gross Added Value over the Projects' lifetime is expected to be £1 billion.

The ExA noted that the DCO [REP9-003] would not secure the benefits from both array areas and the project as a whole should only one be constructed, however, they noted that even if one array was built this would make a substantial contribution to the 2030 target of 50GW installed offshore wind capacity. The ExA agreed with the Applicants' conclusion that the ability to meet the domestic demand of between 1.5 and 3 million homes would have a beneficial effect, which would be significant.

Having regard to the objectives identified by the Applicants, the Secretary of State notes, with reference to the National Policy Statements on energy[132], that there is an urgent need for new electricity generating capacity, and that the Government has concluded that there is a critical national priority (''CNP'') for the provision of nationally significant low carbon infrastructure, which includes offshore electricity generating stations such as wind farms. In his assessment of alternatives, the Secretary of State has not constrained himself solely to those alternatives that could be delivered by the Applicants. Nevertheless, the Secretary of State acknowledges that

[131] https://www.gov.uk/government/publications/clean-power-2030-action-plan
[132] The Overarching National Policy Statement for Energy (EN-1), National Policy Statement for Renewable Energy Infrastructure (EN-3) and the National Policy Statement for Electricity Networks Infrastructure (EN-5).

any alternative must be economically feasible for the developer and allow the developer to fulfil the terms of its lease with The Crown Estate.

The ExA has recommended that the CNP presumptions, as set out in EN-1 (para. 4.2.10-4.2.11), do not apply to the Project. The Secretary of State agrees with the ExA's conclusion and therefore sets out his consideration of alternatives and IROPI in the following sections.

7.2 Identification of Alternatives

The Secretary of State has considered alternative forms of energy generation in the context of the alternative solutions test and is satisfied that, in line with the 2021 joint guidance[133], alternative forms of electricity generation would not meet the objectives of the Project. Furthermore, other OWF proposals do not present an alternative solution as all available OWF projects are required in order to meet UK 2030 targets for renewable energy.

Alternatives to the Project considered by the Secretary of State are consequently limited either to 'Do Nothing' or to alternative offshore wind farm projects.

Alternative offshore wind projects considered are:

- Offshore wind farm location
- Offshore wind farms scale
- Feasible alternative design parameters of the Project

7.3 Consideration of Alternatives

7.3.1 Do Nothing

Not proceeding with the Project would remove the risk of direct impacts to the FFC SPA, the Farne Islands SPA and the Dogger Bank SAC. However, this alternative would not satisfy the Project's objectives and would hinder the wider need to deploy offshore wind to help the UK to meet its commitments under the Climate Change Act 2008 to mitigate the effects of climate change, and to meet the UK Government's policy objective to install up to 50GW of offshore wind by 2030 [REP7-018]. Once constructed, the Project would have a capacity in the range of 1.5-3GW, and would make a significant contribution to the achievement of both national low carbon energy targets and to the UK's contribution to global efforts to reduce the effects of climate change. The Do Nothing alternative would erode the capacity of offshore wind by 2030, putting additional reliance on as-yet unidentified projects to meet the Government's ambitions for low carbon infrastructure.

[133] Defra, NE, the Welsh Government and Natural Resources Wales (2021) 'Habitats Regulations Assessment: protecting a European site': https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site

The Secretary of State agrees that a compelling need in the public interest for the Project is clearly established and the 'do nothing' option is not a feasible alternative solution as it would fail to meet any of the aims and objectives of the Project in meeting such compelling need.

7.3.2 Offshore wind farm location

The site selection for all offshore wind proposals in the UK is controlled by The Crown Estate leasing process. Sites not within the areas identified by The Crown Estate leasing process or outside of that which the Applicants have secured are not legally available, and therefore do not represent feasible alternative locations [REP7-018].

The ExA concluded that no alternative locations or sites exist for the Project that would present a feasible alternative solution.

7.3.3 Alternative design parameters

The Applicants considered the potential to reduce the scale of effect, particularly on ornithological features, by reducing the number of turbines used in the development, or a more condensed, smaller scale array [REP7-018]. It was not considered that the former alternative would meet the objectives of the project, and it would result in a reduced contribution to decarbonisation. A more condensed array area would likely lead to a reduced capacity overall, as there are constraints on the energy density of offshore wind, including wake effects. Alternative design parameters including smaller rotors/swept area, would also result in a lower wind farm capacity.

The minimum clearance between the rotor blades and sea surface is 34m above MSL, and a review was undertaken to determine the feasibility of increasing this to reduce bird collision risk. The Applicants concluded that while technically achievable, it would not support the commercial feasibility of the project due to impacts on the foundation and tower design, and there would be reliance on few vessels capable of installing such structures, most of which are not yet on the market, and with no timeline for their availability. Any increase above 34m is considered a significant risk to the feasibility of the project.

The Applicants considered the potential to reduce the scale of permanent habitat loss on the Dogger Bank SAC, however, detailed design will take place following consent, and a commitment has been made to minimise the amount of material that would result in permanent habitat loss as far as practicable. As noted above, as a reduction in the scale of the project has been ruled out as an alternative, that would also not contribute to reducing the scale of habitat loss. NE [REP6-073] specifically advised that by proposing to build out cable protection to the maximum compensated for, when there are alternative options to reduce impacts, the Applicants risked undermining their derogations case. Although not stated by NE, the ExA considered the same logic would apply in respect of seabirds. Nevertheless, the ExA was content that no further mitigation is possible.

The Secretary of State has considered the Applicants approach to cable protection, and the representations of NE and the ExA's recommendation. The Secretary of State concludes that the Applicants have taken a suitably precautionary approach to assessment which meets both the requirement to have a degree of flexibility in design, while also committing to minimising the scale of protection measures as far as practicable in line with the mitigation hierarchy. The Secretary of State notes that this mitigation is secured through the DMLs, and is satisfied that

for the purpose of the consideration of alternatives, that the Applicants have minimised the potential scale of permanent habitat loss as far as possible, in advance of detailed design.

7.4 Conclusion on Alternatives

The Applicants submitted information on alternatives before or during the Examination [APP-051, REP7-018]. The ExA considered information on alternatives submitted by the Applicants and was satisfied that no alternative solutions exist which would deliver appreciable benefits in terms of adverse effects on the European sites.

Following a review of the information submitted by the Applicants and comments provided by Interested Parties, as well as the recommendation of the ExA, and having identified the objectives of the Project and considered all alternative means of fulfilling these objectives, the Secretary of State is satisfied that no alternative solutions are available that would meet Project objectives, and that IROPI should be considered.

8 Stage 4: Imperative Reasons of Overriding Public Interest ("IROPI")

The HRA Derogation Provisions provide that a project having an AEoI on a protected site may proceed (subject to a positive conclusion on alternatives and provision of any necessary compensation) if there are IROPI.

This section of the HRA determines whether there are IROPI for the Project to proceed subject to adequate compensatory measures being implemented.

The HRA Derogation Provisions identify certain in-principal grounds of IROPI that may be advanced in favour of such a project. Where the site concerned hosts a priority natural habitat or a priority species, grounds for IROPI should include human health, public safety or beneficial consequences of primary importance to the environment but otherwise may be of a social or economic nature.

The parameters of IROPI are explored in guidance, including the 2021 joint guidance[134] and the European Commission[135], which identify the following principles:

- **Imperative** – Urgency and importance: There would usually be urgency to the objective(s), and it must be considered "indispensable" or "essential" (i.e. imperative). In practical terms, this can be evidenced where the objective falls within a framework for one or more of the following;
  - (i) actions or policies aiming to protect fundamental values for citizens' life (health, safety, environment);
  - (ii) fundamental policies for the State and the Society; or
  - (iii) activities of an economic or social nature, fulfilling specific obligations of public service.
- **Public interest**: The interest must be a public rather than a solely private interest (although a private interest can coincide with delivery of a public objective).
- **Long-term**: The interest would generally be long-term; short-term interests are unlikely to be regarded as overriding because the conservation objectives of protected sites are long term interests.
- **Overriding**: The public interest of development must be greater than the public interest of conservation of the relevant protected site(s).

The Applicants provided their IROPI case in section 5 of the Derogation Provision of Evidence [APP-051, updated in REP7-018]. In summary, the Applicants indicated that there is a clear and urgent need for the development of the Projects to help meet the UK Government target of net zero emissions by 2050. They noted that the Projects will provide secure, reliable, renewable energy in the UK for over three million homes. The Projects will make a substantial contribution to meeting the UK Government's ambitious target of net zero by 2050, including the interim target

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135 https://ec.europa.eu/environment/nature/natura2000/management/docs/art6/EN_art_6_guide_jun_2019.pdf

of fully decarbonising the UK power system by 2035. The ExA has described their findings in respect of IROPI at Section 3.1 of the Recommendation Report.

The Secretary of State has reviewed this supporting information and taken full regard to relevant guidance.

The Secretary of State is satisfied that there are imperative reasons of overriding public interest for the Project to proceed subject to adequate compensatory measures being implemented. In arriving at his decision, the Secretary of State has reviewed how the Project provides a public benefit which is essential and urgent despite the harm to the integrity of the Annex I sandbank feature of the Dogger Bank SAC, and breeding kittiwake and guillemot features of the FFC SPA, and breeding guillemot of the Farne Islands SPA.

The decision is predicated by the principal and essential benefit of the Project as a significant contribution to limiting the extent of climate change in accordance with the objectives of the Paris Agreement. The consequences of not achieving those objectives would be severely detrimental to societies across the globe, including the UK, to human health, to social and economic interests and to the environment.

The need to address climate change is the principal tenet behind the Climate Change Act 2008, and subsequently published National Policy Statements for energy[136] (EN-1), renewable energy infrastructure (EN-3), and electricity networks (EN-5), which provide a framework for delivering the UK's international commitments on climate change.

Measures set out in the NPSs have been given further impetus to reflect evolving understanding of the urgency of actions to combat climate change, including a commitment to reduce greenhouse gas emissions to net zero by 2050, which is now reflected in domestic law through amendments to the 2008 Act. The Government's strategy for decarbonisation to achieve this commitment relies on contributions from all sectors delivered through multiple individual projects implemented by the private sector.

The Government has also set up schemes to facilitate the deployment of such projects and to provide the public with value for money, such as via the Contracts for Difference scheme. The Government anticipates that decarbonisation will lead to a substantially increased demand for electricity as other power sources are at least partially phased out or transformed and other sectors, such as heat and transport, electrify.

The UK has also committed to decarbonise the electricity system by 2035, subject to security of supply, focusing on 'home-grown technologies'[137]. This will require the establishment of a reliable and secure mix of low-carbon electricity sources, including large scale development of offshore wind generation, with 43-50GW of installed offshore wind capacity anticipated to be required by 2030[138].

Offshore wind generation schemes can only be developed through the mechanism put in place by The Crown Estate for leasing areas of the seabed in a structured and timely way. Projects which make a significant contribution to meeting the target capacity in the timeframe required

[136] https://www.gov.uk/government/collections/national-policy-statements-for-energy-infrastructure
[137] https://www.gov.uk/government/news/plans-unveiled-to-decarbonise-uk-power-system-by-2035
[138] Clean Power 2030 Action Plan: https://www.gov.uk/government/publications/clean-power-2030-action-plan

are therefore both necessary and urgent. These considerations are expanded on in the following section.

8.1 The National Policy Statements (NPSs)

The NPSs were established against obligations made as part of the Climate Change Act 2008. The Project is considered against the 2024 NPSs, as those were in force at the time the application was accepted for Examination. The overarching NPS for Energy (NPS EN-1) sets out national policy for energy infrastructure in Great Britain. It has effect, in-combination with the relevant technology-specific NPS, in respect of recommendations made by PINS to the Secretary of State on applications for energy developments that fall within the scope of the NPSs. These provide the primary basis for decisions by the Secretary of State on National Energy Infrastructure.

The NPSs set out a case for the need and urgency for new energy infrastructure to be consented and built with the objective of supporting the Government's policies on sustainable development, in particular by:

- Mitigating and adapting to climate change; and
- Contributing to a secure, diverse and affordable energy supply.

The NPS for renewable energy infrastructure (EN-3) covers those technologies which are technically viable at generation capacities of over 50 MW onshore and 100 MW offshore. This includes offshore wind and as such the need for this technology is fully covered by the NPS.

The Secretary of State is of the view that the NPSs clearly set out the specific planning policies which the Government believes both respect the principles of sustainable development and can facilitate the consenting of energy infrastructure on the scale and of the kinds necessary to help us maintain, safe, secure, affordable, and low-carbon supplies of energy.

The NPSs set out the national case and establish the need for certain types of infrastructure, as well as identifying potential key issues that should be considered by the decision maker. Section 104 of the Planning Act 2008 makes clear that where an NPS exists relating to the development type applied for, the Secretary of State must have regard to it. The NPSs provide specific policy in relation to offshore wind development, and the policies set out in NPS EN-1, EN-3, and EN-5 therefore apply.

This national need relates both to the decarbonisation of the electricity supply within the required timeframe and to the risk the decarbonisation programme could pose to the security of electricity supply as more traditional generating stations are decommissioned. With regard to the latter, the Secretary of State notes the ruling in case C-411/17 by the European Court of Justice[139] that the objective of ensuring the security of the electricity supply can constitute an IROPI.

[139] Judgement of 29. 7. 2019 – *Case C-411/17 Inter-Environnement Wallonie and Bond Beter Leefmilieu Vlaanderen.* ECLI:EU:2019;622.

At the time the NPSs were published, scientific opinion was that, to avoid the most dangerous impacts of climate change, the increase in average global temperatures must be kept to no more than 2°C. Global emissions must therefore start falling as a matter of urgency.

The energy NPSs were intended to speed up the transition to a low-carbon economy and help the UK to realise its climate change commitments sooner than would a continuation under the current planning system. They recognise that moving to a secure, low-carbon energy system to enable the UK to meet its legally binding target to cut greenhouse gas emissions by at least 80% by 2050, compared to 1990 levels, is challenging, but achievable. This would require major investment in new technologies to electrify heating, industry, transport, and cleaner power generation. Under some 2050 pathways, electricity generation would need to be virtually emission-free, as emissions from other sectors were expected to persist. Consequentially, the need to electrify large parts of the industrial, heating, and transportation sectors could double electricity demand by 2050.

The NPSs conclude that the UK needs sufficient electricity capacity from a diverse mix of technologies and fuels, and therefore the UK also needs all the types of energy infrastructure covered by the NPSs to achieve energy security at the same time as dramatically reducing greenhouse gas emissions. Thus, all applications for development consent for the types of infrastructure covered by the energy NPSs should be assessed on the basis that the Government has demonstrated that there is a need for those types of infrastructure and that the scale and urgency of that need is as described within EN-1 Part 3. Substantial weight should therefore be given to the contribution which projects would make towards satisfying this need for a secure, low carbon, electricity supply when considering applications for development consent under the Planning Act 2008.

To achieve the target of UK commitments to largely decarbonise the power sector by 2030, the NPSs conclude that it is necessary to bring forward new renewable electricity generating projects as soon as possible. The need for new renewable electricity generation projects is therefore urgent. The NPSs expect offshore wind farms to make up a significant proportion of the UK's renewable energy generating capacity up to 2030 and towards 2050.

8.2 The United Kingdom's Legal Commitment to Decarbonise

This section sets out the obligations of the Climate Change Act 2008, against which the NPSs (2011) were established. It then outlines the UK's 2019 legally binding commitment to achieving 'Net-Zero' carbon emissions by 2050, against which the need for future electricity generation developments should be assessed, as well as updated ambitions in the *Clean Power 2030 Action Plan*[140].

8.2.1 Climate Change Act 2008

The Government, through the 2008 Act, set legally binding carbon targets for the UK, aiming to cut emissions (versus 1990 baselines) by 34% by 2020 and at least 80% by 2050 (amended in

[140] https://www.gov.uk/government/publications/clean-power-2030-action-plan

2019 to net zero emissions by 2050), through investment in energy efficiency and clean energy technologies such as renewables, nuclear and carbon capture and storage.

The 2008 Act is underpinned by further legislation and policy measures. Many of these have been consolidated previously through the UK Low Carbon Transition Plan, and UK Clean Growth Strategy, the Net Zero Strategy, and most recently, the Carbon Budget and Growth Delivery Plan. A statutory body, the CCC, was created by the 2008 Act to advise the UK and devolved Governments and Parliaments on tackling and preparing for climate change, and to advise on setting carbon budgets. The CCC report regularly to the Parliaments and Assemblies on the progress made in reducing greenhouse gas emissions. The UK government has set five-yearly carbon budgets which currently run until 2037 (the sixth carbon budget).

8.2.2 Enhancements of Existing UK Government Policy on Climate Change: Net-Zero

The UK context for the need for greater capacities of low-carbon UK generation to come forward with pace, has continued to develop. In October 2018, following the adoption by the UN Framework Convention on Climate Change of the Paris Agreement, the Intergovernmental Panel on Climate Change ('IPCC') published a 'Special Report on the impacts of global warming of 1.5°C above pre-industrial levels. This report concludes that human-induced warming had already reached approximately 1ºC above preindustrial levels, and that without a significant and rapid decline in emissions across all sectors, global warming would not be likely be contained, and therefore more urgent international action is required.

In response, in May 2019, the CCC published their report called: 'Net-Zero: The UK's Contribution to Stopping Global Warming'. This report recommended that government extend the ambition of the 2008 Act past the delivery of net UK greenhouse gas savings of 80% from 1990 levels, by 2050. The CCC recommend that, "The UK should set and vigorously pursue an ambitious target to reduce greenhouse gas emissions (GHGs) to 'Net-Zero' by 2050, ending the UK's contribution to global warming within 30 years." Importantly, the CCC recommendation identifies a need for low-carbon infrastructure development which is consistent with the need case set out in NPS EN-1, but points to an increased urgency for action. In June 2019 the Government amended the 2008 Act to implement the CCC's recommendation. This made the UK the first major economy to pass laws requiring it to end its contribution to global warming by 2050.

Since the implementation of the Climate Change Act 2008, government has set five-yearly carbon budgets. The latest of which is the sixth carbon budget (CB6) which was laid in legislation in April 2021 and commits to cutting greenhouse gas emissions by 78% by 2035, compared to 1990 level, in line with the CCC recommendation. The sixth carbon budget spans from 2033-2037.

In October 2025, government published The Carbon Budget and Growth Delivery Plan ('CBGDP')[141], which set out how the Government intends to meet emissions reductions up to, and including the sixth carbon budget, and also progress towards meeting the UK's Nationally Determined Contribution under the Paris Agreement. The CBGDP indicated that the package of proposals and policies in the plan would result in the expansion of electricity networks, deployment of sufficient flexible capacity capable of replicating the role of unabated gas on the electricity system, and expand renewables, supporting the goals of the *Clean Power by 2030*

[141] https://www.gov.uk/government/publications/carbon-budget-and-growth-delivery-plan-2025

Action Plan. The *Action Plan* notes that there is currently around 31GW of either constructed or contracted offshore wind capacity; this will need to rise to 43-50 GW in 2030, emphasising the urgent need for significant numbers of renewable energy projects to progress to construction.

Within this context, the importance of all offshore wind projects currently under development to the achievement of Government policy and pledges, is clear. Without the Project, it is possible that delivery of the Government's renewable energy capacity and decarbonisation ambitions will fall short.

8.3 Conclusion

Taking into account the information surrounding the need for the Project, the public interests presented, and that the interests are overriding when measured against the adverse effects on the affected features of the FFC SPA, Farne Islands SPA and the Dogger Bank SAC, the ExA concluded that there is an imperative need for the Project, and as such, IROPI has been established. No comments relevant to the HRA were received from any IP on the Applicants IROPI case. The Secretary of State agrees with the ExA [ER C.14.5] and the Applicants [REP7-018] and considers that imperative reasons in the public interest for the Project to proceed are clearly established, especially the contribution that the Project would make towards renewable electricity generation and towards ensuring the security of electricity supply from a domestically generated source.

9 Stage 5: Proposed Compensatory Measures

Having determined that there are no feasible alternative solutions and that the Project must be carried out for IROPI, the Secretary of State has proceeded to consider below the requirements of regulation 68, which are to provide that any necessary compensatory measures are secured to ensure that the overall coherence of the UK National Site Network (NSN) is protected.

The Applicants submitted a proposed package of compensatory measures for the following protected sites and qualifying features:

- Annex I Sandbanks which are slightly covered by sea water all the time (Dogger Bank SAC)
- Kittiwake (FFC SPA) and guillemot (FFC SPA, Farne Islands SPA)

While the Applicants have provided without prejudice compensatory measures for the razorbill feature of the FFC SPA, these will not be considered further as an AEoI for this feature has been excluded (see Section 4.11). The Secretary of State considers that those compensatory measures outlined below for FFC SPA are equally applicable to the assemblage feature of that site, as the reason for concluding AEoI is driven by the conclusions for the kittiwake and guillemot component features.

9.1 Annex I Sandbanks which are slightly covered by sea water all the time – Dogger Bank SAC

The Applicants Project Level Dogger Bank Compensation Plan [REP7-020] noted that Sections 291 and 292 of the Energy Act 2023 enable the use of strategic compensation measures and the Secretary of State can make regulations related to the establishment, operation and management of one or more Marine Recovery Funds (‘‘MRF’’) for the development of offshore wind and associated infrastructure, respectively. It also noted that a Written Ministerial Statement on compensation requirements for offshore wind projects had been issued by Defra in January 2025, along with interim guidance[142], which is to be used prior to the MRF becoming operational. The Applicants Plan confirmed that Defra had, via the written ministerial statement, committed to the delivery of sufficient Marine Protected Area (‘‘MPA’’) designations and/or extensions to provide strategic compensation for likely benthic environmental impacts resulting from offshore wind developments. The delivery of compensatory measures for sandbanks would be secured through Schedule 18, Part 1 of the DCO.

The Secretary of State notes that the Marine Recovery Funds Regulations 2025 came into force on 17th December 2025, which allow the establishment of one or more MRFs, and sets out the framework for their delivery. It is further noted that the measure for benthic habitats, “MPA

142 https://questions-statements.parliament.uk/written-statements/detail/2025-01-29/HCWS394, https://www.gov.uk/government/publications/strategic-compensation-measures-for-offshore-wind-activities-marine-recovery-fund-interim-guidance/strategic-compensation-measures-for-offshore-wind-activities-marine-recovery-fund-interim-guidance

designation and/or extension", is currently available through the MRF, and that consultation on potential MPAs is due to take place before the end of 2026[143].

9.1.1 Approach to compensation: site designation/extension

The Applicants noted that their preferred compensatory measure, which is the designation of a new site, or a site extension, can only be delivered by Defra, and is therefore solely a strategic measure. NE [RR-039] and TWT [REP1-088] both agreed the theoretical merit, feasibility and suitability of the measure to provide compensation, and that Defra should lead on any site designation and extension, with NE confirming that delivery discussions had commenced between them, Defra, and JNCC. The Applicants submitted the location of a possible site extension for Dogger Bank SAC, while acknowledging that the identification of sites would be overseen by Defra. NE and TWT regarded this as not necessary or appropriate. NE were uncertain whether a project level compensation implementation and monitoring plan ("CIMP") would be needed in addition to the Round 4 Plan level CIMP [REP4-129] and delivery via the MRF. The Applicants explained that they had submitted a project level plan in line with their understanding of NE's expectations for the DCO application and also considered that some form of project level implementation plan would be required. The CIMP was identified as a certified document in the DCO.

The Project Level Dogger Bank Compensation Plan [REP7-020] was revised post-Examination[144] to reflect the updates to the impact numbers discussed during the examination, and to reflect discussions with NE after the close of Examination. NE's final risk and issues log [REP9-031] confirmed matters to be resolved with the exception of the scale of impact and thus compensation quantum, but it also noted a post-examination update to its SoCG[145] that it agrees that the appropriate scenarios for habitat loss have been included to enable further consideration by the Secretary of State and Interested Parties.

The ExA was satisfied that the proposed compensation package for the Dogger Bank SAC can be relied upon and that its delivery is adequately secured through Schedule 18 of the DCO, with reference to its recommendation that the compensation should be based on "scenario 4" [REP7-020], i.e. that the area includes habitat loss from infrastructure and a 50m "halo" effect, along with temporary disturbance (35,069,191.13m^2). As noted in Section 4.7, the Applicants continued discussions with NE after the close of Examination on the various scenarios of impact, and presented an updated set of these in Revision 5 of their Dogger Bank Compensation Plan[144]. The Secretary of State considers that scenario 5 presents an area of impact (30,072,390.13m^2) based on a broadly equivalent basis to that recommended by the ExA, albeit with a modified consideration of the halo effect, and notes the Applicant's post-examination submissions in relation to the change in the areas in each of the scenarios due to the earlier double-counting of some impacts[146].

[143] https://www.gov.uk/guidance/offshore-wind-development-library-of-strategic-compensatory-measures

[144] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002481-6.2.3%20Appendix%203%20-%20Project%20Level%20Dogger%20Bank%20Compensation%20Plan%20(Revision%205)%20(Clean).pdf

[145] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002465-20.3%20Natural%20England%20SoCG%20Update(1).pdf

[146] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002563-C1-023%20-%2022.10%20SoS%20Submission%20Response%20to%20Natural%20Englands%20Letter%2009122025.pdf

Despite agreement between the Applicants and NE that all of the available potential scenarios for habitat loss within the Dogger Bank SAC have been included for consideration by the Secretary of State, there remains disagreement between them whether abrasion/disturbance contributes to AEoI, potential for loss of habitat from halo effects and inclusion of UXO clearance and jack-up operations in permanent habitat loss estimates. The Secretary of State has set out his reasons for not agreeing with NE and the ExA in Section 4.7, such that compensatory habitat is required to compensate for the loss of 2,943.656m^2 (2.9km^2) of Annex I Sandbanks which are slightly covered by sea water all the time.

The Secretary of State notes that the Applicants [AS-048, table 2.5.1] considered there to be a high degree of confidence for the strategic measure and that a 1:1 compensation ratio would be appropriate, with reference to the Round 4 Dogger Bank Strategic Compensation Plan [APP-060]. NE confirmed that compensation multipliers were not agreed or signed up to by the SNCBs and would be agreed by Defra, to which TWT agreed, however, the Applicants did not consider it should be entirely up to Defra without input from the consenting process. Lincolnshire Wildlife Trust [RR-028] did not believe that compensation would be sufficient to address the AEoI, however, it provided no further details. The ExA considered it was for Defra to determine the appropriate compensation multipliers, however, they also considered there to be a high degree of confidence in the delivery of the compensation.

Having due consideration to the information presented to him, the Secretary of State agrees with the position of the Applicants, the advice of NE and TWT, and the recommendations of the ExA, that compensation should be provided by the delivery of a new site designation and/or extension, via the MRF. The Secretary of State wrote to Defra on 6th November 2025 and requested confirmation that the Project and its impacts are of a type which could in-principle be compensated by the MPA measure delivered through the MRF. Defra responded[147] to indicate that the Project could be eligible for the compensation they are proposing to make available via compensatory MPAs, and that this would be verified upon application to the MRF through the supporting documentation provided at the time. As noted above, legislation enabling the creation of one or more MRFs has come into force, and in response to the consultation on environmental compensatory measures reforms[148], the Government indicated that secondary legislation required to implement the reforms to the Habitats Regulations, using the regulation making power in section 293 of the Energy Act 2023, will be drafted in due course, along with guidance drafted by Defra.

The Secretary of State concludes that the proposed compensation measures are legally, financially, and technically feasible, and that the wording of Schedule 18, Part 1, of the DCO secures a mechanism for their delivery. The Secretary of State agrees with the ExA that Defra should decide the necessary compensation ratio, as the appropriate ratio will depend on factors yet to be determined by Defra. However, given the information currently available to him, the Secretary of State agrees with the Applicant and would expect a 1:1 or low ratio to be necessary, given the high degree of confidence in the proposed measure. As noted in Section 4.7 the Secretary of State does not agree with the ExA that the scale of compensation should be based on scenario 4/5, but instead on Scenario 2.

147 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002501-C1-002%20-%20Defra%20-%20Letter%20response%20to%20DESNZ%20RFI_DBSEW_Planning_Application_201125_final.pdf

148 https://www.gov.uk/government/consultations/offshore-wind-environmental-compensation-reforms

9.1.2 Conclusion

The Secretary of State considers that there is sufficient detail in the evidence presented to provide confidence that a package of measures will be delivered, via the MRF, which will protect the coherence of NSN as required by Regulations 29 and 36 of the Offshore Habitats Regulations.

9.2 Kittiwake – FFC SPA

The Secretary of State notes that as part of their lease conditions, the Applicants must adhere to The Crown Estate's Round 4 Kittiwake Strategic Compensation Plan [APP-053], and further notes that the Applicants have secured the option for a MRF contribution for kittiwake in the DCO, Schedule 18, Part 2. However, as noted by the Applicants [REP4-086] [REP4-087, table 2-13] and NE [REP6-076] [REP8-054], interim guidance[149] does not at present allow the MRF to be relied upon for consent in relation to ornithological receptors, such that only project-led measures are presently available to the Applicants. The compensatory measures proposed by the Applicants are contained in [C1-010]:

- Project-Level Kittiwake Compensation Plan (Revision 8)
- Outline Kittiwake Compensation Implementation and Monitoring Plan (Revision 4)

The Applicants Project Level Kittiwake Compensation Plan proposed the following primary compensatory measures for kittiwake from the FFC SPA:

- A financial contribution towards the management of fisheries to increase prey availability, to be delivered via the Marine Recovery Fund operated by Defra.
- Up to two offshore Artificial Nesting Sites (oANS)

The ExA acknowledged the Applicants' preference for a strategic contribution towards fisheries management, however, it noted that fisheries management is not currently identified in Defra's Library of Strategic Compensation Measures (LoSCM) and therefore would not be supported by the MRF. NE [RR-039] also considered that fisheries management was unlikely to be a suitable compensation measure. As such, the ExA was unable to place any confidence in such a measure, and it was not discussed during the Examination. The Secretary of State agrees with the ExA's conclusion and does not discuss such a compensation measure here, as he considers that it cannot yet be relied upon. The Secretary of State therefore only considers the potential for a project led oANS to provide compensation, along with appropriate supportive and adaptive management measures. Nevertheless, the Secretary of State has retained provisions in DCO Schedule 18 Part 2 to allow the Applicant to discharge its requirement to compensate for the impact on Kittiwake via the MRF, if it becomes available to the Applicant within the timescales of this Project. This would be subject conditions, including an offer being made by the MRFO and approval of the Secretary of State at that time.

9.2.1 Approach to compensation: Artificial Nesting Structures

The Applicants highlighted [REP4-087] that the development of oANS is considered to be the most ecologically appropriate compensatory measure for offsetting impacts on kittiwake in English waters as outlined by Defra (Defra's letter to the Offshore Wind Industry Council (OWIC), 2024), and it is noted that oANS are included in the LoSCM[150]. The Project Level Kittiwake Compensation Plan (revision 7) [REP9-007] indicated that a collaborative approach with Outer Dowsing Offshore Wind Farm (''ODOWF'') would be undertaken, with each project developing

[149] https://www.gov.uk/government/publications/strategic-compensation-measures-for-offshore-wind-activities-marine-recovery-fund-interim-guidance/strategic-compensation-measures-for-offshore-wind-activities-marine-recovery-fund-interim-guidance

[150] https://www.gov.uk/guidance/offshore-wind-development-library-of-strategic-compensatory-measures

a single oANS, for which the Applicants have a Memorandum of Understanding with ODOWF. NE [RR-039, annex H] [REP8-054] agreed an oANS had merit and whilst challenging offshore, was technically feasible, but uncertainties should be carefully considered in conjunction with uncertainty around method effectiveness and Project impacts when appraising the proposed scale of the compensatory measures.

The RSPB [RR-049] [REP1-087] [REP3-066] stated that ANSs (onshore or offshore) are unproven. While RSPB indicated a preference for an oANS, they also highlighted supply chain and logistical challenges. TWT [REP3-069] did not support ANS as a compensation measure for impacts on kittiwake. The Applicants explained [REP6-051, table 2-14] that they had undertaken early concept design to help offset the likelihood of material being difficult to procure. It was noted in post examination submissions by the Applicants[151] the offshore oANS design had continued to progress following the close of Examination, with the Applicants looking to appoint an Engineering, Procurement, Construction and Installation contractor imminently, and that significant progress had been made towards a Marine Licence associated with the installation of the oANS (MLA/2025/00344).

With regards to the Memorandum of Understanding with ODOWF on oANS provision, the Secretary of State agrees with the ExA [ER C.15.67] that it has no legal standing, and while a collaborative approach is welcomed, it cannot be relied upon, therefore, his conclusion is based on the provision of a single oANS. The Applicants have indicated [REP7-129] that they can deliver a single oANS at a scale sufficient to offset impacts related to kittiwake and situated in an ecologically and logistically viable location (referred to as location 6a [REP4-020], updated in response to the first consultation) to maximise chances of success, informed by areas located in waters identified by the Round 4 Kittiwake Strategic Compensation Plan [APP-053]. NE confirmed it was generally satisfied the location was appropriate, although noted there was the possibility of competition at this site with foraging kittiwake breeding at the FFC SPA.

The Applicants noted that their existing onshore ANS at Gateshead had the potential to support adaptive management, and could be relied upon to offset any deficit linked to the primary offshore compensation to be delivered through the offshore ANS, it having been installed in 2023. The ExA noted that the while the Applicants confirmed they currently owned the entirety of the onshore structure, which provides space for up to 240 pairs of birds along with planning to increase its scale to 480 spaces, it was in discussion with three other projects regarding sharing the structure. The Secretary of State wrote to the Applicants on 6th November 2025 as part of his first consultation to request confirmation of how many of the 240 spaces at the onshore ANS are being considered by other projects, and what progress had been made towards increasing its capacity. In response, the Applicants indicated that a minimum of 96 spaces would be available to the Project, but this may increase if the other projects no longer need space, and if the capacity of the onshore ANS was increased, at least a further 336 nesting spaces would be available solely to the Project.

NE and RSPB had concerns with regards to whether compensation was achievable over the lifetime of the Project (30 years) using an oANS, and the Applicants responded with calculations which indicated that under almost all scenarios, the mortality would be offset within 50 years [REP6-052], and also noted that the DCO [REP9-003] secures that the oANS cannot be

151 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002525-6.2.1%20Appendix%201%20-%20Project%20Level%20Kittiwake%20Compensation%20Plan%20(Revision%208)%20(Clean).pdf

decommissioned without written approval of the Secretary of State, in consultation with the relevant SNCB, whether or not that extends beyond the operational lifetime of the Project. NE [REP8-054] welcomed the Applicants' commitments and considered them to be appropriately secured, however, it advised further detail on adaptive management measures in future versions of the kittiwake CIMP, and remained concerned as to whether the oANS would be able to deliver the annual numbers of birds necessary per year [REP8-054].

The Applicants, NE and RSPB disagreed on how many breeding seasons the oANS should be in place prior to the installation of the first turbines. While NE [RR-039, annex H] [REP3-055] [REP8-054] and the RSPB [RR-049] [REP3-066] advised that the oANS should be implemented to allow for 4 full breeding seasons before operation of the turbines, the Applicants proposed to reduce the time period for delivery to 2 years in advance of operation. They submitted the Case for Reduction in Kittiwake Breeding Seasons Prior to Artificial Nesting Structure Installation [REP4-083] to provide the rationale for this reduction which concluded that 4 breeding seasons compared to 2 over the course the Project's lifespan (and beyond), would be insignificant and would not materially impact the ability of the ANS to deliver the compensation requirement but would delay delivery of compensation by 2 years.

The ExA agreed with NE [REP8-054] that the Applicants' argument for a reduction in lead in time primarily centres around logistical constraints related to consenting and supply chain risks, and also agreed with NE and RPSB that prompt installation would be preferable. The ExA also noted that any delay in the oANS and the resultant need for a greater amount of compensation to address mortality debt could only exacerbate the concerns regarding the ability of a single oANS to deliver the required compensation, however, they also noted that the onshore ANS is already constructed and therefore could go some way to offsetting mortality debt. Additionally, the DCO secures that the oANS would not be decommissioned without written approval of the Secretary of State in consultation with relevant SNCBs, such that decommissioning would not be granted prior to compensation being delivered, which could extend beyond the lifetime of the Project. In their post-examination submissions made on 5th November 2025, the Applicants outlined progress on the design of their oANS in terms of the scalability and the timing of its installation in relation to the expected construction timetable for the project. Further information was provided in response to the Secretary of State's first consultation, in which it was indicated that an oANS with a capacity of up to 4,200 nesting spaces could be installed three breeding seasons prior to first generation without affecting the viability of the Project[152]. In its response to the Secretary of State's first consultation, NE maintained its position that the oANS should be in place at least four breeding seasons before first generation, the commitment to have it in place for three breeding seasons was welcomed, provided that the requirement was secured in the DCO. The Secretary of State agrees with NE, and has made amendments to Schedule 18 of the DCO to secure the commitment for the oANS to be in place for three breeding seasons prior to first generation.

NE considered there to be a lack of detail in the outline CIMP regarding monitoring the success of the oANS, but welcomed the inclusion of productivity and colonisation monitoring, and colony counts, and recognised the proposal for remote camera techniques [REP8-054]. It is also noted that the Applicants have indicated there would also be an annual in-person survey in

152 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002527-6.2.1.2%20Outline%20Kittiwake%20Compensation%20Implementation%20and%20Monitoring%20Plan%20(Revision%204)%20(Clean).pdf

July/August, if the remote data suggests this would add value [C1-010]. The final CIMP would be developed in consultation with the Kittiwake Compensation Steering Group (''KCSG''), and approved by the Secretary of State in consultation with the relevant nature conservation bodies and, where appropriate, the MMO, which is secured in Part 2 of Schedule 18 in the DCO. The Secretary of State considers that sufficient detail has been provided in relation to monitoring for the oCIMP, and that further detail can be provided in the CIMP.

9.2.2 Compensation quantum

The ExA noted a significant disparity between the Applicants' and NE's calculated compensation quantum resulting from the use of different methodological approaches. The Applicants calculated that 556 pairs would be required per annum assuming the central estimate using 53% adult apportionment and applying the Hornsea Four ("H_4") approach, whereas NE's position was that 4,172 pairs were required based on the upper confidence level (UCL), 100% apportionment, and the application of Hornsea Three Part 2 ("H_{3pt2}" approach), with both methods assuming a 2:1 compensation ratio. NE advised that there would be justification to use a 3:1 ratio should the lead-in time for compensation be reduced due to a delay in the installation of the proposed oANS (see Section 9.2.1 above).

NE [REP7-155] submitted a report that it had commissioned from the British Trust for Ornithology (''BTO'') (on behalf of the Collaboration in Offshore Wind Strategic Compensation), to review existing methods used to calculate the scale of ANS for kittiwakes, and to consider possible alternatives (Rhoades *et al.* 2025)[153], and advised the Applicants to consider the findings and recommendations of the report in their compensation documents. Following the close of Examination, the Applicants submitted a Position Statement on Kittiwake Compensation Calculations [PID-002] which calculated a range of possible compensation values based on the H_{3pt2}, H_4 and Rhoades *et al.* (2025) approaches, and sets out their view on how they consider that precaution should be considered in relation to the application of the new approach. Using Rhoades *et al.* (2025), the Applicants calculated that the level of compensation required was between 915 and 1,804 pairs at the central and UCL respectively (53% apportionment), and, between 1,681 and 3,317 pairs at the central and UCL respectively (100% apportionment). The Applicants considered that the H3pt2 and BTO "new colony" approaches result in an overestimation of compensation. Specifically, the Applicants argue that the step in the calculation to allow for annual adult mortality from the "new" colony amounts to a double-counting of adult mortality, as it treats the colony as if it were isolated and not subject to immigration and emigration [REP3-030]. The Applicants further note that the BTO approach is sensitive to assumptions around the productivity at the oANS and noted the use of "low" productivity (0.819) introduced further precaution (in addition to NE's suggested use of the UCL) when an oANS should lead to higher productivity. The Secretary of State wrote to NE on 6th November 2025 as part of his first consultation, requesting its view on the application of Rhoades *et al.* (2025) by the Applicants. NE[154] indicated that it did not consider the 0.819 productivity rate to be precautionary, noting this is considerably higher than the rate at FFC SPA between 2015 and

[153] Rhoades J, Johnston DT, Humphreys EM & Boresch-Supan PH (2025). Review of methods used to calculate scale of artificial nesting structures proposed as a compensation measure for Kittiwake mortality at offshore wind farms. BTO Research Report 788, 28pp + Appendices.

[154] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002521-C1-012%20-%20Natural%20England%20-%20EN010125%20532559%20DBS%20SoS%20RFI%2006%20November%202025%20-NE%20Response.pdf

2021, and that while productivity would be expected to be higher at the oANS, there was limited evidence to support a different rate. There remained disagreement between the Applicants and NE on how the compensation should be scaled.

While the ExA agreed with NE [REP8-054] that 100% adult apportioning should be applied, they did not agree that the compensation should be scaled at the UCL, but instead at the mean impact value, and with a 2:1 compensation ratio.

The Secretary of State has considered all representations from the Applicants and IPs related to kittiwake compensation submitted during the Examination and in post examination submissions. When considering how to scale the compensation measure, the Secretary of State notes the following:

- The application of the BTO method (Rhoades *et al.* 2025) is considered by NE and the Applicants to reduce uncertainty in the compensation calculation
- The compensation measures are likely to be effective

In view of these factors, it would be unreasonable to apply the UCL and to scale the compensation beyond 2:1. The Secretary of State agrees with the ExA that the compensation should be scaled to the mean impact value using a 2:1 ratio, and that in applying the BTO method, this should be 3,362 pairs. The Secretary of State also considers that the success criteria should be 1,681 pairs based on the mean impact value using a 1:1 ratio. The Secretary of State notes that the latest information provided by the Applicants indicates their intended oANS design has the capacity to accommodate the number of pairs which are required.

9.2.3 Strategic compensation

Part 2 of Schedule 18 of the DCO also secures that should the Applicants wish to make a contribution to the Marine Recovery Fund, wholly or partly in substitution for the oANS or as an adaptive management measure, the sum will be agreed with Defra or another body responsible for the operation of the MRF. While the MRF is presently not accepting applications for kittiwake compensation, the Secretary of State notes that the wording of the DCO allows for this to potentially be used at a later date.

9.2.4 Conclusion

Having reviewed all the information before him, the Secretary of State is satisfied that the compensation level and scale of compensation required as identified are appropriate, and appropriate monitoring and adaptive management is secured to ensure the success of the measures. This conclusion is based on the delivery of a single project-led oANS which it is understood can accommodate up to 4,200 nesting spaces to be installed at three breeding seasons prior to first generation, alongside a minimum of 96 nesting spaces available on the existing Gateshead onshore ANS. The Secretary of State is confident that the Applicants' proposed measures are deliverable at a scale appropriate to the level of compensation required. The Secretary of State agrees that the chosen location of the oANS is appropriate, that the provision of a single structure of sufficient scale has been secured, and that the proposal adequately meets the MRF interim guidance and is consistent with the Crown Estate's Round 4 Kittiwake Strategic Compensation Plan [APP-053]. The Secretary of State is also reassured by the post-examination progress on securing a Marine Licence for the oANS, and updates regarding the necessary contractors to construct and install it. The Secretary of State also

agrees with the ExA that the SNCBs would have sufficient control over the content of subsequent iterations of the kittiwake CIMP, which would be updated by the KCSG.

The Secretary of State is satisfied that the necessary compensatory measures can be secured and delivered to protect the coherence of the UK NSN for kittiwake as required by regulations 29 and 36 of the Offshore Habitats Regulations and regulations 64 and 68 of the Habitats Regulations. He considers that Part 2 of Schedule 18 to the DCO adequately secures the further work required to progress the proposed compensation measures, including a contribution to the MRF, if available, or the approval of a final CIMP.

9.3 Guillemot – FFC SPA and Farne Islands SPA

The option for a MRF contribution for guillemot was included in the DCO [REP9-003], Schedule 18, Part 3. However, as noted by the Applicants [REP4-086] [REP4-087, table 2-13] and NE [REP6-076] [REP8-054], interim guidance does not at present allow the MRF to be relied upon for consent in relation to ornithological receptors, such that only project-led measures are presently available to the Applicants. The compensatory measures proposed by the Applicants are contained in:

- Project-Level Guillemot and Razorbill Compensation Plan (Revision 9)[155]
- Outline Guillemot and Razorbill Compensation Implementation and Monitoring Plan (Revision 4)[156]

The Applicants Project Level Guillemot and Razorbill Compensation Plan[155] proposed the following primary compensatory measures for guillemot from the FFC SPA and Farne Islands SPA:

- Predator eradication/control

9.3.1 Approach to compensation: predator eradication/control

The Applicants proposed predator eradication and control as the primary compensation measure for guillemot of the FFC SPA and Farne Islands SPA [REP6-012], and adaptive management measures included the provision for nesting locations on the kittiwake oANS and signing up fishers to deliver bycatch reduction measures. As the Secretary of State has concluded that the Project will not result in AEoI for the razorbill feature of the FFC SPA (see Section 4.11), this section will only discuss those measures put forward by the Applicants in relation to guillemot, for which an AEoI was concluded for FFC SPA and the Farne Islands SPA.

The Applicants considered that there was a degree of confidence in their primary method of compensation in view of it being a method for inclusion in the LoSCM. Both a project-led and strategic option for the delivery of guillemot compensation were presented in the Guillemot [and Razorbill] Compensation Plan[157], and are secured in Part 3 of Schedule 18 of the DCO. While the option for compensation to be delivered through the MRF is secured in the DCO, the Secretary of State notes that, like for kittiwake, this cannot be relied upon at the time of decision as the MRF is not presently accepting applications for guillemot compensation. The Secretary of State was provided updated details of the proposed Isles of Scilly predator eradication scheme which may become available via the MRF as part of his first consultation, including estimates of

155 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002576-6.2.2%20Appendix%202%20Guillemot%20and%20Razorbill%20Compensation%20Plan%20(Revision%209)%20(Clean)(1).pdf

156 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002529-6.2.2.1%20Annex%20A%20-%20Outline%20Guillemot%20and%20Razorbill%20Compensation%20Implementation%20and%20Monitoring%20Plan%20(Revision%204)%20(Clean).pdf

157 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002576-6.2.2%20Appendix%202%20Guillemot%20and%20Razorbill%20Compensation%20Plan%20(Revision%209)%20(Clean)(1).pdf

the potential number of breeding pairs the scheme could deliver. This is discussed further in Section 9.3.3.

The Applicants considered a number of possible sites to deliver compensatory habitat for guillemot through the delivery of predatory eradication during Examination, which was set out in their Guillemot [and Razorbill] Compensation Site Shortlist Refinement Report [REP3-019]. At the close of Examination, a single project-led site, Middle Mouse, had been selected [REP6-012], however, NE raised concerns about the presence of rats and the scale of the site to provide the level of compensation needed [REP6-076] [REP8-054]. TWT [REP3-069] and RSPB [REP5-066] also raised concerns in relation to its location, and the level of evidence needed to demonstrate that rat presence was a limiting factor at the site. At the close of Examination, the Applicants noted that rat presence at Middle Mouse was inconclusive, and in post examination submissions[158], they confirmed that they had been unable to secure a suitable project-led option in England, Wales or Northern Ireland, such that the only site being considered at the close of Examination was no longer being progressed. The Secretary of State notes that at the end of the Examination, the ExA considered that neither a delivery mechanism for strategic compensation nor a project-led option had been established, and did not consider that feasible, deliverable project-led compensation had been secured for guillemot (or razorbill). The ExA considered that the proposed compensation scheme (Middle Mouse) was unproven and could not be relied upon, and therefore, the ExA's final recommendation was that the Order in the form applied for could not be made pursuant to regulations 63 and 64 of the Habitats Regulations.

Post-examination site identification and refinement

Consistent with the MRF interim guidance, the Applicants continued to explore project-led options following the close of Examination and submitted a secondary site shortlist refinement report[159] which outlined a number of sites in Scotland, with three being progressed for further consideration. Two of the sites are in the Outer Hebrides (Pabaigh, Bearasaigh Islands) and one is in Shetland (Out Skerries), and the Applicants considered that each of these could provide the level of compensation needed. The Secretary of State wrote to the Applicants on 6th November 2025 as part of his first consultation, seeking further detail on the sites which are being progressed, and on the same date, to NE and NatureScot to gain their views on the sites and their potential to deliver compensatory habitat for guillemot. The Applicants provided an update on their sites, including further analysis including habitat refinement, noting that they had combined the two Outer Hebrides locations into a single scheme, but were continuing to progress this and the Out Skerries scheme[160].

NatureScot raised concerns in their response to the first consultation [C1-007][161] about how delivering compensation in Scotland would interact with other projects looking for compensation or mitigation opportunities in that jurisdiction, and also, that there appeared to be no

[158] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002463-20.1%20SoS%20Submission%20Cover%20Letter%2014102025(1).pdf

[159] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002467-20.5%20Guillemot%20and%20Razorbill%20Compensation%20Secondary%20Shortlist%20Site%20Refinement%20Report(1).pdf

[160] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002544-22.2%20The%20Applicants%E2%80%99%20Response%20to%20Secretary%20of%20State%20Request%20for%20Information.pdf

[161] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002506-C1-007-NatureScot%20Response.pdf

consideration of the delivery of compensation as part of the Sectoral Marine Plan for Offshore Wind in Scottish Waters[162]. The Applicants responded[163] that in their site selection, they had avoided publicly known compensation schemes, designated sites which could be subject to management as part of Scottish initiatives, with reference to the Scottish Government's Portfolio of Compensatory Measures for Seabirds Project. The Secretary of State noted that in Section 3.2, Stakeholder Engagement, of the Applicants Guillemot [and Razorbill] Compensation Plan (Revision 9)[155], that they met with the Scottish Government's Offshore Wind Directorate on 13th January 2026. The summary of the interaction indicates that the Offshore Wind Directorate, "... confirmed that strategic compensation and HRA reforms are a live topic in Scotland at the moment but there is no desire to delay project consents on this basis.", and that, "There are not thought to be any legal barriers to [the proposed Project's] proposals although the Offshore Wind Directorate are keen to speak to UK counterparts regarding the mechanism for cross-border governance." The Secretary of State acknowledges the challenges presented in the availability of sites which may deliver suitable habitat to contribute to compensation for which may be beyond the consenting jurisdictions of individual projects, however, he notes the limitations raised by the Applicants and their avoidance of other known schemes, and that NatureScot did not indicate that the proposed areas interacted with those being considered by plans or projects for which Scottish Ministers are competent authorities.

9.3.1.1 Outer Hebrides (Pabaigh islands and Bearasaigh Islands)

A number of focal islands are proposed to deliver the compensation (Sean Bheinn, Bearasaigh, Pabaigh Mor and Pabaigh Beag), with a number of others within the biosecurity area due to being within rat swimming distance (Flodaigh, Bhacasaigh and Siaram Mor). The Islands are not within any SPA, but are approximately 35km west of the Flannan Isles SPA, which includes guillemot as a breeding feature. The Applicants undertook initial site visits and drone surveys in 2025, and confirmed predator presence on Pabaigh Mor, Pabaigh Beag, Bhacasaigh and camera trap images on the adjacent mainland, with potential thermal images of rats on Flodaigh. Poor weather limited evidence gathering on Sean Bheinn and Bearasaigh and adjacent islands. The Applicants propose to undertake further surveys as part of pre-eradication studies in 2026/27. Evidence for the presence of auks is more limited, with none recorded nesting on the islands in a 2025 survey, though the timing of this (late July) may have somewhat limited its results. The islands are also not regularly monitored. A further survey would be undertaken as part of pre-eradication planning in 2026/27. More broadly, the Applicants note that the Western Isles population of guillemots has been higher in the past, and links the decline in part to predation.

An initial habitat assessment was undertaken, with a refined assessment using high resolution drone footage having taken place on Pabaigh Mor and Pabaigh Beag. Accounting for exposure and terrain, 5,420m^2 of habitat area was estimated, sufficient to support 2,170 to 13,550 guillemot pairs at densities of 0.5 pairs/m^2 and 2.5 pairs/m^2 respectively. While a refined assessment of habitat area has not been completed for Sean Bheinn and Bearasaigh, the unrefined estimate is 6,560m^2, or 3,280 and 16,400 guillemot pairs at densities of 0.5 pairs/m^2 and 2.5 pairs/m^2 respectively.

[162] https://www.gov.scot/publications/sectoral-marine-plan-offshore-wind-energy/, https://www.gov.scot/publications/draft-updated-sectoral-marine-plan-offshore-wind-energy-2025/

[163] https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002536-22.5%20The%20Applicants'%20Response%20to%20NatureScot's%20DESNZ%20letter.pdf

The Applicants have positively engaged with landowners, with Heads of Terms issued to each, and letters of support of have been received from landowners of Pabaigh Mor and Pabaigh Beag[155].

9.3.1.2 Out Skerries

A number of focal islands are proposed to deliver the compensation (Housay, Grunay, Bruray and Bound Skerry). The Islands are not within any SPA, but are approximately 26km south of Noss SPA, which includes guillemot as a breeding feature. The Applicants undertook initial site visits and drone surveys in 2025, and confirmed predator presence on Housay, Bruray and Grunay, though it was unconfirmed for adjacent islands, including Benelips, Filla and Guens. The Applicants propose to undertake further surveys as part of pre-eradication studies in 2026/27. Evidence for the presence of auks is more limited, with none recorded nesting on the islands in a 2025 survey, though the timing of this (late July) may have somewhat limited its results. The islands are also not regularly monitored. A further survey would be undertaken as part of pre-eradication planning in 2026/27. More broadly, the Applicants note that the Shetland population of guillemots has been significantly higher in the past, and links the decline in part to predation.

An initial habitat assessment was undertaken, with a refined assessment using high resolution drone footage having taken place on Housay, Bruray and Bound Skerry. Accounting for exposure and terrain, 6,445m^2 of habitat area was estimated, sufficient to support 2,687 to 13,434 guillemot pairs at densities of 0.5 pairs/m^2 and 2.5 pairs/m^2 respectively. While a refined assessment of habitat area has not been completed for Housay and Filla (Guens was not subject to unrefined habitat assessment), the unrefined estimate is 8,236m^2, or 4,118 and 20,560 guillemot pairs at densities of 0.5 pairs/m^2 and 2.5 pairs/m^2 respectively.

The Applicants have indicated that eradication activity would commence at their selected sites in September/October 2027, at least two breeding seasons ahead of turbine installation[155]. During Examination, NE did not consider implementation before impact to be analogous to delivering compensation before impact, and consistently advised that eradication might take longer than two years, and that compensation would not be delivered until the required number of chicks were being produced and had reached age of first breeding [REP8-054]. The Applicants argued that a delay would simply delay delivery, and noted that since connectivity between the site being considered during Examination (Middle Mouse) and the Isles of Scilly (strategic compensation, see 9.3.2), was limited, there would be no material effect on the populations of the compensation schemes [REP7-129]. Noting that as the revised schemes of the Outer Hebrides and Out Skerries are a significant distance from FFC SPA and the Farne Islands SPA, the Secretary of State considers the Applicants' reasoning to equally apply here. NE's end of Examination position [REP8-054] was that for every year the proposed development was in operation without compensation in place, that the full compensation target for each species would need to be added to the total compensation requirements. The ExA considered that a degree of overcompensation would be appropriate should the delivery of compensation be delayed, and saw no reason to disagree with NE. The Applicants have positively engaged with landowners, with Heads of Terms issued to each, and letters of support of have been received from the landowners of Out Skerries[155].

NE raises some concerns in response to the first consultation [C1-012][164] on the species of rats present on the Out Skerries, and also in relation to reincursion risk for some of the Outer Hebrides sites, which are within the swimming range of brown rat from Lewis, however, it welcomed the Applicants' proposed approach to plan and address this and commitment to use best practice, and indicated that the number of breeding pairs which could be theoretically supported would, if realised, make a meaningful contribution to the package of compensatory measures. In their response to the Secretary of State's third consultation, RSPB indicated that they had serious doubts about the suitability of the selected locations to meet the compensation requirements, including due to the potential for Great Bernera and Little Bernera to act as stepping stones for brown rats to Bearasaigh, noting that brown rats have been recorded swimming as far as 2km, and questioned whether predator free habitat availability was a limiting factor for guillemot [and razorbill] in the region. The Secretary of State has considered this response in the context of the wider set of schemes proposed, their potential contribution to the compensation quantum, and the availability of strategic compensation, which is set out below.

NatureScot were invited to comment on the Applicants' Compensation Site Secondary Shortlist Refinement Report and Guillemot [and Razorbill] Compensation Plan [PID-002] as part of the first consultation. A number of concerns were raised in relation to monitoring the implementation and success of the measures, and also potential impacts on nearby SPAs [C1-007]. The Secretary of State considers that the CIMP provides sufficient detail on the monitoring proposals, and that these will be finalised post consent, but acknowledges that the Applicants do not appear to have considered the potential for impacts on nearby SPAs in any detail. The Secretary of State considers that such unintended consequences would be managed post consent as part of further development of the CIMP, noting that the detailed CIMP will be submitted to the Secretary of State, post-consent, for approval following consultation with NE and other members of the relevant steering group. Connected to this issue, the RSPB in their response to the third consultation that future wind farms in Scotland could also impact the compensated population, and that future assessments would contain uncertainty in relation to apportionment to the compensated sites and future population sizes, for example. The Secretary of State also considers that these are issues that can be addressed post consent, and that the CIMP contains options for multiple locations of predator eradication should one site be deemed unsuitable by other development. With regards to NatureScot's indication that monitoring should be carried out in agreement with them and NE, the Secretary of State considers that as the proposed compensation schemes are located in Scotland, and that their contribution to the NSN would primarily be within the range of sites managed by NatureScot, that they are a relevant conservation body which should be included on the Steering Group, and which should be consulted on with regards to the CIMP. This is secured in Part 3 of Schedule 18 of the DCO, which was acknowledged by the Applicants in their response to the first consultation[155].

9.3.2 Compensation quantum

The Applicants compensation quantum was based on 50% displacement and 1% mortality values, leading to a compensation requirement for both SPAs of 739 breeding pairs using a 1:1 ratio and the central impact value, however, they included a range of values in the Guillemot [and Razorbill] Compensation Plan[155]], including those using NE's preferred rates. The

164 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002521-C1-012%20-%20Natural%20England%20-%20EN010125%20532559%20DBS%20SoS%20RFI%2006%20November%202025%20-NE%20Response.pdf

Secretary of State agrees with the ExA that predator eradication would be an appropriate and feasible measure for guillemot, and that the delivery of compensatory measures would be secured through Part 3 of Schedule 18 of the DCO [REP9-003]. When considering how to scale the compensation measure, the Secretary of State notes the following:

- There is some certainty as to the potential for predator eradication to be effective as it is included in the LoSCM
- There remains some uncertainty as to the selection of a specific project-led site, to what degree predation is a limiting factor at any of the sites considered, and the timing of the delivery of predator eradication at the sites
- Available seabird survey data for the sites is limited, and the use of the sites by guillemot currently, or historically, appears to be limited
- That while there may be connectivity between the establishment of breeding at the selected sites and the NSN, they are distant from the FFC SPA and Farne Islands SPA, and so would benefit the wider NSN rather than the sites predicted to be affected
- While Heads of Terms have been provided to landowners of the sites covering the selected schemes by the Applicants, and letters of support have been received covering each scheme, there are no legal agreements in place at the time of decision
- The ExA considered that adaptive management measures are of importance in part due to some of the above uncertainties, however, their potential benefits have not been quantified.

As indicated in Section 4.1.1, the Secretary of State has already concluded that mortality should be based on 70% displacement and 2% mortality rates, and therefore agrees with NE [REP4-124] that these should be applied. The Secretary of State has based his conclusions on the advice of NE and the recommendations of the ExA, which are to use the H_4 method and 100% apportionment to FFC SPA and a 2:1 compensation ratio, if the compensation is to be delivered solely by the Applicants Project-led measures. However, the Secretary of State considers that compensation should be scaled to the mean impact value, which would require sufficient space for 4,029 breeding pairs for FFC SPA, and 115 pairs for the Farne Islands SPA.. It is noted that NE have indicated in its response to the first consultation [C1-012][165], that due to the package of measures proposed by the Applicants, it would be disproportionate to factor philopatry into the calculation of the required level of compensation. The Secretary of State agrees, and therefore philopatry is not considered further. NE's [REP8-054] position of using the central impact value at a 1:1 compensation ratio to define the success criteria is agreed (2,072 pairs); the Secretary of State agrees with the Applicants and the ExA that the success criteria should be developed, agreed, and monitored through the CIMP. The Applicants confirmed [PDB-006] that success criteria of predator eradication would be defined in detail post-consent in the

165 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002521-C1-012%20-%20Natural%20England%20-%20EN010125%20532559%20DBS%20SoS%20RFI%2006%20November%202025%20-NE%20Response.pdf

Guillemot [and Razorbill] CIMP through metrics including colony counts, productivity monitoring and monitoring of predator presence and biosecurity, which were welcomed by NE [REP4-026].

The Secretary of State notes that based on refined habitat estimates of the two compensation schemes being progressed by the Applicants[155], both of the currently shortlisted schemes should be able to deliver a sufficient habitat area, even assuming the lowest assumptions of nesting density. The Secretary of State considers that a sufficient level of precaution has been integrated into the calculation of the displacement impact and subsequent compensation quantum, and that the final CIMP, which is secured in the DCO, will ensure that the measures will be implemented.

The Applicants' have included the option to use the MRF, when available (see Section 9.3.3), and also to provide nesting spaces on their oANS, as an adaptive management measures. With regards to the latter, the Applicants confirmed that there would be provision for 415 guillemots, with the option to increase this capacity to 1,247, if required[155]. The Secretary of State notes that these spaces should be available three breeding seasons prior to first generation, in view of the timetable proposed for the kittiwake compensation.

9.3.3 Strategic compensation

Defra indicated in their response to the first consultation that the quantification work for the Isles of Scilly will include projected compensation values for both guillemot and razorbill, and provided a further update in December 2025 which included estimated rates of seabird recovery for the Isles of Scilly, following brown rat removal [C1-026][166]. The Secretary of State notes that for guillemot, the concluded impact of rat eradication on the guillemot population was an uplift of 2,500 pairs in 30 years, with a high level of confidence that the value would be met or exceeded. The Applicants noted in their response to the Secretary of State's consultation that they disagreed with the nesting density used to estimate the scale of compensation available on the Isles of Scilly, but also that the value which NE have concluded encompasses their preferred success value for the Project (2,207 pairs). Additionally, the Applicants indicated that the report acknowledged that that there is potential for a predator eradication scheme in the Isles of Scilly to wholly deliver NE's requested scaling of compensation measures for guillemots (7,924 pairs), which is captured in their Guillemot [and Razorbill] Compensation Plan (Revision 9)[167]. RSPB indicated in their response to the third consultation that the Applicant's reference to the potential for the Isles of Scilly to allow for growth into the 10,000s of pairs should not be relied upon. However, in its response to the Secretary of State's third consultation, NE[168] noted that while confidence is lower, there is the potential for provision of additional rat-free nesting spaces in potentially suitable habitat, that offers a reasonable prospect of delivering the number of pairs to compensate for the Dogger Bank South wind farm.

It is noted that the MRF is not presently accepting applications for guillemot compensation, however, the progress with the Isles of Scilly scheme is noted, and there remains the potential

166 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002567-C1-026%20-%20Defra%20-%20IoS%20eradication%20-%20quantification%20of%20benefit%20v3%20FINAL%201225.pdf

167 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002576-6.2.2%20Appendix%202%20Guillemot%20and%20Razorbill%20Compensation%20Plan%20(Revision%209)%20(Clean)(1).pdf

168 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002621-EN010125%20540564%20DBS%20SoS%20RFI%205%20Feb%202026%20-%20NE%20response%20060326.pdf

for the strategic measures to contribute to the compensation for the Project. The Secretary of State notes from Defra's response to his second consultation [C2-002][169] that they have funded the Royal Society of Wildlife Trusts to deliver a fully costed implementation plan for predator eradication on the Isles of Scilly and that officials are now working with the Duchy of Cornwall to secure delivery of this measure. Defra further noted that the Duchy has written to the Secretary of State confirming its intention to deliver predator reduction for seabird compensation on the Isles of Scilly, and that they were jointly exploring with the Duchy whether the compensation could be made available to offshore wind applicants through the Marine Recovery Fund. Additionally, the Secretary of State notes that the available evidence for the proposed Isles of Scilly scheme suggests this would not be sufficient on its own to deliver the scale of compensation required, however, the availability of compensation through the MRF is the responsibility of Defra. The Secretary of State notes that Part 3 of Schedule 18 of the DCO secures that, if available, a contribution to the Marine Recovery Fund may be used to wholly or partly in substitution for the Project-led compensation, or, as adaptive management.

9.3.4 Conclusion

Having reviewed all the information before him, and the progression since the close of the Examination on the compensatory measures, the Secretary of State is satisfied that the compensation level and scale of compensation required as identified are appropriate, and appropriate monitoring and adaptive management is secured to ensure the success of the measures. This conclusion is based on the delivery of one or more project led schemes (Outer Hebrides and Out Skerries), the option to contribute to the MRF when the scheme is operational, and the adaptive management provided by the oANS, all of which are secured in the DCO. The Secretary of State is confident that the Applicants' proposed measures are deliverable at a scale appropriate to the level of compensation required. Whilst the Secretary of State is content that the Applicants Project-led measures are adequate and sufficient to ensure the overall coherence of the UK NSN, he notes the ecological and other benefits of compensation at a strategic level and he encourages the Applicant to pursue strategic compensation delivered by the MRF if it becomes available to the Applicant within the requisite timeframe.

With regards to the timing of the measures, the Secretary of State considers that the Applicants should continue to progress and deliver the Project-led measures in a timescale that allows for the eradication programme to have been commenced two years in advance of the commencement of construction of Work No. 1A and 1B of the Project, unless the MRF becomes available to the Applicant within the timescales of the Project. The Secretary of State has considered the Applicants' assertion that the level of detail provided, and the conditions already in place in the DCO through Schedule 18, sufficiently secure the compensation and allow for further detail to be provided, consulted upon and approved post-consent. The Secretary of State agrees that the wording of the DCO secures the relevant plans required to implement the compensation and monitor its success, and that these will be subject to agreement with the Secretary of State and in consultation with the relevant nature conservation bodies.

The Secretary of State is satisfied that the necessary compensatory measures can be secured and delivered to protect the coherence of the UK NSN for guillemot as required by regulations 29 and 36 of the Offshore Habitats Regulations and regulations 64 and 68 of the Habitats

169 https://nsip-documents.planninginspectorate.gov.uk/published-documents/EN010125-002573-Defra%20-%20Letter%20response%20to%20DESNZ%20RFI_DBS_IoS_compensation_availability_final_300126.pdf

Regulations. He considers that Part 3 of Schedule 18 to the DCO adequately secures the further work required to progress the proposed compensation measures, including a contribution to the MRF, if available, or the approval of a final CIMP.

10 Conclusion

The Secretary of State has carefully considered all the information presented within the application, during the Examination and the representations made by all IPs, along with the ExA's Recommendation Report and the responses to the Secretary of State's further consultations. The Secretary of State concluded that likely significant effects could not be excluded for 32 sites (Table 1), when the Project is considered alone or in-combination with other plans and projects. These sites were taken forward to an AA to consider whether the Project would result in any adverse effects upon the integrity of these sites.

Having given due consideration to the information and analysis presented to him, and having made a full assessment of the potential for AEoI at each of the protected sites for which the potential for LSE was identified, the Secretary of State concludes an adverse effect on the integrity of the:

- Dogger Bank SAC: Sandbanks which are slightly covered by seawater all the time (alone and in-combination)
- Flamborough and Filey Coast SPA: breeding kittiwake (alone and in-combination), guillemot (in-combination), seabird assemblage (alone and in-combination)
- Farne Islands SPA: guillemot (in-combination)

The Secretary of State is satisfied that there are no alternatives to fulfilling the objectives of the Project and that the Project provides a benefit that is imperative to the public interest. The Secretary of State is also satisfied that the public benefits of the Project would outweigh the impacts to the Dogger Bank SAC, Flamborough and Filey Coast SPA and the Farne Islands SPA. The Secretary of State is also satisfied that necessary compensatory measures to ensure that the overall coherence of the National Site Network can be secured and delivered through the DCO as set out in Schedule 18.

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