

Rampion 2 Wind Farm Category 5: Reports

Habitats Regulations Assessment (Without Prejudice) Derogation Case (clean)

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1. Introduction

1.1 Purpose of this document

- 1.1.1 Rampion 2 Offshore Wind Farm (OWF) (hereafter referred to as “Rampion 2”) is a proposed extension of the existing Rampion Offshore Wind Farm (Rampion 1). Rampion Extension Development (RED) (‘the Applicant’) is a joint venture between RWE Renewables, and a consortium consisting of Enbridge and a Macquarie-led consortium.
- 1.1.2 The Applicant has produced a **Report to Inform Appropriate Assessment** (Document Reference: 5.9) (RIAA), which assesses the potential effects from Rampion 2 with respect to the conservation objectives of the European and Ramsar sites identified where a potential for a Likely Significant Effect (LSE) cannot be ruled out, to determine the potential for an Adverse Effect on Integrity (AEoI) alone and/or in-combination with other plans or projects. The purpose of the RIAA is to provide the information to the Competent Authority (in this case the Secretary of State (SoS) for the Department for Energy Security and Net Zero (DESNZ)), in consultation with the relevant Statutory Nature Conservation Bodies (SNCBs) (Natural England), required to enable them to undertake the Appropriate Assessment (AA).
- 1.1.3 At the conclusion of the Applicant’s RIAA it was determined that there would be no Adverse Effect on Integrity (AEoI) of any European sites. However, for the kittiwake (*Rissa tridactyla*), guillemot (*Uria aalge*) and razorbill (*Alca torda*) features of the Flamborough and Filey Coast (FFC) Special Protection Area (SPA), Natural England has advised that it cannot rule out an AEoI on the FFC in-combination with other plans and projects; despite the minimal contribution of Rampion 2 to the annual kittiwake mortality rate (0.89 kittiwake, subsequently reduced to 0.72 kittiwake per annum), guillemot mortality rate (1.26 breeding adults) and razorbill mortality rate (1.23 birds) to the assessed in-combination total for this site. Natural England’s advice also applies to guillemot mortalities (1.07 breeding adults) for the Farne Islands SPA, also in-combination.
- 1.1.1 The Applicant has therefore provided this ‘without prejudice’ Article 6(4) Habitats Regulations Assessment (HRA) derogation case to provide the SoS for DESNZ with the necessary information to support a clear and overriding case for Rampion 2 should they conclude AEoI.
- 1.1.2 The Applicant strongly believes that if the SoS finds AEoI in respect of the FFC SPA and the Farne Islands SPA then, as presented in this document, there are demonstrable imperative reasons of overriding public interest in Rampion 2 and the policy objectives it will serve, which outweighs the risk of any adverse impact on the FFC or Farne Islands SPAs.

1.2 The Proposed Development

- 1.2.1 Rampion Extension Development Limited (hereafter referred to as ‘RED’) (the Applicant) is developing the Rampion 2 Offshore Wind Farm Project (Rampion 2)

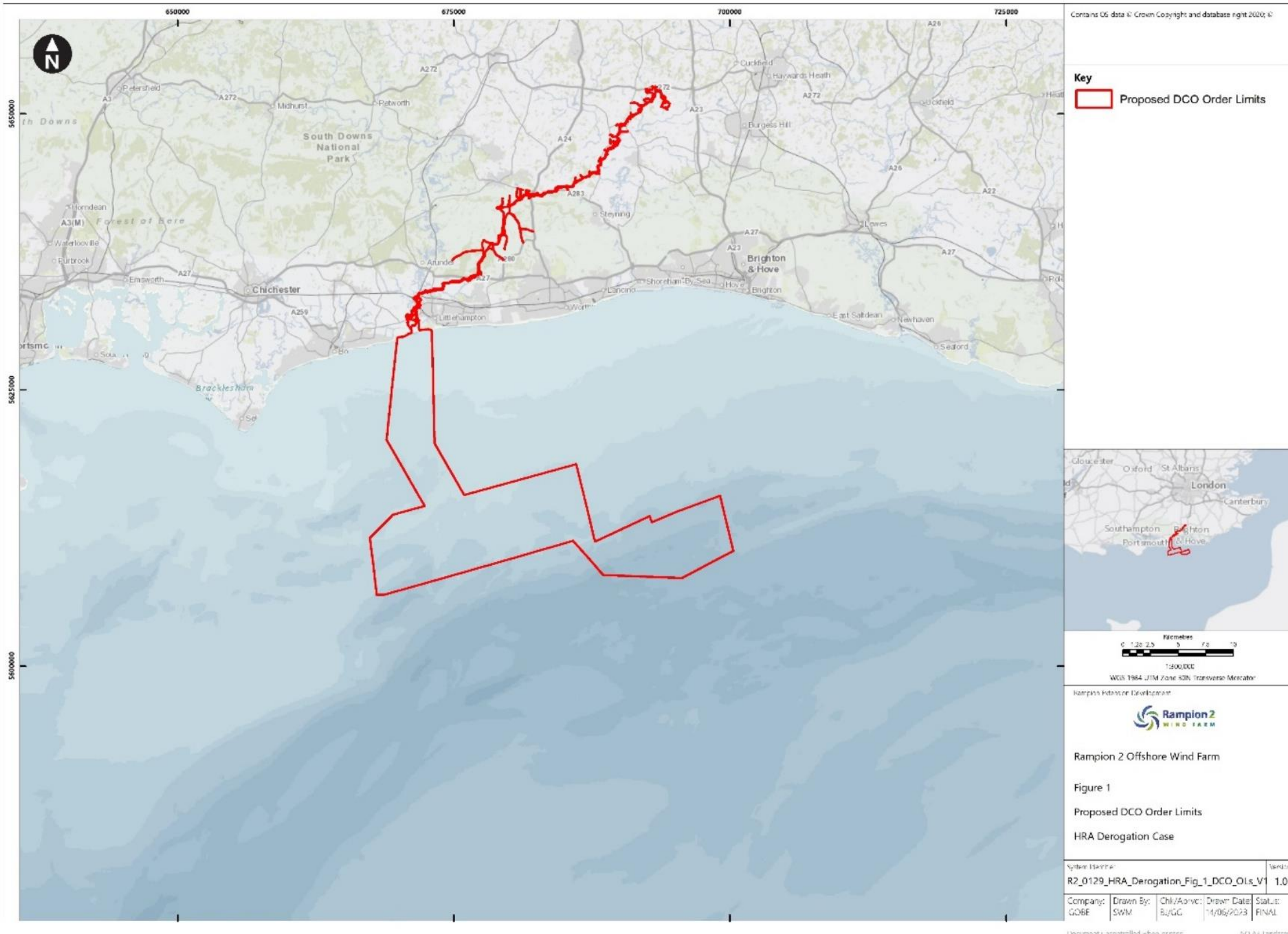
located adjacent to the existing Rampion Offshore Wind Farm Project ('Rampion 1') in the English Channel.

- 1.2.2 Rampion 2 will be located between 13km and 26km from the Sussex Coast in the English Channel and the offshore array area will occupy an area of approximately 160km².
- 1.2.3 The key offshore elements of the Proposed Development will be as follows:
- up to 90 offshore wind turbine generators (WTGs) and associated foundations;
 - blade tip of the WTGs will be up to 325m above Lowest Astronomical Tide (LAT) and will have a 22m minimum air gap above Mean High Water Springs (MHWS);
 - inter-array cables connecting the WTGs to up to three offshore substations;
 - up to two offshore interconnector export cables between the offshore substations;
 - up to four offshore export cables each in its own trench, will be buried under the seabed within the final cable corridor; and
 - the export cable circuits will be High Voltage Alternating Current (HVAC), with a voltage of up to 275kV.
- 1.2.4 The key onshore elements (landward of MHWS) of the Proposed Development will be as follows:
- a single landfall site near Climping, Arun District, connecting offshore and onshore cables using Horizontal Directional Drilling (HDD) installation techniques;
 - buried onshore cables in a single corridor for the maximum route length of up to 38.8km using:
 - ▶ trenching and backfilling installation techniques; and
 - ▶ trenchless and open cut crossings.
 - a new onshore substation, proposed near Cowfold, Horsham District, which will connect to an extension to the existing National Grid Bolney substation, Mid Sussex, via buried onshore cables; and
 - extension to and additional infrastructure at the existing National Grid Bolney substation, Mid Sussex District to connect Rampion 2 to the national grid electrical network.
- 1.2.5 A full description of the Proposed Development is provided in [Chapter 4: The Proposed Development, Volume 2](#) of the ES (Document Reference 6.2.4). With a generating capacity of over 100 megawatts (MW), Rampion 2 qualifies as a NSIP. The Planning Act (PA) 2008 is the primary legislation that establishes the legal framework for applying for, examination and determination of applications for DCOs for NSIPs.
- 1.2.6 A number of environmental assessments and surveys are required before a DCO can be granted. This includes the requirement to undertake a HRA under

Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (UK Government, 2017a, herein referred to as the “Habitats Regulations”) and Regulation 28 of the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2017 (UK Government, 2017b, herein referred to as the “Offshore Habitats Regulations”). The Applicant must therefore provide the relevant competent authority with the information it needs to undertake a Habitats Regulations Assessment (HRA) and establish the implications of the Proposed Development for sites within the National Site Network (National Site).

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Figure 1-1 Proposed DCO Order Limits



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1.3 HRA process to date

- 1.3.1 In order to undertake a HRA, the Applicant is required to present such information as the Competent Authority (in this case, the SoS), may reasonably require. This process is required to determine whether Rampion 2 may have a likely significant effect or adverse effect upon integrity of any sites within the National Site Network in accordance with the provisions of the Habitats Regulations.
- 1.3.2 Although the United Kingdom (UK) departed from the European Union (EU) on 31 December 2020 (EU Exit), the Habitats Regulations continue to provide the legislative backdrop for HRA in the UK (subject to minor changes). The legal framework, HRA process and implication of the UK's departure from the EU (EU-Exit) are discussed further in **Section 3**
- 1.3.3 The Applicant has therefore provided information to support a HRA of Rampion 2, specifically to support an Appropriate Assessment (AA) decision as documented in the **RIAA** (Document Reference: 5.9). In accordance with the Habitats Regulations, the **RIAA** (Document Reference: 5.9) considers whether Rampion 2 could result in an AEoI on a conservation site of National importance (National Site), either alone or in-combination with other plans and projects.
- 1.3.4 Information provided in the RIAA enables an assessment of each potentially affected species and the relevant European sites. The Applicant's evidence presented within the RIAA concludes that Rampion 2 will not result in an AEoI on any European sites alone or in combination with other plans or projects. However, two sites, the FFC SPA and Farne Islands SPA, are considered particularly sensitive to adverse impacts and Natural England disagreed with the Applicant's conclusion for impacts on kittiwake, guillemot and razorbill features of the FFC SPA, and the guillemot feature of the FFC SPA, in-combination (Natural England, 2021) **Figure 1-2**.
- 1.3.5 In terms of kittiwake from FFC SPA, a precedent was set in the Norfolk Boreas OWF DCO, where the SoS did not accept the Applicant's conclusion, within the RIAA, that the kittiwake population would continue to grow as a basis to exclude AEoI for Norfolk Boreas. Specifically, the SoSs HRA stated:
- “Furthermore, if the mortality from the windfarms is 432 adults per year, then the population of the SPA after 30 years will be 14.3% lower than it would have been in the absence of the Projects and the population growth rate would be reduced by 0.5%. This reduction in the population would be counter to the restore conservation objective for this feature of the SPA and would result in an adverse effect on the integrity of the site.”*
- 1.3.6 An AEoI for the guillemot feature of FFC SPA was first ruled by the SoS for Hornsea Project Four, and recently for Sheringham and Dudgeon extension projects. Both these projects are required to compensate for their full impacts on the SPA. The SoS is yet to rule AEoI for the guillemot feature of the Farne Islands SPA, however there is concern from Natural England that if Berwick Bank OWF is consented then compensation may be required for this site.
- 1.3.7 To date, an AEoI has not been ruled by the SoS for the razorbill feature of FFC SPA. However, Natural England have requested that a without prejudice case be

submitted in the event that the SoS rules an AEoI cannot be ruled out for razorbill at FFC SPA.

1.3.8 The Applicant's provision of a without prejudice derogation case for Rampion 2 therefore aligns with recent case precedent, Natural England's advice and requirements set out within the UK National Policy Statements (NPSs). There are six Energy NPSs currently designated, however those of relevance to Rampion 2 are:

- NPS for Overarching Energy (EN-1) (DECC, 2011a);
- NPS for Renewable Energy (EN-3) (DECC, 2011b); and
- NPS for Electricity Networks (EN-5) (DECC, 2011c).

1.3.9 The new versions of the NPSs also relevant to Rampion 2 are:

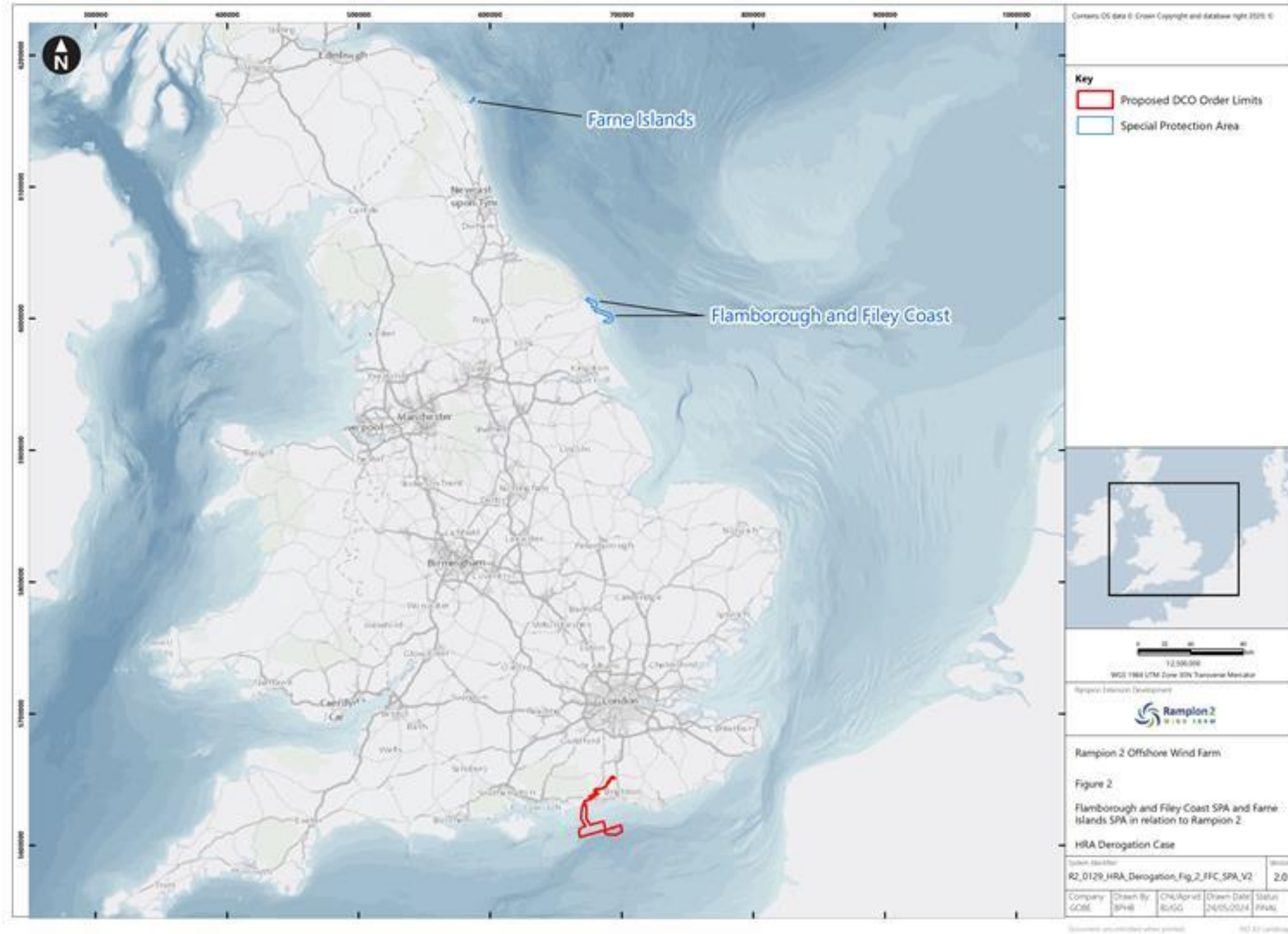
- Overarching NPS for Energy (EN-1) (DESNZ, 2024);
- NPS for Renewable Energy Infrastructure (EN-3) (DESNZ, 2024); and
- NPS Electricity Networks Infrastructure (EN-5) (DESNZ, 2024).

1.3.10 Of particular relevance to this derogation case, within the Overarching National Policy Statement for Energy (EN-1), it states that:

'If, during the pre-application stage, the SNCB [Statutory Nature Conservation Body] indicate that the proposed development is likely to adversely impact the integrity of HRA sites, the applicant must include with their application such information as may reasonably be required to assess a potential derogation under the Habitats Regulations.' (DESNZ, 2023a).

1.3.11 **Section 1.4** provides further information on derogation under the Habitats Regulations to date.

Figure 1-2 Flamborough and Filey Coast SPA and Farne Islands SPA in relation to Rampion 2



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1.4 Derogation Provisions of the Habitats Regulations and experience to date

- 1.4.1 The HRA process provides a derogation under the Habitats Regulations 2017 and the Offshore Marine Habitats and Species Regulations 2017 that allows projects that may have an AEoI to be consented if three tests are met in a sequential order:
- there are no “*Alternative Solutions*” to the project;
 - there are “*imperative reasons of overriding public interest*” (IROPI) for the project to proceed; and
 - any necessary compensatory measures are secured to ensure that the overall coherence of the network of European sites is protected.
- 1.4.2 The derogation tests thereby underpin a four-step process and are hereafter referred to as the “*HRA Derogation Provisions*” (further detailed in **Section 2: The legal framework and guidance**).
- 1.4.3 In the UK, as of June 2024, there have been seven OWF applications which have included “Without Prejudice” or “Shadow” HRA Derogation Cases as part of their consent applications, all of which are on the East Coast of England, as submitted to the Planning Inspectorate (“PINS”) on behalf of the SoS for Business, Energy and Industrial Strategy ((BEIS), now the Department for Energy Security and Net Zero (DESNZ)). Of these, all have received consent to date as summarised in **Section 2**, with reference made to these throughout this document.

1.5 The applicant’s primary position and scope of this submission

- 1.5.1 The Applicant accepts that the application of the HRA Derogation Provisions could be necessary, notwithstanding the **RIAA** (Document Reference: 5.9) conclusions of no potential for an increased risk of AEoI, and therefore has provided the information necessary to support a clear and overriding HRA derogation case for Rampion 2, which could be relied upon by the SoS if required.
- 1.5.2 The purpose of this document is to provide, without prejudice, information to demonstrate that the derogation tests will be met for Rampion 2 if it is necessary to resort to them to authorise the Proposed Development.
- 1.5.3 The scope of the derogation case has been limited to the FFC SPA (kittiwake, guillemot and razorbill features), and Farne Islands SPA (guillemot feature). These sites/ features are considered sensitive to adverse impacts on species populations and Natural England’s advice is therefore that information should be provided to inform/support the SoS’s derogation process, if needed.

1.6 Summary of consultation

- 1.6.1 The Applicant recognises the importance of engaging with the relevant stakeholders with respect to derogation and the development of any potential compensation measures, as their knowledge is important. This is especially

relevant for engagement with Natural England (the relevant SNCB) during the DCO pre-application phase (now complete).

- 1.6.2 The Applicant has therefore sought the advice of key stakeholders and kept them updated on project developments. The Applicant has engaged openly through consultations and a series of online Evidence Plan Process (EPP) Expert Topic Group (ETG) meetings, and other relevant meetings, from December 2020 to April 2024. Attendees have included Natural England (the SNCB), the Marine Management Organisation (MMO), Centre for Environment, Fisheries and Aquaculture Science (Cefas), Sussex Ornithology Society, Sussex Wildlife Trust, The Wildlife Trust, and the Royal Society for the Protection of Birds (RSPB).
- 1.6.3 Further to the above stakeholder engagement, the Applicant held a 'Kittiwake Strategic Compensation Meeting' with Natural England in September 2022, with the aim being to focus discussion on the potential need for HRA derogation and relevant compensatory measure options for kittiwake.
- 1.6.4 Further, in terms of guillemot and razorbill, the Applicant held a meeting with Natural England on 17th April 2024 to discuss ornithology, where Natural England requested that a **Guillemot and Razorbill Evidence and Roadmap [REP3-060]** also be developed, to accompany this without prejudice derogation case.
- 1.6.5 Further details of consultation carried out (including the Applicant's responses) is provided in the **Consultation Report** (Document Reference: 5.1).

1.7 The structure of this document

- 1.7.1 This document is structured as follows:
- **Sections 2 – The legal framework and guidance** and **Section 3 Impacts on National Site features**: provide the legal context and HRA process surrounding the application of derogation sets out an overview of the legal context and HRA process; relevant National Site features; and potential impacts on the relevant features of those sites (SPAs, SACs and Ramsar Sites);
 - **Section 4 – Consideration of Alternatives**: comprises a demonstration of No Alternative Solutions. This section provides evidence to show whether the first derogation test has been met. It examines whether there are any feasible Alternative Solutions to Rampion 2 that meet its core project objectives and concludes that there are none;
 - **Section 5 – Imperative reasons of overriding public interest (IROPI)**: comprises a demonstration of IROPI. This section provides evidence to show whether the second derogation test has been met. It identifies the IROPI that would enable a decision by the SoS to authorise Rampion 2 if they were to conclude AEoI;
 - **Section 6 – Compensatory Measures**: comprises a summary of potential Compensatory Measures;
 - **Section 7 – Conclusion**;
 - **Section 8 – Glossary of terms and abbreviations**; and

- **Section 9 - References.**

1.8 Supporting information

1.8.1 This document refers to wider material that has been submitted as part of the DCO Application. For brevity, this information is not reproduced in full here, where references are made to material submitted as part of the DCO Application. The full details for all other material referenced within this document are provided in **Section 9: References**, however a list of the documents supporting the without prejudice Derogation Case is provided below:

- **Draft wording for derogation conditions** (Schedule 17 of the **draft Development Consent Order (DCO)** (Document Reference: 3.1))
- **Report to Inform Appropriate Assessment** (Document Reference: 5.9) and associated appendices (A-I);
- **Consultation Report** (Document Reference: 5.1);
- **Commitments Register** (Document Reference: 7.22);
- **Chapter 3: Alternatives, Volume 2** of the ES (Document Reference: 6.2.3);
- **Chapter 12: Offshore and intertidal ornithology, Volume 2** of the ES (Document Reference: 6.2.12) and associated appendices (**Chapter 12.1: Offshore and intertidal ornithology baseline technical report, Volume 2** to **Chapter 12.5: Offshore and intertidal ornithology population viability analysis, Volume 4** of the ES (Document References: 6.4.12.1- 6.4.12.5)); and
- **Chapter 17: Socio-economics, Volume 2** of the ES (Document Reference: 6.2.17).



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2. The legal framework and guidance

2.1 Introduction

- 2.1.1 The legal framework upon which the without prejudice derogation case for Rampion 2 is based, is detailed within this Section. **Section 2.2: EU Habitats Directive** provides an overview of the original legislation of Council Regulations 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the ‘Habitats Directive Regulations’) and **Section 2.3: UK legislation** provides an overview of how this is now transposed to UK law through the Habitat Regulations (1994 – 2017).
- 2.1.2 **Section 2.4: Overview of HRA stages 1 and 2** provides an overview of the HRA process in reference to the primary legislation of relevance to Rampion 2, which is Regulation 29 and 36 of Offshore Habitats Regulations (UK Government, 2017b). First, this briefly outlines HRA stages 1 and 2, which provide screening for likely significant effects (LSE) and an appropriate assessment (AA). These inform but are not part of the derogation case.
- 2.1.3 **Section 2.5 presents and Overview of HRA stages 3 and 4** in more detail including: Assessment of Alternatives and consideration of IROPI and compensatory measures (as formed as part of the derogation case). These provide the relevant legislation and ensure a more complete understanding of requirements by reference to a series of government guidance documents (2022), as well as the seven previous UK OWF derogation cases (2013 – 2024) that have successfully passed the HRA derogation tests.

2.2 EU Habitats Directive

- 2.2.1 The EU Habitats Directive (Council Directive 92/43/EEC, the Habitats Directive) and, by virtue of Article 7 of that Directive, also the Wild Birds Directive (Directive 2009/147/EC) (the Birds Directive), seek to conserve particular natural habitats and wild species across the EU by, amongst other measures, establishing a network of sites (European sites); and a legal framework for species requiring strict protection (European protected species). The aim is to ensure the long-term survival of viable populations of Europe's most valuable and threatened species and habitats, to maintain and promote biodiversity.
- 2.2.2 The requirements concerning the authorisation of plans or projects which may adversely affect European sites are contained in Articles 6(3) and 6(4) of the EU Habitats Directive.

Table 2-1: EU Habitats Directive 92/43/EEC

Article 6(3)

“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4 (i.e., Art. 6(4)), the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

Article 6(4)

“If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission to other imperative reasons of overriding public interest.”

2.3 UK legislation

2.3.1 Articles 6(3) and 6(4) of the EU Habitats Directive specifically are transposed by the following regulations in the UK (prior to the UK's withdrawal from the EU), collectively known as the Habitats Regulations:

- Regulation 64 and 68 of Habitats Regulations 2017 (UK Government, 2017a); and
- Regulation 29 and 36 of Offshore Habitats Regulations 2017 (UK Government, 2017b).

2.3.2 Since the UK's withdrawal from the EU (European Union (Withdrawal) Act 2018 (as amended)), the HRA process implemented under the Habitats Regulations is subject to a few minor changes, such as:

- European sites in the UK are termed “European sites” and are collectively termed the “National Site Network”, including those that formed part of the Natura 2000 network immediately before 31 December 2020 plus any subsequently designated by the UK Government;

- The UK Department for Environment Food and Rural Affairs (Defra) provides guidance on how Government will adhere to EU guidance on meeting the management objectives for what is now the UK’s National Site Network (the “Network Objectives”) (DEFRA, 2021); and
- Section 6(2) of the EU (Withdrawal) Act 2018 (as amended) establishes that UK courts “*may have regard to anything done by a EU entity [i.e., the EC]...so far as it is relevant*”.

2.3.3 In the UK, the Habitats Regulations define European sites as SACs, SPAs, Sites of Community Importance (SCI) and candidate SACs. Potential SPAs (pSPAs) and possible SACs (pSACs) and Ramsar sites (as designated under the Ramsar Convention) are also afforded the same protection as European sites by UK Government policy.

2.4 Overview of HRA stages 1 and 2

2.4.1 HRA is generally described as a sequential process, as Regulation 36(1,2) of the Offshore Habitats Regulations 2017 is consequent upon and follows from a negative outcome to Regulation 29(1,2) (UK government, 2017). In practice, there can be a degree of overlap between stages and the process can be iterative. There are four broad stages for HRA required in Regulation 29(1,2) and 36(1,2) as shown in **Table 2-2**. These ‘derogation tests’ are hereafter referred to as ‘derogation’.

Table 2-2 The four stages of HRA in the Offshore Habitats Regulations 2017

Habitats Regulations Provision	HRA Stage
Regulation 29(1,2)	Stage 1 - Screening for Likely Significant Effects (LSE) Stage 2 – Appropriate Assessment (AA)
Regulation 36(1,2)	Stage 3 – Consideration of alternatives Stage 4 – Consideration of IROPI and compensatory measures

2.4.2 For stages 1 and 2, the Habitats Regulations require all competent authorities to consider whether any plan or project will have a LSE on a National Site. LSE is determined through a HRA Screening Report. Where LSE cannot be ruled out, the potential for an AEoI is determined through an AA. Both the HRA Screening Report and AA are together known as an HRA. The Habitats Regulations underlies the sequential decision-making tests applied under the HRA process to projects likely to significantly affect European sites.

2.4.3 HRA stages 1 and 2 require that any project (or plan) likely to have a significant effect on a National Site (alone or in combination) must be subject to AA of the implications for that National Site in view of the site's conservation objectives. The

exception to this requirement is when the project is directly connected with or necessary to the management of the European sites in question; however, this is not the case for Rampion 2.

- 2.4.4 The RIAA and accompanying screening and integrity matrices are required to set out the methodology and evidence in respect of HRA stages 1 and 2, applying the above legal principles. The 'shadow' AA undertaken by the Applicant is documented in the **RIAA** (Document Reference: 5.9) and is referred to throughout this document as it informs stages 3 and 4.
- 2.4.5 A project must not be authorised if it is concluded, based on the AA, that there would be an AEoI of any National Site, unless the requirements of stages 3 and 4 are satisfied. HRA stages 3 and 4 are directly applied to the derogation case and the process which is followed, supported by legislation and guidance, is detailed separately below.
- 2.4.6 It is worth noting that the Planning Inspectorate's recently updated Advice Note Ten (Planning Inspectorate, 2022) incorporates these stages (3 and 4) into a single stage 3. However, for the purpose of this document stages 3 and 4 remain separate. This does not make a difference to the outcome of this report.

2.5 Overview of HRA stage 3 and 4

- 2.5.1 The Habitats Regulations acknowledge that there may be IROPI for some plans and projects to proceed where the public interest outweighs possible harm to a European site (National Site), provided that harm is adequately compensated. The regulations therefore allow projects that may have an AEoI to be consented. In such a scenario, a derogation could only be provided if three tests are met in a sequential order. These are stages 3 and 4 and together form the derogation process, as follows:
- there are no Alternative Solutions to the project;
 - there are IROPI for the project to proceed; and
 - Compensatory Measures are secured that ensure that the overall coherence of the network of European sites is protected.
- 2.5.2 These 'derogation tests' are underpinned by Regulations 29 and 36 of the (UK) Offshore Habitats Regulations, as presented in **Table 2-3**. These are hereafter referred to as "derogation".
- 2.5.3 The requirement and nature of derogation in stages 3 and 4 are informed by the extent of any AEoI identified through stages 1 and 2.

Table 2-3 Alternative Solutions, IROPI and Compensation Measures, as set out in the (UK) the Offshore Habitats Regulations.

Regulation	Considerations of HRA Stages 3 and 4
29 (1)	<p><i>“If it is satisfied that, there being no alternative solutions, the plan or project referred to in regulation 28(1) must be carried out for imperative reasons of overriding public interest (which, subject to paragraph (2), may be of a social or economic nature), the competent authority may agree to the plan or project notwithstanding a negative assessment of the implications for the site.”</i></p>
29 (2)	<p><i>“Where the site concerned hosts a priority natural habitat type or a priority species, the reasons referred to in paragraph (1) must be either - (a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or (b) any other imperative reasons of overriding public interest.”</i></p>
36 (1)	<p><i>“This regulation applies where, notwithstanding a negative assessment of the implications for a European offshore marine site or European site - (a) a plan or project is agreed to in accordance with regulation 29; or (b) a decision, or a consent, permission or other authorisation, is affirmed on review in accordance with regulations 29 and 34(3).”</i></p>
36 (2)	<p><i>“The appropriate authority must secure that any necessary compensatory measures are taken to ensure that the overall coherence of Natura 2000 is protected.”</i></p>

2.6 Guidance

2.6.1 The Applicant has drawn on a wide range of guidance (see **Section 9: References**) as listed below:

UK Guidance

- Department for Environment, Food and Rural Affairs (Defra) (2012). Habitats Regulations: guidance on the application of article 6(4);
- Defra (2021). Best practice guidance for developing compensatory measures in relation to Marine Protected Areas; and

- David Tyldsley and Associates (DTA) (2021b) The Habitats Regulations Assessment Handbook.

EU Guidance

- European Commission (EC) (2010). Wind energy developments and Natura 2000;
- EC (2018). Managing Natura 2000 Sites (“MN 2000”): The provisions of Article 6 of the Habitats Regulations 92/43/EEC; and
- EC (2020b). Guidance document on wind energy developments and EU nature legislation.

2.7 UK planning decisions

2.7.1 The UK planning decisions have been used as a guide on the validity of types of evidence and scenarios, and also draw on the various guidance itself (e.g. Defra 2012). There have been seven derogation cases consented as of June 2024 by the UK’s SoS for Business, Energy and Industrial Strategy (BEIS)/ SoS for Energy and Net Zero. These include:

- Hornsea Three OWF (Hornsea Three) (BEIS, 2020a);
- Norfolk Boreas OWF (Norfolk Boreas) (BEIS, 2021a);
- Norfolk Vanguard (BEIS, 2022a);
- East Anglia ONE North (BEIS, 2022b); and
- East Anglia TWO (BEIS, 2022c);
- Hornsea Four OWF (DESNZ, 2023b); and
- Sheringham and Dudgeon OWF Extension Projects (DESNZ, 2024).

2.7.2 All seven of these OWF projects are located off the East Coast of England in the North Sea and are referred to throughout this document for the element relevant to each section.

2.7.3

3. Impacts on national site features

3.1 Overview

- 3.1.1 This without prejudice derogation case has been developed with reference to the potential impacts on the kittiwake, guillemot and razorbill features of the FFC SPA, and the guillemot feature of the Farne Islands SPA.
- 3.1.2 Detailed information about the National Site, the relevant feature affected, the conservation objectives, including the range of ecological attributes that are most likely to contribute to the site's overall integrity and the evidence base are submitted with the DCO Application. Most notably within the **RIAA** (Document Reference: 5.9) and associated appendices (A-I) and **Environmental Statement (ES), Volume 2** (ES) chapters (Document References 6.2.1 to 6.2.31) referenced therein and **ES Appendices, Volume 4** (Document References 6.4.1.1 to 6.4.29.1). The purpose of the without prejudice derogation case is not to reiterate this information. However, a brief overview of the impacts identified for the above listed species is provided in this Section.

3.2 Types of impacts

- 3.2.1 The main two impacts identified for seabird species are as follows:
- **Collision** – there is potential risk to birds from OWFs through collision with wind turbine generators (WTGs) and associated infrastructure. There is an increase in potential risk of collision with wind turbines if they are in areas of high bird densities in which there is a high level of flight activity. That high level of flight activity can be associated with locations where food supplies are concentrated or with areas where there is a high turnover of individuals (possibly commuting daily between nesting and feeding areas or passing through the area on seasonal migrations). The potential collision risk was estimated using collision risk modelling (CRM).
 - **Displacement** – the presence of WTGs and the construction and decommissioning of WTGs, substations and cable laying can directly disturb and displace seabirds that would normally reside within and around the area of sea where an OWF is operating. This in effect represents indirect habitat loss, potentially reducing the area available for those seabirds sensitive to disturbance to forage, loaf and / or moult in the way that they are currently able to within the area.
- 3.2.2 Kittiwake were assessed for collision risk only because they are not sensitive to displacement from OWFs (Bradbury *et al.*, 2014). Both guillemot and razorbill were not assessed for collision risk due to their low flight heights. However, both auk species were assessed for displacement impacts because there is some evidence that they are prone to displacement from OWFs. Displacement was assessed using a simple 'matrix' approach in line with Natural England guidance (Parker *et al.*, 2022c).

3.3 Impacts on Kittiwake

- 3.3.1 The **RIAA** (Application Reference Number 5.9) concludes that Rampion 2 will not lead to an AEol in respect of the kittiwake feature of the FFC SPA.
- 3.3.2 As detailed in **Section 8.5** of the **RIAA** (Document Reference: 5.9), the contribution from Rampion 2 to the annual kittiwake mortality rate (to collision risk) of 0.72 kittiwake per annum represents a very small and non-material contribution to the in-combination total of just 0.25%. The **RIAA** (Document Reference: 5.9) concludes therefore that there is no potential for an increased risk of an AEol to the conservation objectives of the kittiwake feature of the FFC SPA in relation to collision effects from Rampion 2 in-combination with other OWFs.
- 3.3.3 Notwithstanding the **RIAA** (Document Reference: 5.9) conclusion of no AEol, the FFC SPA (particularly the kittiwake feature) is considered particularly sensitive to adverse impacts and Natural England's advice is therefore that information should be provided to inform/ support the SoS's derogation process, if needed.

3.4 Impacts on Guillemot

- 3.4.1 The **RIAA** (Application Reference Number 5.9) concludes that Rampion 2 will not lead to an AEol in respect of the guillemot feature of the FFC SPA, or the guillemot feature of the Farne Islands SPA.
- 3.4.2 As detailed in **Section 8.5** of the **RIAA** (Document Reference: 5.9), the contribution from Rampion 2 to the annual guillemot mortality rate (from displacement) of 1.26 and 1.07 breeding adults from the FFC SPA and the Farne Islands SPA, respectively. This represents a Rampion 2 contribution of just 0.35% of the in-combination total at FFC SPA and 1.41% of the in-combination total at Farne Islands SPA. The **RIAA** (Document Reference: 5.9) concludes therefore that there is no potential for an increased risk of an AEol to the conservation objectives of the guillemot feature of the FFC SPA and Farne Islands SPA in relation to collision effects from Rampion 2 in-combination with other OWFs.
- 3.4.3 Notwithstanding the **RIAA** (Document Reference: 5.9) conclusion of no AEol, Natural England's advice is that information should be provided to inform/ support the SoS's derogation process, if required.

3.5 Impacts on Razorbill

- 3.5.1 The **RIAA** (Application Reference Number 5.9) concludes that Rampion 2 will not lead to an AEol in respect of the razorbill feature of the FFC SPA.
- 3.5.2 As detailed in **Section 8.5** of the **RIAA** (Document Reference: 5.9), the contribution from Rampion 2 to the annual razorbill mortality rate (from displacement) of 1.23 breeding adults from the FFC SPA. This represents a Rampion 2 contribution of just 0.52% of the in-combination total at FFC SPA. The **RIAA** (Document Reference: 5.9) concludes therefore that there is no potential for an increased risk of an AEol to the conservation objectives of the razorbill feature of the FFC SPA and Farne Islands in relation to collision effects from Rampion 2 in-combination with other OWFs.

- 3.5.3 Notwithstanding the **RIAA** (Document Reference: 5.9) conclusions of no AEol for all features, Natural England's advice is that information should be provided in a without prejudice derogation case to inform/ support the SoS's derogation process, if required.

3.6 Conservation objectives

- 3.6.1 The potential impact on kittiwake, guillemot and razorbill from the FFC SPA, and guillemot of the Farne Islands SPA, was determined through considering the likely effect on the following site conservation objectives (Natural England, 2019).

“Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Regulations, 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 population of each of the qualifying features; and*
- *The distribution of the qualifying features within the site.”*

- 3.6.2 The **RIAA** (Document Reference: 5.9) conclusion of no AEol for the FFC SPA and the Farne Islands SPA was based on the ability to rule out an adverse effect from Rampion 2, either alone or in combination with other projects/ plans, on the above listed conservation objectives for the site.

- 3.6.3 However, this without prejudice derogation case has been produced in response to Natural England's advice that they are unable to rule out an AEol of the kittiwake, guillemot and razorbill populations of FFC SPA and the guillemot population of Farne Islands SPA, therefore undermining **“The population of each of the qualifying features”** conservation objective.

4. Consideration of alternatives

4.1 Introduction

Overview

- 4.1.1 **Sections 2-3** of this without prejudice derogation case has set out the legal and regulatory background to derogation. Evidence is presented within the DCO Application and also summarised in the above sections of the reasonable worst-case potential impact on the kittiwake, guillemot and razorbill features of the FFC SPA, and the guillemot feature of the Farne Islands SPA.
- 4.1.2 **Section 4** (this part) of the without prejudice derogation case now examines the need for the Rampion 2 and whether there are any feasible Alternative Solutions to the Proposed Development. It is demonstrated with evidence to the SoS that there are no Alternative Solutions which meet Rampion 2's objectives.
- 4.1.3 It is of note that the “need” for Rampion 2 presented in this section, overlaps to some extent with the IROPI detailed in **Section 5**. Both consider climate change and national actions and policies. However, the IROPI focuses further on national imperative and specific needs of the public, whilst the “need” that informs the assessment of alternatives, has greater emphasis on technology and carbon neutral power capacity required to meet national targets. Where greater detail is provided in another section, this has been referred to.
- 4.1.4 A large range of alternatives have been identified, considered, and discounted. These range from “doing nothing”, to alternative sites, routes, designs, scales and working methods.

Content and structure

- 4.1.5 The approach taken follows the legal context and HRA process surrounding the application of derogation, together with guidance and case history, as set out in **Section 23**. With limited prescriptive legislation for Alternative Solutions, the approach adopted by the Applicant has been principally guided by UK and EC guidance and opinions, as well as UK planning decisions.
- 4.1.6 Recognising that the case for Alternative Solutions can be a multi-staged process, the Applicant has adopted the four principal steps set out below which consider the potential Alternative Solutions in a structured and sequential process:
- **Step 1:** Define the objectives or purpose of the project and the problem it is causing that needs to be solved, i.e. the harm that it would cause to the integrity of a European Site;
 - **Step 2:** understand the need for the project;
 - **Step 3:** Are there financially, legally, and technically feasible alternative solutions; and

- **Step 4:** Are there alternative solutions with a lesser effect on the integrity of the European Site.

4.1.7 The assessment of Alternative Solutions is supported particularly by ‘The Need’ for Rampion 2, which is provided in **Section 4.3: Step 1 – the core objectives of Rampion 2** below.

4.2 Step 1 - the core objectives of Rampion 2

4.2.1 It is clear from the need described in **Section 4.3: The Need**, that offshore wind must be deployed urgently and at scale.

4.2.2 To demonstrate project need, the David Tyldesley Associates (DTA) HRA Handbook considers the following four objectives as a “helpful starting point”, based on Hornsea Three objectives:

- *“To generate low carbon electricity from an OWF in support of the decarbonisation of the UK electricity supply;*
- *To export electricity to the UK National Grid to support UK commitments for offshore wind generation and security of supply;*
- *To optimise generation and export capacity within the constraints of available (UK) sites and onshore transmission infrastructure; and*
- *To deliver a significant volume of (UK) offshore wind in the 2020s.”*

4.2.3 Whilst the above four objectives are a good starting point, the following additional objectives are also relevant to Rampion 2 (as an Extension project):

- to maximise renewable energy generation at optimal UK seabed locations; and
- to maximise the use of existing infrastructure.

4.2.4 These six objectives provide a set of criteria for demonstrating Rampion 2’s contribution towards key public-interest outcomes such as:

- decarbonisation;
- maximising provision of Renewable/ Wind Generated Electricity; and
- Electricity Supply Resilience.

Relevant works and residual potential harm

4.2.5 At the conclusion of the **RIAA** (Document Reference: 5.9) it was determined that there would be no AEoI of any European sites. However, for the kittiwake, guillemot and razorbill features of the FFC SPA, and the guillemot feature of the Farne Islands SPA, Natural England has advised that it cannot rule out an AEoI in-combination with other plans and projects.

4.2.6 The evidence and submissions concerning the residual potential impacts on kittiwake, guillemot and razorbill of this site are provided in **Section 3: Impacts on national site features** of this document. To re-iterate, the predicted contribution from Rampion 2 to an in-combination effect is considered minimal for kittiwake (0.72 breeding adults), guillemot (1.26 breeding adults at FFC SPA and 1.07 breeding

adults at Farne Islands SPA) and razorbill (1.23 breeding adults). Therefore a without prejudice derogation case is being presented to address the risk that the SoS disagrees with the **RIAA** (Application Reference Number 5.9) conclusions.

- 4.2.7 It is important to establish the context in which the following considerations and tests are applied. Rampion 2's predicted in-combination contribution across all projects is considered insignificant in relation to other OWF projects where derogation has been necessary (see **Section 3** for further details).

4.3 Step 2 – The need

Approach

- 4.3.1 This Step identifies the need / problems that the project is designed to address / solve.

Clear and urgent need for Rampion 2

- 4.3.2 With a current estimated capacity of 1200MW, Rampion 2 will make meaningful and timely contributions to UK decarbonisation and security of supply, while significantly contributing to lower bills for consumers throughout its operational life, thereby addressing all important aspects of existing and emerging UK Government policy.

- 4.3.3 The urgent need for Rampion 2, as detailed within this section, is encompassed by five clear requirements:

- **Decarbonisation**: Rampion 2 will deliver significant quantities of low-carbon electricity from as early as the late 2020s. This is in line with the UK's Committee on Climate Change (CCC)'s recent identification of the need for urgent action to increase the pace of decarbonisation in the Great Britain (GB) electricity sector (CCC, 2022).
- **Wind generated electricity**: Greater energy generation from offshore wind is critical for both the reduction of electricity related emissions, as well as providing a timely contribution to a massive increase in electricity demand due to electrification of transport, heat and industrial demand. A step change in offshore wind has been led by the government capacity targets of 50GW from offshore wind 2030 (UK Government, 2022).
- **Resilience of electricity system**: Rampion 2 will make a significant contribution to the UK's energy security from the late 2020s. By being connected at the transmission system level, Rampion 2 will play an important role in the resilience of the GB electricity system from an adequacy and system operation perspective.
- **At scale**: Rampion 2 is a substantial infrastructure asset capable of delivering significant quantities of low carbon electricity. Rampion 2 is expected to provide enough green electricity to power more than one million UK homes, maximising

the capacity of generation in the wind-rich, accessible, and technically deliverable proposed location, to the benefit of all UK consumers.

- **Competitive:** The highly competitive Contract for Difference (CfD) allocation in 2019 specifically accelerated the deployment of offshore wind, with costs falling by two thirds in the last five years. Rampion 2 would therefore provide highly competitive electricity compared to conventional and low-carbon generation, both in GB and more widely.

Decarbonisation

- 4.3.4 Decarbonisation is the act of reducing the carbon footprint (primarily in the form of greenhouse gas emissions) arising from the use of energy in society, to reduce the warming impact on the global climate. Rampion 2 is a major renewable energy infrastructure project with an anticipated capacity of up to 1200MW of low-carbon energy, which will provide a significant contribution towards the process of decarbonisation (by around 1.8 million tonnes per year) of energy consumption in the UK, as part of a far greater global aim to address climate change.
- 4.3.5 Human-induced warming has reached approximately 1°C above pre-industrial levels and without a significant and rapid decline in emissions across all sectors, global warming is not likely to be contained (IPCC, 2021). The impacts of climate change are global in scope and unprecedented in human existence. Decarbonisation is already a global challenge, but our efforts, and those of future generations, will need to accelerate if urgent and meaningful actions are not set in motion now so that they can deliver in the critical 2020s and beyond (further consideration on the global imperative is provided in **Section 5**).
- 4.3.6 Any delay in reducing carbon emissions today results in greater carbon emissions to the atmosphere, higher global temperature rises and an increased level of and speed of action required to halt impacts. A rise in global temperatures above 1.5°C has potential to cause irreversible climate change, the potential for widespread loss of life and severe damage to livelihoods. Yet, greenhouse gases projected at a global scale (using Nationally Determined Contribution (NDCs)) are now set to exceed 1.5°C by 2030 and look increasingly likely to exceed 2°C after 2030 (IPCC 2021). Therefore, any delays incurred now, make the challenge significantly more difficult for the years ahead.
- 4.3.7 As such, the UK, has declared, in common with many other countries, that we face a global “climate change emergency” (UK Parliament, 2019). By definition, an emergency is a grave situation that demands an urgent response and legal obligations have been committed to as follows:
- International: the United Nations Framework Convention on Climate Change led Paris Agreement (2015); and
 - UK: the Climate Change Act 2008 (as amended) and Glasgow Climate Pact (2021) (including Scotland and UK).
- 4.3.8 These legal instruments provide the commitments to become carbon neutral, i.e., to reach “Net Zero” by the middle of the 21st century internationally, by 2050 in the UK; and with interim targets. However, the UK is not currently on track to meet the

fourth (2023-2027) or fifth (2028-2032) carbon budgets and requires more challenging measures (CCC 2020; CCC undated).

- 4.3.9 Decarbonisation cannot be allowed to fail, and urgent actions are required in the UK and abroad, to keep decarbonisation on track and limit global warming. To meet the Net Zero target, a radical transformation to our national energy ecosystem is required, meaning even more low-carbon, wind and solar generation capacity than even the most ambitious scenarios currently envisage, will be required to meet the UK's legally binding targets as set out by the Climate Change Act 2008 (as amended). Rampion 2 is designed to meet this imperative and enacts such fundamental and urgent national objectives articulated at the highest level in legislation and policy documents.

Wind Generated Electricity

The Need for Offshore Wind

- 4.3.10 Offshore wind generation is an essential element of the UK's response to the climate emergency and Rampion 2 is particularly well placed to generate low carbon electricity from the plentiful wind in its surrounding waters.
- 4.3.11 The adoption of the Net Zero commitments requires a substantial reduction in the carbon emissions from transport, heat and industrial emissions. This in turn is expected to create a significant and additional demand for low-carbon electricity in the 2030s and 2040s. This additional demand places a new urgency on the development of new and additional sources of low-carbon electricity that must be established in the 2020s to meet the 2050 target for Net Zero, as well as interim targets. As such, the Clean Growth Strategy (BEIS 2017) provides measures to decarbonise all sectors of the UK economy through the 2020s and beyond. This includes an ambitious Sector Deal for offshore wind.
- 4.3.12 Greater energy generation from offshore wind is therefore important not only to reduce electricity-related emissions, but also to provide a timely next-step contribution to a future generation portfolio which is capable of supporting the massive increase in electricity demand, which is expected because of decarbonisation through-electrification of transport, heat and industrial demand. This requires urgent action at an unprecedented pace, with analysis of the National Grid Electricity System Operator (NGESO) data identifying that net negative emissions are required to ensure meeting the UK net zero target for 2050 (National Grid ESO, 2022).

UK Policy Framework

- 4.3.13 In the UK, specific need for offshore wind was established by the Ten Point Plan (BEIS, 2020b) and committed to in the UK Offshore Wind Sector Deal (BEIS 2019), with a target of 40GW powered by offshore wind by 2030. This was further reiterated in the 2020 Energy White Paper (BEIS, 2020c) and the UK Government's Net Zero Strategy for the UK, Build Back Greener (BEIS, 2021b).
- 4.3.14 However, the draft National Policy Statement (NPS) EN-1 (DESNZ, 2023a) set out a need for substantially more installed offshore capacity to achieve Net Zero by 2050 and the target has since increased to 50GW in the Prime Minister's British Energy Security Strategy (UK Government, 2022), with an aim for 5GW from

floating wind (HM Government 2022). This pledge represents scaling up the UK's current installed offshore wind capacity by a factor of almost five times within the next eight years (to 2030) and reflects the Government's aim to accelerate its journey to deliver Net Zero greenhouse gas emissions by 2050.

- 4.3.15 The draft NPS EN-1 (DESNZ, 2023a), states that there is a critical national priority (CNP) for the provision of nationally significant new offshore wind infrastructure (and supporting onshore and offshore network infrastructure). The CNP is elaborated on within EN-3, where it states that subject to any legal requirements, the urgent need for CNP Infrastructure to achieving our energy objectives, together with the national security, economic, commercial, and net zero benefits, will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy. The Government strongly supports the delivery of CNP Infrastructure and it should be progressed as quickly as possible.
- 4.3.16 Build Back Greener goes on to recommend actions to be taken so that by 2035, all the UK's electricity will come from low carbon sources, including offshore wind. These ambitions are further drawn on in the currently drafted National Policy Statements for England and Wales (BEIS, 2021b; BEIS, 2021c). The National Infrastructure Commission (NIC) has recently increased its recommended UK renewables deployment target from 50% to 65% by 2030 (NIC, 2020).
- 4.3.17 However, NGENSO goes further in detailing the future capacity required in the UK. NGENSO's Future Energy Scenarios (FES) details that to achieve Net Zero targets, offshore wind capacities will be required at 38 – 47GW in 2030, 68 – 83GW in 2040, and 87 – 113GW by 2050 (National Grid, 2021a). In every scenario, a pathway to Net Zero includes a significant increase of offshore wind capacity beyond that predicated in the Sector Deal.
- 4.3.18 Therefore, planning for a much larger offshore wind capacity than provided for in the various targets is necessary to meet Net Zero, as now reflected in the UK target for 50GW. This increased target responds to the UK Climate Change Committee (CCC)'s 2019 Report (CCC, 2019), where they advise that consistently strong deployment of low-carbon generation in the lead up to 2050 will be required to meet Net Zero, including “...at least 75GW of offshore wind.” In the most recent CCC report (CCC, 2021), the CCC emphasise that in order to achieve Net Zero there is a required “*rapid scale up in low carbon investment....and speed up the delivery which will need to accelerate even where ambition is broadly on track. For example, although the Government's 2030 target for offshore wind is in line with the CCC pathway, a minimum of 4GW of additional offshore wind capacity will be needed each year from the mid-2020s onwards, significantly greater than the current 2GW per year*”.

Low or No Regrets Options

- 4.3.19 The UK Net Zero Strategy (BEIS 2021b) makes a case for a low or no regrets approach to decarbonisation. This framework, set by the Nation Engineering Policy Centre (NEPC) (2017) promotes rapid decision making in net zero policy to take urgent action. Such an approach now supports offshore wind, meeting the essential criteria to: play a major part in reducing UK carbon emissions; unlock low carbon pathways in the future; reduce costs in future to floating offshore wind and to the consumer; make the best use of the available resource, using the limited

seabed areas leased by The Crown Estate (TCE); and have clear co-benefits in electrifying heat and transport.

- 4.3.20 Extensions to operational wind farms have proven to be a successful way of efficiently developing more offshore generating capacity (e.g. Burbo Bank, Kentish Flats, and Walney Extensions). Rampion 2 is an Extension project which meets the TCE's specified application criteria, and was granted a lease in August 2019 following a selection process which included a Plan HRA.
- 4.3.21 Extension projects take advantage of the technological gains made since the original installations were made. They benefit from existing infrastructure, real life experience of working on site, earlier geological and environmental studies and direct experience of the wind resource through existing wind turbine performance (TCE, 2019).
- 4.3.22 The wind farm extensions, which together offer significant generation potential, will also play a key part in building the industry scale necessary to meet the government's climate change targets. Scale is crucial to delivering further cost reductions, making offshore wind ever cheaper. Not only are offshore wind turbines becoming larger and more efficient, but a larger UK offshore wind industry with a proven track record de-risks future projects.
- 4.3.23 Given the pre-existing knowledge of the sites, wind farm extensions represent a low risk and low-cost option for the UK.

Resilience of Electricity System

- 4.3.24 As part of a diverse generation mix, wind generation contributes to improve the stability of capacity utilisations among renewable generators. By being connected at the transmission system level, large-scale offshore wind generation can and will play an important role in the resilience of the GB electricity system from an adequacy and system operation perspective.

At Scale

- 4.3.25 Internationally, and importantly, the UK is leading in offshore wind generation. UK offshore wind projects are increasing in capacity and decreasing in unit cost. Hitherto, each subsequent project has provided a real-life demonstration that size and scale work for new offshore wind, for the benefit of consumers. Other conventional low-carbon generation (e.g. tidal, nuclear or conventional carbon with Carbon Capture, Utilisation and Storage (CCUS)) remain important contributors to achieving the 2050 Net Zero obligation, but their contributions will not be significant in the 2020s due to the associated technical, commercial and development timeframes. However, many more projects than those currently in development pipelines will be required to meet Net Zero.

Competitive

- 4.3.26 Cost reduction and affordability are particularly important in the context of OWF development. UK government policy and regulatory objectives seek to ensure affordability to consumers, through the CfD auction process (generation assets) and Offshore Transmission Owner (OFTO) regime (offshore transmission assets). In broad terms, both seek to incentivise investment in low carbon electricity generation and transmission assets, ensure security of supply and help the UK

meet its carbon reduction and renewables targets, whilst reducing cost to the consumer. A highly competitive CfD allocation round took place in 2019 to specifically accelerate the deployment of offshore wind, with costs falling by two thirds in the last five years. As such, offshore wind is already highly competitive against other forms of conventional and low-carbon generation, both in GB and more widely.

Summary

- 4.3.27 Offshore wind generation excels above all other power generation as being economically and technically viable in the UK, and that it is economically and technically preferential against other low carbon options, for the UK electricity consumer.
- 4.3.28 Full utilisation of optimal seabed locations through extending existing projects (Extensions) represent a lower risk and lower cost option for the UK.
- 4.3.29 Rampion 2 is therefore a critical, ‘easy win’ option to deliver urgent and necessary decarbonisation actions in the critical 2020s to halt climate change. However, decarbonisation does not stop in 2030 but continues with urgency until stable global temperatures are achieved, and because of the cumulative warming effect of atmospheric carbon, every moment’s delay makes that achievement more difficult and potentially further into the future. Early action will have a correspondingly more beneficial impact on our ability to meet Net Zero targets than will later action. It will also bring wider benefits, as discussed within **Section 5** (IROPI).

4.4 Step 3 – Consideration of alternatives

Scope of alternatives consideration

- 4.4.1 In his decision on Hornsea Three, the SoS published the following advice on the scope of alternatives that required consideration:

“The Secretary of State does not consider the development of alternative forms of energy generation to meet the objectives for the Project. Alternatives to the Project considered by the Secretary of State are consequently limited either to Do Nothing or to alternative wind farm projects.

Alternative types of wind farm projects considered are:

- Offshore wind farms not in UK Exclusive Economic Zone (EEZ);
- Offshore wind farms within UK EEZ, including:
 - ▶ At other locations available to the Applicant;
 - ▶ Within other Zones leased from The Crown Estate by other developers; and
 - ▶ Within Zones to be leased by The Crown Estate under the Licensing Round 4”

- 4.4.2 The Applicant agrees with the decision of the SoS for Hornsea Three described above in **paragraph 4.4.1**, and has therefore limited the consideration of alternatives for Rampion 2 to:

- Do Nothing
- Alternative types of wind farm projects which are:
 - ▶ Offshore wind farms not in UK Exclusive Economic Zone (EEZ);
 - ▶ Offshore wind farms within UK EEZ, including:
 - At other locations available to the Applicant;
 - Within other Zones leased from The Crown Estate by other developers; and
 - Within Zones to be leased by The Crown Estate under the Licensing Round 4.

Do Nothing

- 4.4.3 In the context of Rampion 2, the 'do nothing' option would comprise not proceeding with the project. This would remove any possibility of harm to FFC SPA. However, the requirement for the project, and its core objectives would not be met.
- 4.4.4 The 'do nothing' can be immediately discounted as it would not meet any of the core project objectives for Rampion 2 and would (at best) ignore and (at worst) hinder efforts to respond the clear and urgent need for offshore wind deployment at scale, before 2030, to help the UK to meet its legally binding net zero by 2050 commitment to mitigate the effects of climate change.
- 4.4.5 To do nothing is not a realistic option unless one ignores a raft of government policy: NPS EN-1 (DESNZ, 2023a) and EN-3 (DESNZ, 2023c), the net zero by 2050 commitment (DESNZ, 2022), and the UK government's commitment to deliver 50GW of offshore wind by 2030, as set out in the UK governments British Energy Security Strategy (UK Government, 2022). There is an imperative need for renewable energy schemes and for offshore wind in particular; a need which is beyond argument and grows more urgent with each passing month.
- 4.4.6 Given the need to tackle pressing climate change, a "do nothing" approach is inappropriate. It is not compatible with a climate emergency to wait and see if the development of other potential future offshore wind projects means Rampion 2 is not required. Any suggestion that other (yet to be identified) projects could make up for the loss of Rampion 2 fundamentally misunderstands the scale of the task in hand and the long lead-time for offshore wind development.
- 4.4.7 If Rampion 2 is abandoned, a relatively low risk project with the scope to provide an estimated capacity of 1200MW before 2030 would be lost.

Current Offshore Wind Applications

- 4.4.8 Current offshore wind applications are unlikely to meet the UK target for 50GW by 2030. The do-nothing scenario therefore ignores a raft of government policy and targets set in legislation. Furthermore, it seriously inhibits the delivery of decarbonisation in the 2030s and beyond.
- 4.4.9 In the UK as a whole, there are currently 13.7GW of built and operational OWFs. A further 14.9GW is currently consented and is under development or committed

and under construction, and there are currently eight projects (8.3GW) in planning (TCE, 2022).

- 4.4.10 This would bring the total 2030 UK capacity up to 36.9GW (excluding Rampion 2). Therefore, Rampion 2, at 1.2GW, would provide critical additional capacity to help the UK reach its 2030 target, making a total of 38.1GW by 2030. Even with Rampion 2 the above assessment shows that the UK is at high risk of not meeting the 50GW target by 2030.
- 4.4.11 Some OWF projects could be subject to lengthened timescales from planning through to construction associated with the development process so run the risk of not becoming fully operational by 2030. Attrition may also be expected in line with previous rounds whereby 78% of awarded sites have become operational in Round 1 and 87% for Round 2, for England and Wales. Therefore, it is possible that there may be further reduction in capacity of some projects once in operation by 2030.
- 4.4.12 This demonstrates that not only would Rampion 2 be critical to help the UK meet its 2030 targets but may play a larger role in post-2030 targets, owing to potential attrition and lengthened timescales beyond 2030.
- 4.4.13 Whilst a further 26 sites have been identified for future development with recent lease awards by TCE's Round 4 and ScotWind, and a combined capacity of 37.1GW (TCE, 2022), only a few of these have the potential to be advanced through the planning and construction process to be operational by 2030, given the relatively recent award. Indeed, only one of these has a grid connection by 2030 (Round 4), with a capacity of 1.5GW. Therefore, in the absence of Rampion 2, a capacity of 36.9GW + 1.5GW may be possible in the UK by 2030, equal to 38.4 GW.

Future Offshore Wind Applications

- 4.4.14 Any resulting projects from future offshore wind applications are considered discounted at this time as any "potential" windfarm that is not yet in the formal planning system is not considered a feasible alternative solution as it is extremely unlikely any of these would be generating power in the 2020s. In recognition of this, future leasing rounds were discounted by the SoS in consideration of previous OWFs, e.g. Hornsea Three (BEIS, 2020a).
- 4.4.15 The urgent need to mitigate climate change and the consequent demand for deployment of offshore wind, at scale, by 2030, means that waiting to see how future proposals might progress is not an option.
- 4.4.16 TCE has calculated indicative timeframes for offshore wind based on its experience of previous offshore wind leasing rounds as shown in **Figure 4-1** below (TCE, 2018). Given the leasing (and follow-on consenting) timescales there is only a very small possibility for the estimated 1200MW of Rampion 2 to be fulfilled by another UK project in future rounds by 2030. The scale of the UK targets for offshore wind, the short timescales to meet 2030 targets and prevalence of offshore environmental and technical constraints, mean that lost capacity cannot be expected to be offset or replaced by other future leasing rounds even in the most optimistic of outlooks.

Figure 4-1 Indicative time frames for delivering new OWF Projects (TCE, 2018)



Summary

4.4.17 The do-nothing scenario would result in an estimated loss of circa 1200MW and would further decrease the chances of the UK meeting its target of 50GW by 2030. The 2020s is the decade in which to set in motion the wheels of many projects which have potential to deliver decarbonisation in the 2030s and beyond. It is also the decade in which to deliver those low and no regrets projects which are critical to reducing carbon emissions as early as possible. This will avoid the additional burden caused by late delivery of such projects, on the development pipeline for the 2030s and beyond. Consenting Rampion 2 is consistent with that approach.

Alternative Array Locations Not in the UK EEZ

4.4.18 Alternative sites for OWFs outside the UK would not meet any of the core project objectives for Rampion 2, primarily because they would provide no contribution to the identified UK need. The UK is party to international treaties and conventions in relation to climate change and renewable energy. This includes a legally binding requirement to reach net zero emissions by 2050, and its commitment under the Paris agreement to a plan – called a nationally determined contribution, or NDC – to cut emissions by 68% by 2030, compared with 1990 levels. Other international countries similarly have their own (different) binding targets.

4.4.19 As such, sites outside the UK cannot count towards the need identified by UK policy. Conversely, sites outside the UK are required for other countries to achieve their own respective targets in respect of climate change and renewable energy.

4.4.20 It is therefore self-evident that locations outside the UK cannot be an alternative solution to Rampion 2. This concurs with the Hornsea Three decision (BEIS, 2020a), where the SoS confirmed that *“it does not consider offshore wind farm projects that are located outside UK territorial waters as being an alternative to the Project [Hornsea Three] since this would not meet the objective to support the decarbonisation of the UK electricity supply and UK commitments on offshore wind generation”*.

Alternative UK EEZ Locations

4.4.21 Offshore wind development(s) located in alternative UK EEZ locations can be discounted on one or more of the following grounds:

- such development would not meet core project Objectives No. 3, 4, 5 and 6 (see **Section 4.2**);
- such development is not feasible (for the Applicant);
- such development is complimentary (not an alternative) to Rampion 2 given the scale and urgency of the need;
- such development may have similar adverse effects on European site(s); and
- even if it is assumed that such development could have lesser effects on European site(s), the strength and urgency of the IROPI case demands implementation of Rampion 2 in addition to or in preference.

4.4.22 In his determination of Hornsea Project Three, the SoS considered Alternatives to the development and determined that for the reasons set out in the HRA, which

are replicated above for Rampion 2, that no Alternative Solutions are available with respect to alternative wind farm projects both within and out-with the UK EEZ.

- 4.4.23 TCE own and/or hold the exclusive rights to manage the leasing of seabed for offshore wind development within UK territorial waters and the UK EEZ, with seabed made available for offshore wind development selectively, in successive offshore leasing rounds, usually several years apart. Alternative UK EEZ locations cannot be Alternative Solutions for the reasons set out in the sections below.

Repowering Existing Windfarms

- 4.4.24 The majority of operational wind farms to date typically have a life span of 20 to 25 years before decommissioning is planned and these assets will not reach their decommissioning stage for another decade. The timeframes involved for the decisions on repowering therefore do not meet project Objective No. 4 in ‘*delivering a significant volume of (UK) offshore wind in the 2020s*’. Furthermore, due to rapid technological advances in the size of turbines (increase rotor diameter from 120m (3.6MW) in 2013 to 260m (12MW) in 2021), it is highly unlikely that pairing foundations designed for smaller capacity turbines with larger turbines would be feasible due to fundamental engineering constraints. Newly designed and built windfarms are likely to present the only means of repowering, requiring new consent.

ScotWind Leasing

- 4.4.25 In June 2020, The Crown Estate Scotland launched the Scotwind leasing round to grant property rights for seabed in Scottish water for new commercial scale offshore wind projects. The closing date for applications was 16 July 2021. In October 2020, the final Sectoral Marine Plan for Offshore Wind Energy (“the Plan”) and Offshore Wind Policy Statement (OWPS) was published. The Plan, which was published by Marine Scotland, sets out the most suitable sustainable locations for the future development of commercial offshore wind energy. The Plan provides the strategically planned spatial footprint for offshore wind development in Scotland and identifies 15 Plan Options (“POs”), split across 4 regions which are capable of generating several GW of renewable energy.
- 4.4.26 Following evaluation of the bids, option agreements were offered to the successful parties in January 2022 and confirmed as signed in April 2022.

The ScotWind Leasing clearing process¹ opened in April 2022 with Option Agreements being offered in August 2022 and confirmed as signed in November 2022.

- 4.4.27 Up to 27.6GW of new generating capacity could be built over the next decade as a result. However, it is highly likely that significantly less of this capacity will be available before 2030.
- 4.4.28 It is envisaged that all of this generating capacity will be required, in addition to Rampion 2, to reach the UK Governments optimistic renewable energy generation and carbon reduction targets.

¹ <https://www.crownestatescotland.com/news/scotwind-clearing-process-opens> (Date accessed: 3 August 2023)

- 4.4.29 It should be also noted that ScotWind projects do not necessarily represent alternatives with less damaging ecological impacts and that a project level HRA will be required of each project in due course.

Therefore, for the reasons set out above, ScotWind projects are not considered a feasible alternative solution for Rampion 2.

Round 3

- 4.4.30 The identification of Round 3 Zones was the output of a robust Government and TCE spatial planning process involving Strategic Environmental Appraisals (SEA) to identify / indicate relative levels of constraint and opportunity, and an AA by TCE of its plan to award the nine Zone Development Agreement (ZDAs).
- 4.4.31 Out of the nine zones identified during the TCE Round 3 process, only six zones were taken through to successfully deliver projects, including East Anglia ONE North, East Anglia TWO, Norfolk Vanguard, Norfolk Boreas and Hornsea Four. However, the consenting of Round 3 OWFs does not lessen the scale or urgency of the need for further large-scale offshore wind projects. To meet the 2030 Sector Deal, the majority, if not all, of the OWF projects in Round 4 and ScotWind, as well as the capacity proposed to be delivered under the TCE Extensions Round, are also likely to be required. These are not, therefore, considered to be Alternative Solutions. Further information on the use of remaining parts of the Round 3 Zone 6 area for Rampion 2 are set out below.

Round 4

- 4.4.32 Round 4 projects are very unlikely to be generating power on any scale before 2030. These projects would not meet core project Objective No. 4 (*'delivering a significant volume of (UK) offshore wind in the 2020s'*) and would therefore not address the Government's target to deliver 50GW by 2030. Furthermore, regardless of timescales, they are still needed in addition to, not instead of Rampion 2 to meet the 50GW target.
- 4.4.33 Given the mobile nature and large foraging ranges of kittiwake, guillemot and razorbill species, any comparable large-scale offshore wind proposal located north of Rampion 2 is highly likely to give rise to a significantly increased level of impact on FFC SPA and Farne Islands SPA (alone or in-combination).
- 4.4.34 Furthermore, given the number and spread of European sites around the UK, any large-scale offshore wind proposal is likely to affect one or more European sites - as illustrated through the constraint mapping and regional characterisation reports published in connection with Leasing Round 4 (TCE, 2023).
- 4.4.35 This is further confirmed through the Round 4 projects plan level HRA (TCE, 2021) which has concluded an AEoI of FFC SPA (kittiwake feature). Therefore, each Round 4 project, which is subject to a project level HRA, is highly likely to have a worse effect in relation to this site and feature. In other words, the notion that unidentified and unconstrained areas exist to deliver the scale of development required, without effects on the integrity of European sites is improbable.

- 4.4.36 On this basis Rampion 2 presents an opportunity to deliver a substantial renewable energy generating project that, even in the event of an AEoI, will only have a minimal effect, which is comparatively rare.

Alternative Area Within the Rampion Zone

- 4.4.37 In 2008, nine strategic zones were identified for what is known as 'Round 3', the third licensing round for offshore wind farms. It was under this TCE offshore wind leasing programme that the Rampion 1 project was brought forward, located within Zone 6, English Channel.
- 4.4.38 Rampion 1 was designed with a focus on achieving the most efficient and cost-effective project development at that time. The consent for Rampion 1 covered an area of 139km² within the total area of Zone 6 (271km²), with the completed wind farm occupying approximately 72km². There is thus an extensive residual area within Zone 6 that was left undeveloped at that time. Substantial progress has been made in the offshore wind industry in the period since Rampion 1 design was optimised in 2014. This includes advances in project economics, technology and understanding such as construction approaches, design, and social and environmental effects.
- 4.4.39 A re-evaluation of areas within the wider Zone 6, and the surplus part of the area consented under the Rampion 1 DCO, was therefore carried out to identify areas which may now be suitable for the development of Rampion 2. Following detailed and thorough site selection appraisal, as set out in Section 3 of the **Chapter 3: Alternatives, Volume 2** of the ES (Document Reference: 6.2.3) notably including extensive consultation and engagement throughout the process as well as assessment of engineering, environmental, economic and consenting factors and subsequent feasibility analysis, the proposed Rampion 2 project makes best use of the less constrained residual Zone 6 area as part of the Proposed Development.
- 4.4.40 As the remainder of Zone 6 is suboptimal for the development of an OWF, further utilisation by Rampion 2 of this area would not fulfil Objective No. 3 “*To optimise generation and export capacity within the constraints of available (UK) sites and onshore transmission infrastructure*” or Objective No. 5 “*To maximise renewable energy generation at optimal UK seabed locations*”.

Consideration of Feasible Design Alternatives for Rampion 2

- 4.4.41 The consideration of environmental parameters and other constraints has been a central theme of the Rampion 2 site selection. The site selection assessments have been supported by detailed consideration of the findings of the original Rampion 1 EIA and its subsequent Examination process, together with the knowledge and understanding gained through the post-consent and construction phases of Rampion 1. All of these have provided additional insight and understanding of the relevant environmental sensitivities and the range of other constraints applicable for Rampion 2.
- 4.4.42 Consideration has been given to feasible alternatives throughout the development process for Rampion 2. This has formed a fundamental driver for decision making within the project. The Applicant has continued to re-appraise all elements of the maximum development scenario (MDS) for Rampion 2 (see **Chapter 4: The Proposed Development, Volume 2** of the ES (Document Reference: 6.2.4)), to ensure that feasible and practical mitigation has been deployed, where deemed

appropriate to do so (to eliminate or reduce likely significant effects (LSE), in EIA terms).

- 4.4.43 Rampion 2 has adopted commitments (primary design principles inherent as part of Rampion 2, installation techniques and engineering designs/modifications) as part of their pre- application phase, to eliminate and/or reduce the LSE arising from any potential impacts (as far as possible). These are outlined in full in the **Commitments Register** (Document Reference: 7.22).
- 4.4.44 An important part of the Rampion 2 development process has been the consideration of potential options, selection, and the subsequent refinement of project infrastructure. **Chapter 3: Alternatives, Volume 2** of the ES (Document Reference: 6.2.3) outlines the site selection process for Rampion 2 including a comparison of alternatives considered and the reasons for selecting the final MDS.
- 4.4.45 Consultation was a key part of this process, informing all stages, and has helped to refine the project through wider spatial, design and process considerations discussed in broader forums, both formally through **Evidence Plan** (Document Reference: 7.21) meetings, or more informally through the feedback received through public consultation.
- 4.4.46 The Applicant has followed the following pre-application consultation process, as required under the Planning Act 2008, and set out in 'Planning Act 2008: guidance on the pre-application process for major infrastructure projects' (UK Government, 2015):
- notify the Secretary of State of the proposed application;
 - identify whether the project requires an environmental impact assessment; where it does, confirm that they will be submitting an environmental statement along with the application, or that they will be seeking a screening opinion ahead of submitting the application;
 - produce a Statement of Community Consultation (RED, 2022) in consultation with the relevant local authority or authorities, which describes how the applicant proposes to consult the local community about their project and then carry out consultation in accordance with that Statement;
 - make the Statement of Community Consultation (RED, 2022) for inspection by the public in a way that is reasonably convenient for people living in the vicinity of the land where the development is proposed, as required by section 47 of the Planning Act and Regulations;
 - identify and consult statutory consultees on the Preliminary Environmental Information Report (PEIR) as required by section 42 of the Planning Act and Regulations;
 - publicise the proposed application in accordance with Regulations;
 - set a deadline for consultation responses of not less than 28 days from the day after receipt/last publication;
 - have regard to relevant responses to publicity and consultation; and
 - prepare a consultation report and submit it to the Secretary of State.

- 4.4.47 Prior to consultation with stakeholders, consideration was given to several technical, commercial, and environmental consenting constraints, informed by data analysis and constraints mapping.
- 4.4.48 Having regard to feedback received through these consultation exercises was a key driver for design changes to Rampion 2, which have sought to avoid or mitigate potential effects on sensitive ecological receptors and also addressed other negative impacts from the site on other receptors. Offshore, since the PEIR (RED, 2021) the proposed DCO Order Limits have been reduced in size and the maximum number of turbines has reduced.
- 4.4.49 The design process for Rampion 2 has been challenging considering geological (deeper waters) and shipping constraints, particularly to the south of the site. This is further exacerbated by landscape and visual considerations presented through proximity of Rampion 2 to the South Downs National Park and two other designated landscape areas.
- 4.4.50 The Applicant has assessed the potential adverse effects on kittiwake, guillemot and razorbill alongside these other challenges and has presented a MDS which provides appropriate mitigation for potential effects on all sensitive receptors; and it is considered that any further design refinement is likely to reduce the benefit without any material improvement.
- 4.4.51 Therefore, design changes are not considered a feasible alternative solution for Rampion 2.

4.5 Step 4 – Assessment and comparison of the impact of any feasible alternative solutions on European sites (National Site Network)

- 4.5.1 Step 4 would involve an assessment and comparative analysis of the relevant impacts of any identified feasible alternatives in respect of European sites comprised in the National Site Network. However, as the previous Steps (1 – 3) demonstrate, there are no feasible alternatives to Rampion 2 at other or to the final design and area for Rampion 2, this Step is therefore not required.

4.6 Summary and overall conclusions on alternative solutions

- 4.6.1 The purpose of this section has been to demonstrate objectively to the SoS that there are no feasible Alternative Solutions to Rampion 2.
- 4.6.2 The sections above summarise the iterative and comprehensive design and mitigation process including a range of potential alternatives discounted by the Applicant during pre-application prior to determining the final design and maximum area for development for Rampion 2.
- 4.6.3 The consideration of Alternative Solutions must be approached on a reasonable basis, with reference to the genuine project objectives designed to serve the identified need. Each stage/ step must be grounded in real world considerations of feasibility (legally, technically, and commercially). With that in mind, the Applicant

has undertaken a comprehensive analysis of potential alternative options which is considered sufficient to enable the SoS to be objectively satisfied as to the absence of any feasible Alternative Solutions to Rampion 2.

- 4.6.4 In this context it is relevant and reasonable for the SoS to have regard to and place weight on the experience and expertise of the Applicant in offshore wind development. RWE has pioneered UK offshore wind energy over two decades, having installed the first offshore turbines at Blyth in 2000, and commissioned the UK's first commercial-scale offshore wind farm, North Hoyle, in 2004. RWE owns and/or operates 10 offshore wind farms with a total installed capacity of 3.86GW. With six projects already in development and plans to establish commercial scale floating wind in the UK, RWE has one of the largest offshore wind pipelines in the UK.
- 4.6.5 The final design and maximum area for development for Rampion 2 is informed by expert judgement and market leading expertise, with current knowledge of the realities and challenges of construction in the marine environment. The Applicant believes that the experience RWE holds in offshore wind delivery should give the SoS confidence that the Applicant has considered all feasible options to avoid or reduce harm to European sites whilst ensuring a viable and deliverable project.

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5. Imperative Reasons of Overriding Public Interest (IROPI)

5.1 Introduction

- 5.1.1 The HRA Derogation Provisions provide that a project having an AEol on a European site may proceed (subject to a positive conclusion on alternatives and provision of any necessary compensation) if the project must be carried out for IROPI that justify the project despite the environmental damage it may cause.
- 5.1.2 **Section 5** of the without prejudice derogation case is provided to demonstrate that the SoS can be satisfied that there are IROPI for Rampion 2, should the SoS conclude any AEol in respect of the FFC SPA and Farne Islands SPA.
- 5.1.3 This section of the document sets out a compelling case that Rampion 2 must be carried out for IROPI in view of its social and economic benefits, which align with (and are needed to achieve) UK government policy aspirations and legal commitments.
- 5.1.4 The case submitted demonstrates that Rampion 2 can substantially contribute to the UK's legally binding climate change targets by helping to decarbonise the UK's energy supply, whilst also contributing to the essential tasks of ensuring security of supply and providing low-cost energy for consumers in line with the UK government's national policies. Rampion 2 will also provide substantial employment opportunities and skills development, particularly in coastal communities, whilst also playing a major role in supporting the UK's supply chain.

5.2 Content and structure of Section 5

- 5.2.1 The IROPI information in this section of the report is structured as follows:

Section 5.3

- Consideration of the Scope of the IROPI;
- **Imperative:** it must be essential (whether urgent or otherwise), weighed in the context of the other elements below, that the plan or project proceeds;
- **Public interest:** a public benefit must be delivered rather than a solely private interest.;
- **Long-term interest:** European Commission guidance states that it is reasonable to assume that the interest can only be overriding if it is a "*long-term interest*"; and
- **Overriding:** the interest served by the plan or project outweighs the harm (or risk of harm) to the integrity of the site as identified in the appropriate assessment.

Section 5.4

- The final conclusion that there are IROPI to support Rampion 2.

5.3 Rampion 2 IROPI Case

The Scope of IROPI

- 5.3.1 The HRA Derogation Provisions identify certain in-principle grounds of IROPI that may be advanced in favour of a project, although these are not exhaustive and other IROPI grounds may be relied upon. There are restrictions on IROPI grounds for impacts to priority habitat or species unless the matter is subject to a further opinion. In the case of Rampion 2, potentially effect SPAs (FFC SPA and Farne Islands SPA) classified under the Birds Regulations do not identify priority habitat types or priority species.
- 5.3.2 Therefore, the IROPI which can be considered for Rampion 2 are unconstrained, and can include:
- the core IROPI of human health, public safety and beneficial consequences of primary importance for the environment;
 - IROPI of a social or economic nature; and
 - any other IROPI.
- 5.3.3 The parameters of IROPI are explored in Defra 2012 and MN 2000 (European Commission, 2018), 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 the Habitats and Birds Directives are long term interests.
 - **Overriding:** The public interest of development must be greater than the public interest of conservation of the relevant European site(s).
- 5.3.4 The parameters of IROPI are further established in the context of the recent Decision on Hornsea Three (BEIS, 2020a) for which the SoS was satisfied there

are IROPI for the Development to proceed (subject to adequate compensatory measures (paragraph 6.35)).

- 5.3.5 The SoS reviewed the public benefit of the project (which was deemed to be “*essential and urgent*”) and the principal and essential benefit which was classified as a “*significant contribution to limiting the extent of climate change*”. The need to make this contribution within the timeframe required (and the mechanisms governed by TCE) was further highlighted (paragraph 6.42). The nature of the project, its location and predicted impacts on the FFC SPA and Farne Islands SPA make the case highly applicable to Rampion 2.

The Global Imperative – (“*Actions to protect fundamental values for citizens' life: health, safety, environment*”)

- 5.3.6 The impacts of climate change are global in scope and unprecedented in human existence. The science linking the concentration of greenhouse gas emissions to average global temperature on earth is unequivocal. The climate stability that has enabled humans to prosper is now at risk. This has been highlighted by the Sixth Assessment Report published recently by the Intergovernmental Panel on Climate Change (IPCC, 2023). This report highlighted amongst other things that it is unequivocal that human influence has warmed the atmosphere, ocean and land and that widespread changes in the atmosphere, ocean, cryosphere, and biosphere have occurred.
- 5.3.7 The direct and indirect consequences of climate change, which include extreme weather events (flooding, heat waves and droughts), species extinctions and ecosystems collapse all threaten the health, safety, and environment of global citizens. For example, by hindering food production, water resources and putting lives and settlements at risk.
- 5.3.8 The UK government recognises that people are already experiencing some impacts and that those impacts will become more severe and widespread as global temperatures rise. The measure of the impacts citizens experience depends upon how successfully greenhouse gas emissions can be reduced. The IPCC has stressed that global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in CO₂ and other greenhouse gas emissions occur in the coming decades.
- 5.3.9 With the potential to generate an estimated capacity of 1200MW, Rampion 2 will deliver a substantial, near-term contribution to GB decarbonisation objectives and security of supply and will significantly help to reduce the UK’s greenhouse gas emissions, by offsetting millions of tonnes of carbon dioxide (CO₂) emissions per annum.
- 5.3.10 In the Hornsea Three Decision (BEIS 2020a), the SoS determined that the consequences of not contributing to the objective of limiting the extent of climate change would be “*severely deleterious to societies across the globe, including the UK, to human health, to social and economic interests and to the environment*” (paragraph 6.37).

- 5.3.11 This closely reflects the primary case for IROPI, as provided through core objectives in the HRA of the draft Energy NPS²; which is predicated by the principle and essential need for the NPSs in providing a framework for delivering the UK's international commitments on climate change in accordance with the objectives of the Paris Agreement. The consequences of not achieving those objectives would be severely deleterious to societies across the globe, including the UK, to human health, to social and economic interests and to the environment.

The UK Context (“*Fundamental policies for the State and the Society*”)

- 5.3.12 The UK has demonstrated global leadership on climate change. It has in place a comprehensive set of measures to reduce greenhouse gas emissions through investment in renewables. Recent enhancements of UK government policy and legislation to tackle climate change provide unequivocal evidence that the objectives of Rampion 2 fall within a framework of fundamental policies for the state (and the society it serves).
- 5.3.13 In July 2019, the UK became the first major economy to legally commit to reducing its greenhouse gas emissions to net zero by 2050. In their 2019 Report (CCC, 2019), the UK's CCC advise that consistently strong deployment of low-carbon generation in the lead up to 2050 will be required to meet net zero, including “...*at least 75GW of offshore wind.*” In the most recent CCC report (CCC, 2022), the CCC emphasise that in order to achieve Net Zero there is a required “*a rapid scale up in low carbon investment....and speed up the delivery which will need to accelerate even where ambition is broadly on track. For example, although the Government’s 2030 target for offshore wind is in line with the CCC pathway, a minimum of 4GW of additional offshore wind capacity will be needed each year from the mid-2020s onwards, significantly greater than the current 2GW per year.*”
- 5.3.14 The adoption of a net zero by 2050 commitment requires a substantial reduction in the carbon emissions from transport and heat. This in turn is expected to create a substantial additional demand for low-carbon electricity in the 2030s and 2040s. This additional demand places a new urgency on the development of new and additional sources of low-carbon electricity that must be established in the 2020s to meet the UK government's carbon budgets out to 2050.
- 5.3.15 Again, this closely aligns with the Energy NPS HRA which states that the key objectives of the Energy NPS suite are for the energy system to ensure supply of energy always remains secure, reliable, affordable, and consistent with meeting our target to cut greenhouse gas emissions to net zero by 2050.
- 5.3.16 Through the BESS the UK government has pledged to install 50GW of offshore wind capacity by 2030, up from the previous target of 40GW (BEIS, 2022d). This pledge represents a five times increase of the UK's installed offshore wind capacity within the next decade and reflects Government's aim to accelerate its journey in order to deliver net zero greenhouse gas emissions. As illustrated in **Figure 4-1**, the development of large-scale offshore wind farms typically takes

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015242/hra-energy-nps.pdf

more than eight years. Projects that are not consented, in planning or well-advanced are unlikely to contribute by 2030.

- 5.3.17 Without the contribution from Rampion 2, it is very possible that delivery of the Sector Deal and the UK government's 2030 ambition would fall short. Offshore wind is recognised as being an important technology for low-carbon generation and the urgent need for large capacities of low-carbon generation is clear to avoid compromising security of electricity supply. Specifically, Rampion 2 will be a necessary part of the future generation mix, and as such will make a valuable contribution in the direction of adopted UK government policy and achievement of decarbonisation commitments.
- 5.3.18 At the local level, the UK's net zero target is reflected in the climate change strategies of Arun (Arun District Council, 2022), Horsham (Horsham District Council, 2022), Mid Sussex (Mid Sussex District Council, 2022), South Downs National Park Authority (SDNPA, 2020), and West Sussex County Council (West Sussex County Council, 2020).
- 5.3.19 In the Hornsea Three Decision (BEIS 2020a), the SoS references the UK's international commitments on climate change to define the principal and essential benefit of the project. These are delivered through the Climate Change Act 2008 (as amended), the National Policy Statements (NPS) for energy (EN-1), renewable energy infrastructure (EN-3) and electricity networks (EN-5).
- 5.3.20 Furthermore, these (draft) NPSs place greater emphasis on OWFs, as these are considered critical national infrastructure.

The Clear and Urgent Need for Rampion 2

- 5.3.21 The fundamental importance of and need to urgently deliver Rampion 2 is therefore clear and demonstrable. It flows from the important and urgent requirement to deliver significant volumes of renewable energy generating capacity to meet the UK's legally binding net zero by 2050 commitment in response to the latest climate science and, in turn, from the size of the contribution expected from offshore wind, as confirmed by the government's commitment of 50GW of offshore wind by 2030.
- 5.3.22 The need for significant quantities of offshore wind is already well-established in the relevant National Policy Statements (NPS) (EN-1 and EN-3) which pre-date the more recent commitments. Since the NPSs were published in 2011, there have been significant developments to UK energy and climate policy. Recent enhancements of existing UK government policy on climate change and the development of offshore wind (not referenced above) include:
- a highly competitive CfD allocation round in 2019 to accelerate the deployment of offshore wind, with costs falling by two thirds in the last five years;
 - the European Commission's 2030 Climate Target Plan (European Commission, 2020a) published in September 2020 which sets a more ambitious and cost-effective path to achieving climate neutrality by 2050;
 - the Energy White Paper Powering our Net Zero Future (BEIS, 2020c) presented to Parliament by the SoS in December 2020 that set out measures to support the development of offshore wind. These include funding for

manufacturing infrastructure and the Offshore Renewable Energy Catapult project to serve as a leading testing facility for the development of technologies;

- the reaffirming of the 40GW by 2030 ambition on 18 November 2020 by the Government's 'Ten Point Plan for a Green Industrial Revolution (BEIS 2020b); and
- the British Energy Security Strategy (BEIS, 2022d), which sets an even more ambitious target of 50GW by 2030.

5.3.23 The energy industry has also continued to evolve with the cost of many key technologies falling significantly, which the CCC note is an indication of “...*major changes to what is possible...*”. There is now an even greater urgency for offshore wind generation, particularly large projects like Rampion 2 which are deliverable in the late-2020s, given announcements made in 2019 relating to nuclear deployment in the UK. Offshore wind is now one of the lowest cost forms of energy and one that can be deployed at scale within relatively short timeframes. It is essential to meet the government's decarbonisation, security of supply and affordability policies.

5.3.24 The draft Energy NPS HRA, states that “*wind and solar are not reliant on fuel for generation. They are the lowest cost ways of generating electricity, helping to reduce costs and providing a clean and secure source of electricity supply.*”

5.3.25 As explained in **Section 5.2** ('the Need'), the deployment of offshore wind, and specifically Rampion 2, is needed to make a significant contribution to the following UK Government's national policy aims of decarbonisation:

- net-zero and the importance of deploying zero-carbon generation assets at scale;
- security of supply (geographically and technologically diverse supplies); and
- affordability.

5.3.26 Wind generation is economically and technically preferential, to the GB electricity consumer for the following reasons:

- decarbonisation is a UK legal requirement and is of global significance. It cannot be allowed to fail, and urgent actions are required in the UK and abroad, to keep decarbonisation on track to limit global warming;
- wind generation is an essential element of the delivery plan for the urgent decarbonisation of the GB electricity sector. This is important not only to reduce power-related emissions, but also to provide a timely next-step contribution to a future generation portfolio which is capable of supporting the decarbonisation of transport and heat sectors, through electrification;
- as part of a diverse generation mix, wind generation contributes to improve the stability of capacity utilisations among renewable generators. By being connected at the transmission system level, large-scale offshore wind generation can and will play an important role in the resilience of the GB electricity system from an adequacy and system operation perspective;

- internationally, and importantly, GB is leading in this regard, offshore wind generation assets are becoming bigger and cheaper, each subsequent project providing a real-life demonstration that size and scale works for new offshore wind and providing benefits to consumers in the process. Other conventional low-carbon generation (e.g., tidal, nuclear or conventional carbon with CCUS) remain important contributors to achieving the 2050 Net-Zero obligation, but their contributions in the important 2020s is likely to be low;
- offshore wind is already highly competitive against other forms of conventional and low-carbon generation, both in GB and more widely.

5.3.27 Rampion 2 specifically offers the following benefits:

- the Rampion 2 development proposes a substantial infrastructure asset, capable of delivering large amounts of low-carbon electricity, from as early as the late 2020s. This is in line with the CCC's recent identification of the need for urgent action to increase the pace of decarbonisation in the GB electricity sector;
- Rampion 2' connection to the National Energy Transmission System (NETS) means that it will be required to play its part in helping NGESO manage the national electricity system. This includes participating in mandatory balancing markets (to help balance supply and demand on a minute-by-minute basis and provide essential ancillary services) as well as providing visibility to the GB power market of its expected generation. This means that the low marginal cost wind power it will produce, can be forecast and priced into future contracts for power delivery by all participants, thus allowing all consumers to benefit from the market-price reducing effect of low-marginal cost offshore wind generation; and
- maximising the capacity of generation in the resource-rich, accessible, and technically deliverable Rampion Zone, is to the benefit of all GB consumers, and the wind industry generally.

5.3.28 Rampion 2 can make a large, meaningful, and timely contribution to decarbonisation and security of supply, while helping lower bills for consumers throughout its operational life, thereby addressing all important aspects of the UK's legal obligations and existing and emerging UK government policy. The case for Rampion 2 is urgent and important.

A Clear Public Interest

5.3.29 There is a clear public interest in Rampion 2 proceeding. That flows from its unique ability to provide a substantial contribution in the late 2020s towards the achievement of the UK government's national policies, which demand the urgent decarbonisation, ensuring security of supply and affordability discussed above.

5.3.30 Defra (2021) advises that the NPSs and other documents setting out UK government policy (e.g., the UK Renewable Energy Roadmap, DECC, 2013) provide a context for competent authorities in considering derogation and that projects which enact or are consistent with national strategic plans or policies (e.g., such as those provided for in NPS EN-1 and EN-3) are more likely to show a high level of public interest.

- 5.3.31 Rampion 2 is consistent with and enacts important national policy as demonstrated in the sections above.
- 5.3.32 It is further noted that in the determination of Hornsea Project Three (BEIS 2020a), the SoS found that the project will provide an essential public benefit (paragraph 6.36) in terms of the delivery of renewable energy.

Combatting Climate Change

- 5.3.33 The public interest in Rampion 2 goes further than meeting legal and policy targets. Rampion 2 could be instrumental in combating climate change and the threats it poses to human beings and the environment (including seabirds). The health and well-being of our species, and the future of our planet, depends on the rapid deployment of renewable resource such as Rampion 2.
- 5.3.34 The most recent climate change risk assessment for the UK published by the UKs CCC highlights a series of risks to the UK from climate change (CCC, 2021). 61 risks and opportunities were identified in the report and many of these risks could be combatted by the deployment of large-scale offshore wind resource such as, and including, Rampion 2.
- 5.3.35 Kittiwake is a species evidenced to be more sensitive to climate change than other seabirds. By way of example, climate change has been linked with an 87% decline in breeding kittiwake on Orkney and Shetland, and by 96% at St Kilda since 2000 (RSPB, 2017). This is in comparison with a predicted reduction in the annual growth population growth rate of 0.48% due to in-combination OWF collision risk mortality. Additionally, recent research by Marine Scotland (2021) describes the observed impact of increases in sea surface temperature on abundance of sandeel, which is a key prey species for seabird species for kittiwake, guillemot and razorbill. Sadykova *et al.* (2020) predict significant spatial shifts in a number of UK predator prey relationships by 2050, including seabird/sandeel, with all but one model showing significant decreases overall.
- 5.3.36 This research demonstrates that the likely effect of climate change will be further declines of these seabird species due to a failure of prey populations.
- 5.3.37 Habitats vulnerable to climate change that are not adversely impacted by Rampion 2 will benefit from climate change mitigation which low carbon generation provides. This demonstrates that climate change mitigation including low carbon generation is an essential part of protecting the coherence of the UK SPA network.

Socio-Economic Benefits

- 5.3.38 The public interest in Rampion 2 goes further still and includes substantial economic benefit to the UK and its regions. Rampion 2 is capable of providing substantial benefits to the UK economy including facilitating confidence in the UK and local supply chain, growing a skilled workforce and providing wider community benefits.
- 5.3.39 As set out in [Appendix 17.2: Socio-economics cost and sourcing report, Volume 4](#) of the ES (Document Reference: 6.4.17.2) the assessment of the key quantitative measures of economic impact (i.e. employment and Gross Value Added (GVA) output) during the construction phase are driven by the amount of

the relevant projects supply chain expenditure captured by businesses located within each Study Area identified.

- 5.3.40 For Rampion 2, it is estimated that around 40% of its £2.87 billion (in 2019-pricing) construction cost, or the equivalent of £1.14 billion (in 2019-pricing) will be retained by businesses in Rampion 2's supply chain nationally. At the Sussex-level, the overall level of supply chain expenditure retained by local businesses is anticipated to be minimal (around 1.0% of total construction costs), adding up to £30.1 million (in 2019-pricing).

Employment

- 5.3.41 At the UK level, the potential employment supported by Rampion 2 (i.e. when taking account of the direct, Tier-1 and wider supply chain impact) is estimated to average around 4,060 FTE jobs per annum. At the Sussex level, the expenditure retained locally is estimated to support around 80 direct FTE jobs over the construction phase of Rampion 2.
- 5.3.42 Based on research about offshore wind supply chain engagement (RenewableUK, n.d.), it is estimated that currently there are in the order of 20 businesses directly engaged in offshore wind supply chain activity within Sussex, a number of which are local offices of much larger (often national/international) businesses within the sector. On this basis, it is anticipated that jobs supported during the development and construction phase of Rampion 2, will include jobs employed in development and consent activities, including engineering and professional services.
- 5.3.43 At this stage it is not possible to quantify the exact number of direct jobs that will be supported by Rampion 2's day-to-day operations. However, it is estimated that an offshore windfarm the size of Rampion 2 will require between 40 to 50 FTE posts (allowing for some degree of efficiency across operations for the existing Rampion 1 project and Rampion 2). Additional employment will also be supported through supply chain expenditure with businesses located in Sussex and elsewhere in the UK.
- 5.3.44 In terms of wider potential employment benefits supported during the operation and maintenance phase of Rampion 2, it is anticipated that between 540-550 (FTE) direct, indirect and supply chain jobs will be supported nationally, of which between 100-110 jobs will be based in Sussex.

Impact of Construction on Gross Value Added (GVA)

- 5.3.45 The employment supported by the construction of Rampion 2 will also contribute to the size and overall productivity of the national and local economies, ultimately supporting their recovery from the current downturn experienced as a result of the COVID-19 pandemic.
- 5.3.46 It is estimated that construction activity will contribute in the region of £233 million GVA per annum, totalling to £936 million over Rampion 2's anticipated four-year construction programme. Of this, an estimated £16 million GVA (or around £4.1 million per annum) are anticipated to be generated by Sussex-based businesses engaged with the Rampion 2 supply chain.

Supply Chain and Skills Development

- 5.3.47 Despite local supply chain constraints, the Applicant aims to work with local partners to maximise the ability of local people and businesses to access opportunities associated with the construction and operation of the project. An **Outline Skills and Employment Strategy** (Document Reference: 7.2.4) has been submitted with this application.

Public Interest

- 5.3.48 While the Applicant is a private entity, the strategy to harness the UK's offshore wind resource to produce renewable electricity can only be delivered through the private sector. The identification and development of offshore sites for that purpose is a fundamental national policy pursued within a clear framework, which seeks to protect the environment and human health from the consequences of climate change and promote public safety.
- 5.3.49 Critically, it is a state-led policy. From the earliest rounds of offshore wind, it has been promoted and pursued by the Government, delivered through TCE. Site appraisal was initiated by the Government SEA, with subsequent site appraisal and delivery refined by TCE through SEA and Zone Appraisal and Planning studies.
- 5.3.50 Therefore, the policy drivers for offshore wind clearly lie in and serve the public interest. However, delivery of that public interest must be through private companies such as RWE.
- 5.3.51 MN 2000 acknowledges that it is the nature of the interest, not the party promoting that interest, that must be public:
- "As regards the "other imperative reasons of overriding public interest" of social or economic nature, it is clear from the wording that only public interests, irrespective of whether they are promoted either by public or private bodies, can be balanced against the conservation aims of the Regulations."*
- 5.3.52 It is beyond doubt that projects developed by private bodies can be considered where such public interests are served, as in this case.

A Long-Term Interest

- 5.3.53 For IROPI to arise, the public interest would usually be long-term. Each public interest identified above is a long-term UK interest – decarbonisation, security of supply, provision of low-cost energy, protecting the human species and the environment, providing employment opportunities, contribution to the UK economy, provision of skills training and community benefit.
- 5.3.54 Rampion 2 will be capable of providing clean energy generation for around 35 years (possibly longer) and it can be deployed within a relatively short time frame (within the 2020s). It will contribute to the UK's future low carbon energy mix needed to meet UK's net zero commitment but also beyond 2050.
- 5.3.55 As demonstrated in earlier sections of this report, delivery of offshore wind resource is urgently required to bridge the gap between the move away from carbon generation technologies to the large-scale deployment of other technologies such as nuclear, wave and tidal.

- 5.3.56 All scenarios forecast to achieve net zero involve the large-scale deployment of renewable generation, with the CCC stating that at least 75GW of offshore wind is required. Electricity demand is predicted to rise and there is a long-term interest in ensuring that the lights remain on, whilst also meeting decarbonisation targets and combatting climate change.
- 5.3.57 Large energy infrastructure projects have a long lead time due to the planning and consenting framework. The potential contribution of Rampion 2 is significant to decarbonisation and security of supply, but also strategically important, to ensuring continuity in the offshore wind sector. Through the Offshore Wind Sector Deal, industry has committed to strengthening the competitiveness of the UK supply chain, consistent with the UK's Clean Growth Strategy. This is a long-term endeavour which seeks to maximise the advantages for UK industry from the global shift to clean growth.
- 5.3.58 Economic benefits will derive not only from the direct construction, operation, and maintenance of Rampion 2 but from the important confidence it will bring to the UK supply chain.

Overriding Interest

- 5.3.59 Consideration of IROPI necessarily involves a balancing exercise and an exercise of planning judgement by the decision maker, which in the case of the Application is the SoS.
- 5.3.60 In case C-239/0436, Advocate General Kokott said:
- “The necessity of striking a balance results in particular from the concept of 'override', but also from the word 'imperative'. Reasons of public interest can imperatively override the protection of a site only when greater importance attaches to them. This too has its equivalent in the test of proportionality, since under that principle the disadvantages caused must not be disproportionate to the aims pursued.”*
- 5.3.61 Or, as put by the EC in C-239/04 82:
- “...the choice requires a balance to be struck between the adverse effect on the integrity of the SPA and the relevant reasons of overriding public interest.”*
- 5.3.62 It will be for the SoS therefore to make a judgement on whether the substantial, long-term public interest that Rampion 2 delivers, outweighs the potential harm to the FFC SPA and Farne Islands SPA.

A Balancing Exercise

- 5.3.63 Rampion 2's Overriding Interest is set against the envisaged harm. To inform the SoS's exercise of judgement as to the planning balance the following sections consider the predicted impacts on the FFC SPA and Farne Islands SPA against the significant public benefits to the UK and humanity through delivery of Rampion 2.

FFC SPA

- 5.3.64 Over 250,000 birds nest along the Flamborough and Filey coast between March and September, including the only mainland colony of gannets in England and one

of the largest population of kittiwake in the UK. The cliffs are also home to puffins (*Fratercula arctica*), guillemot and razorbill. The SPA provides protection to the cliffs which the birds depend on and extends 2km out to sea, affording protection for inshore waters which are important to the seabird's breeding behaviours.

- 5.3.65 The Applicant's predicted impacts on kittiwake, guillemot and razorbill, as features of the FFC SPA and guillemot of Farne Islands SPA, from Rampion 2 in-combination, are set out below.

Rampion 2

- 5.3.66 If the SoS concludes AEoI on the FFC SPA and Farne Islands SPA, then they must determine where the balance lies between the public interest of conserving biodiversity and the public interest(s) provided by Rampion 2.
- 5.3.67 It is of fundamental importance to this derogation case to re-emphasise the minimal contribution of Rampion 2 to the assessed in-combination total kittiwake, guillemot and razorbill mortality due to potential collision with, and displacement from OWFs. Rampion 2 is a significant distance south of the FFC SPA, and even further south of the Farne Islands SPA, with no breeding season connectivity to these SPAs. In addition, it is considerably further away from these SPAs than other OWF projects that have contributed more significantly to the collision risk in-combination total. This includes those projects that have already received DCO consent with a derogation case.
- 5.3.68 In terms of benefits from Rampion 2, the Proposed Development will also serve the interest of conserving biodiversity. As global warming accelerates, warmer winter sea temperatures have caused shifts in the abundance and quality of seabird prey species, with knock-on effects for seabirds. In addition, an increase in the frequency of extreme weather events could affect breeding habitat and create unfavourable foraging conditions, which may lead to increased mortality of adults and chicks. Rampion 2 will provide a significant contribution to alleviating one of the key anthropogenic pressures on the seabirds at the impacted SPAs: climate change driven reductions in prey availability.
- 5.3.69 Rampion 2 is a project of strategic importance for the UK, for the future protection of local communities, property, and infrastructure and to ensure a reliable supply of electricity for the UK in the long-term. Concurrently, the transition to renewable energy is more beneficial ecologically than a continuous reliance on finite fossil fuels.
- 5.3.70 The long-term public interest that Rampion 2 delivers must outweigh the potential harm to the FFC SPA and Farne Islands SPA, and The Applicant considers that there are no alternatives to Rampion 2. As the Proposed Development is a fundamental component of the UK's need and obligations to address climate change, the potential harm is clearly outweighed by the substantial public interest. Ultimately the decision over a long-term renewable energy strategy versus minimal predicted adverse impacts on European sites rests with the SoS.

Support From Previous Cases

- 5.3.71 It is noted that in the determination of previous OWF derogation cases (see **Section 2.7 UK planning decisions**), the SoS found that the projects would provide an essential public benefit in terms of the delivery of renewable energy,

specifically (and the statement is consistent across all five Decisions) ‘*a public benefit which is essential and urgent despite the harm to the integrity of the [feature(s)].*’ The SoS has supported its conclusions based on ‘*the principal and essential benefit of the [Proposed] Development as a significant contribution to limiting the extent of climate change in accordance with the objectives of the Climate Change Act 2008 (as amended)*’; and outlines that by not meeting these targets it ‘*would be severely detrimental to societies across the globe, including the UK, to human health, to social and economic interests and to the environment.*’

- 5.3.72 The SoS’s determination of previous OWF derogation cases is further supported by the SoS’s references to NPSs (EN-1, 2, 3), international agreements and Net Zero targets to support IROPI as well as the need for increased demand for electricity, need for a ‘*reliable and secure mix of low-carbon electricity sources, including large-scale development of offshore wind generation*’.
- 5.3.73 Scale of development and urgency is also a clear reason for the SoS’s decision stating the projects make ‘*a significant contribution to meeting the target capacity in the timeframe required are therefore both necessary and urgent*’.
- 5.3.74 It should be noted that all five previous derogation projects, for which the above logic was applied, are in the North Sea and significantly closer to FFC SPA and Farne Islands SPA than Rampion 2.

Summary of IROPI

- 5.3.75 This submission demonstrates a compelling case that Rampion 2 is indispensable and must be carried out for IROPI.
- 5.3.76 Rampion 2 can substantially contribute to the UK’s legally binding climate change targets by helping to decarbonise energy supply, whilst also contributing to the essential tasks of ensuring security of supply and providing low-cost energy for consumers in line with the UK Government’s national policies.
- 5.3.77 Rampion 2 will contribute to tackling the climate change risks identified in the UK CCC’s “*UK Third Climate Change Risk Assessment (CCRA3)*”, all of which impact the core IROPI of human health, public safety, and the primary importance of the environment.
- 5.3.78 Rampion 2 will also contribute materially to the economic and social landscape in the UK as it can provide substantial employment opportunities and skills development, particularly in coastal communities, whilst also playing a major role in supporting the UK’s supply chains.
- 5.3.79 If the SoS finds AEol in respect of FFC SPA and Farne Islands SPA then there is a demonstrable overriding public interest in Rampion 2 and the policy objectives it will serve, which significantly outweighs the minimal contribution of Rampion 2 to the in-combination totals (for the relevant species) and any adverse effects on the SPAs.



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6. Compensatory measures

6.1 Introduction

Overview

- 6.1.1 Having demonstrated that there are no Alternative Solutions and that there are IROPI for Rampion 2, this section now demonstrates to the SoS that compensatory measures can be put in place if necessary to ensure the overall coherence of the National Site Network is protected, should the SoS conclude AEoI in respect of the FFC SPA and Farne Islands SPA.
- 6.1.2 Whilst the Applicant's **RIAA** (Document Reference: 5.9) concludes no AEoI for all potential impacts both alone and in-combination, relevant compensatory measures are provided on a without prejudice basis in case the SoS disagrees with the Applicant's conclusion.

Content and structure

- 6.1.3 This section provides a summary of the process through which the Applicant has selected the compensatory measures which would be delivered if AEoI were concluded. This section also provides a summary of each selected compensatory measure and a justification of the sufficiency of each measure.

Consultation

- 6.1.4 As outlined in **Section 2.5**, the Applicant has utilised feedback from relevant stakeholders and Statutory Nature Conservation Bodies (SNCBs) to inform preparation of the **RIAA** (Document Reference: 5.9) and in-principle compensatory measures for the Rampion 2.
- 6.1.5 The advice from Natural England has consistently been that all impacts on the FFC SPA and the Farne Islands SPA, in particular for in-combination, need to be recorded regardless of their magnitude and that none are 'negligible' or de-minimis.
- 6.1.6 Natural England has stated that, while they recognise that the predicted impacts from Rampion 2 are not unduly significant in scale, they have the potential to contribute to existing significant cumulative impacts on seabirds at an EIA scale, and to in-combination impacts on SPA qualifying features (Natural England, 2021). Natural England therefore considers that an AEoI cannot be ruled out.
- 6.1.7 In recognition of the above Natural England advised that Rampion 2 continue to consider the need for compensation, especially if there are predicted impacts in-combination and that exploration of compensatory measures is undertaken in collaboration with other RWE projects i.e., North Falls and Five Estuaries.

Summary

- 6.1.8 In summary, Natural England agrees that the predicted impacts from Rampion 2 are “*not unduly significant in scale*”, however they disagree with the **RIAA** (Document Reference: 5.9) conclusions, in relation to the FFC SPA (kittiwake, guillemot and razorbill features) and Farne Islands SPA (guillemot feature), that predicted impacts are ‘de minimis’ and can be ruled out. On this basis, Natural England has advised that an in-principle derogation case be prepared.
- 6.1.9 In terms of compensatory measures, Natural England, in acknowledgement of the relatively insignificant contribution of Rampion 2 to an AEoI in-combination, advises that strategic compensation (if available) or collaboration with another project is considered appropriate and proportionate.

6.2 Compensatory measures selection process

- 6.2.1 Compensatory measures can only be taken forward if they are effective, securable, and deliverable. To meet these objectives the Applicant has applied a five-step process which has been developed in view of existing guidance (Defra, 2021), case history and Natural England’s (SNCB) advice.

Step 1 - Risk to conservation objectives

- Quantifying the nature and extent of potential adverse effects and the conservation objectives which may be undermined.

Step 2 - Network coherence

- Identifying how the coherence of the network may be affected and specifying the aims / objectives of compensatory measures with reference to the site’s conservation objectives.

Step 3 - Feasibility of proposed measures

- Assessing the feasibility of proposed compensation measures (technical, legal, and financial).

Step 4 - Selected measures

- Identifying the preferred list of compensatory measures and extent of compensation to be provided (e.g. quantum / ratio).

Step 5 - Implementation and monitoring plan

- Providing an overarching implementation and monitoring plan.

- 6.2.2 This five-step process was undertaken for Rampion 2, as set out below, however, based on the minimal relative in-combination contribution from Rampion 2, the level of detail in the supporting information presented in this section is reasonably proportionate.

Step 1 – Identify the Impacts and Conservation Objectives Affected

Approach

- 6.2.3 Step 1 quantifies the nature and extent of potential adverse effects and the conservation objectives which may be undermined through the Proposed Development.
- 6.2.4 Potential adverse effects to the site have been identified to inform the nature and quantum of the proposed compensatory measures. This is informed through the conclusions of the **RIAA** (Document Reference: 5.9), which includes:
- nature and scale of potential adverse effect to site integrity (following mitigation);
 - the risk in view of the conservation objectives (which conservation objectives may be undermined or compromised); and
 - recognition of the uncertainties in predicted effects.
- 6.2.5 The **RIAA** (Application Reference Number 5.9), in its conclusions, presents the nature/ scale of potential effect for each impact, by quantifying the number of individuals (for a given SPA / species) potentially affected set against the population required per annum. This results in a list of conservation objectives at risk (undermined or compromised) for each impact.
- 6.2.6 As outlined in **Section 3** and detailed in **Section 8.5** of the **RIAA** (Document Reference: 5.9), Rampion 2 will potentially affect the FFC SPA through a minimal in-combination contribution of 0.72 kittiwake, 1.26 guillemot and 1.23 razorbill mortalities per annum. In addition, Rampion 2 will potentially affect the Farne SPA through a minimal in-combination contribution of 1.07 guillemot.
- 6.2.7 **Section 4.4** of this document set out the conservation objectives for the ornithological features of the site and goes on to highlight the specific conservation objective that is relevant to the without prejudice derogation case i.e. “...maintaining or restoring the population of each of the qualifying features”.

Step 2 – Identify the Effect on Network Coherence

- 6.2.8 Step 2 identifies how the coherence of the National Site Network may be affected and specifies the aims / objectives of compensatory measures with reference to those affected site conservation objectives.

Kittiwake

- 6.2.9 The UK population of kittiwake in 2000 was estimated at approximately 429,000 pairs, representing 15.6% of the North Atlantic biogeographical population (Mitchell *et al.* 2004).
- 6.2.10 Kittiwake are a feature of 33 UK SPA sites, with 29 in Scotland, two in England, one in Wales and one on Northern Ireland. Kittiwake are in unfavourable conservation status at more than 25 of the 33 UK SAs for breeding kittiwake, including FFC SPA where numbers are lower than at the time of designation.

- 6.2.11 The main drivers of these trends in decline appear to be change in sandeel abundance (strongly influenced by sandeel fishing) and climate change (OSPAR Commission, 2009). Climate change models suggest that kittiwake numbers in the UK and Ireland may decrease relative to the Seabird 2000 baseline by 54% by 2050 as a consequence of climate change (Davies *et al.* 2021).

Guillemot

- 6.2.12 There are approximately 1,265,888 individual breeding guillemot in the UK, with the majority of the population found in Scotland and the north of England. The UK population has increased by 23% over the last 40, but has declined since the last full census (1998 – 2002) by 11% (Burnell *et al.*, 2023). Guillemot have two defined bioseasons; breeding season from March to July, and non-breeding season from August to February (Furness, 2015). During their breeding season guillemot forage near their coastal colonies, using pursuit diving to hunt small fish, especially sandeel (*Ammodytes tobianus*), as well as crustaceans (Birdlife International, 2023). Outside of their breeding season guillemot disperse widely at sea throughout UK waters. They have an average lifespan of 23 years, and reach breeding maturity after five years (Robinson, 2005).

Razorbill

- 6.2.13 Razorbill are also cliff-nesting seabirds from the auk family. There are approximately 225,015 individual breeding razorbill in the UK (Burnell *et al.*, 2023). Whilst the breeding abundance of razorbill has increased since the late 1980s, current trends show an overall population decline since 2017 (JNCC, 2021), however, despite these recent declines the population still increased by 18% between the 1998 – 2002 and 2015 – 2021 census periods. This species is longlived with an average lifespan of 13 years and reaches breeding maturity after 4 years (Robinson, 2005). The razorbill has four defined bioseasons: breeding season (April – July), post-breeding season (August – October), migration-free winter season (November – December) and pre-breeding migration season (January – March) (Furness, 2015). Razorbill are pursuit diving seabirds and prey mainly on sandeel and clupeids (Clupeidae) during the breeding season (Birdlife International, 2023).

Aims/ Objectives of Compensatory Measures

- 6.2.14 Building on an understanding of how the network coherence will be impacted by the Proposed Development (Step 2) the aims and objectives of the compensatory measures have been defined. The process of identifying aims and objectives is governed by five key principles, which have been developed in view of the existing guidance and case history as set out in **Section 3** of this report.
- i. link to the specific conservation objectives for the site or feature and address the specific damage caused by the permitted activity;
 - ii. focus on providing the same ecological function for the species or habitat that the activity is damaging OR, where this is not technically possible, provide

functions and properties that are comparable to those that originally justified designation;

- iii. not negatively impact on any other sites or features;
- iv. ensure the overall coherence of designated sites and the integrity of the National Site Network; and
- v. be able to be monitored and an appropriate adaptive management strategy identified if required.

6.2.15 For each compensatory measure the following criteria are used to assess its sufficiency:

- follow a 'Hierarchy Approach' - in gauging level of sufficiency;
- substance and scale – of the anticipated benefits from the measure in relation to assessed impacts on key species;
- location and connectivity – of the proposed measure to the SPA network (for the relevant key species);
- timing – of anticipated benefits for each key species in relation to commencement of impacts from the Proposed Development;
- additionality – demonstrating that the proposed compensatory measure is additional to normal SPA management practices or other planned initiatives; and
- SPA network coherence – contribution of the measure to SPA network coherence.

6.2.16 The aims and objectives identified by the Applicant for compensation measures (as a result of the outcomes of Steps 1 and 2) are to:

- offset the damage to populations of bird species affected by the Proposed Development;
- address uncertainty through adopting a precautionary approach and designing compensatory measures based on a worse-case scenario;
- ensure compensatory measures are feasible and effective and deliverable;
- ensure compensatory measures are within the same biogeographic region (for sites designated under the Habitats Regulations) or within the same range, migration route or wintering area for the bird species affected;
- ensure compensatory measures do not jeopardize the preservation of the integrity of any other National Site (or European site) contributing to the overall coherence of the network;
- ensure compensatory measures are additional to the 'normal' management required for the National Site (s); and
- ensure compensatory measures are effective at the time the damage occurs on the site concerned, or where this cannot be fully achieved, provide overcompensation for the interim losses.

6.2.17 The approach taken to address all these aims and objectives is provided in Steps 3 and 4.

Step 3 – Identify and Assess the Feasibility of Compensatory Measure Options

Strategic Compensation

- 6.2.18 The current approach to compensation in England is on a project-level piecemeal basis – where individual projects plan, secure and deliver appropriate compensation for their own anticipated effects on the National Site Network. However, it is acknowledged across industry, by the UK Government and regulators that this approach is inefficient and unsustainable and that a more strategic, joined-up approach is necessary.
- 6.2.19 The Offshore Wind Environmental Improvement package (OWEIP) is the UK Government’s solution to this problem. The OWEIP is designed to strengthen commitments in the BESS (BEIS, 2022d). Published in April 2022, this set out how the UK will accelerate its transition away from oil and gas, moving towards renewable sources of energy. The OWEIP aims to accelerate deployment of offshore wind while continuing to protect the marine environment. Current delays are often caused by an assessment of impacts on the environment identified within HRAs.
- 6.2.20 The UK Government is seeking amendments to the Energy Bill to:
- give the SoS powers to tailor HRAs that are required before an offshore wind farm is consented;
 - enable measures to compensate for impacts on the marine environment to be taken at a strategic level across multiple projects; and
 - set up a Marine Recovery Fund (MRF) to help deliver these strategic measures.
- 6.2.21 The MRF will provide an efficient method for delivering compensatory measures which are becoming increasingly difficult to identify at the individual project level as well as those that can only be delivered by the government (e.g., fisheries management measures). The MRF will need to secure Strategic Compensatory Measures over multiple financial years given the 25–30-year lifespan of offshore wind farms and due to ongoing operational requirements, such as monitoring and enforcement (BEIS, 2023).
- 6.2.22 In practical terms, it is expected that the MRF will:
- raise/collect financial contributions from developers;
 - spend the funds on agreed measures with or through partners; and
 - monitor and enforce the measures (protection of the measures).
- 6.2.23 This industry-funded MRF will support delivery of strategic compensatory measures. The intention is for the fund to be operational and able to receive

payments from late 2023, however uncertainty remains around when the MRF will be operational and receiving payments.

Project-Level Compensatory Measures

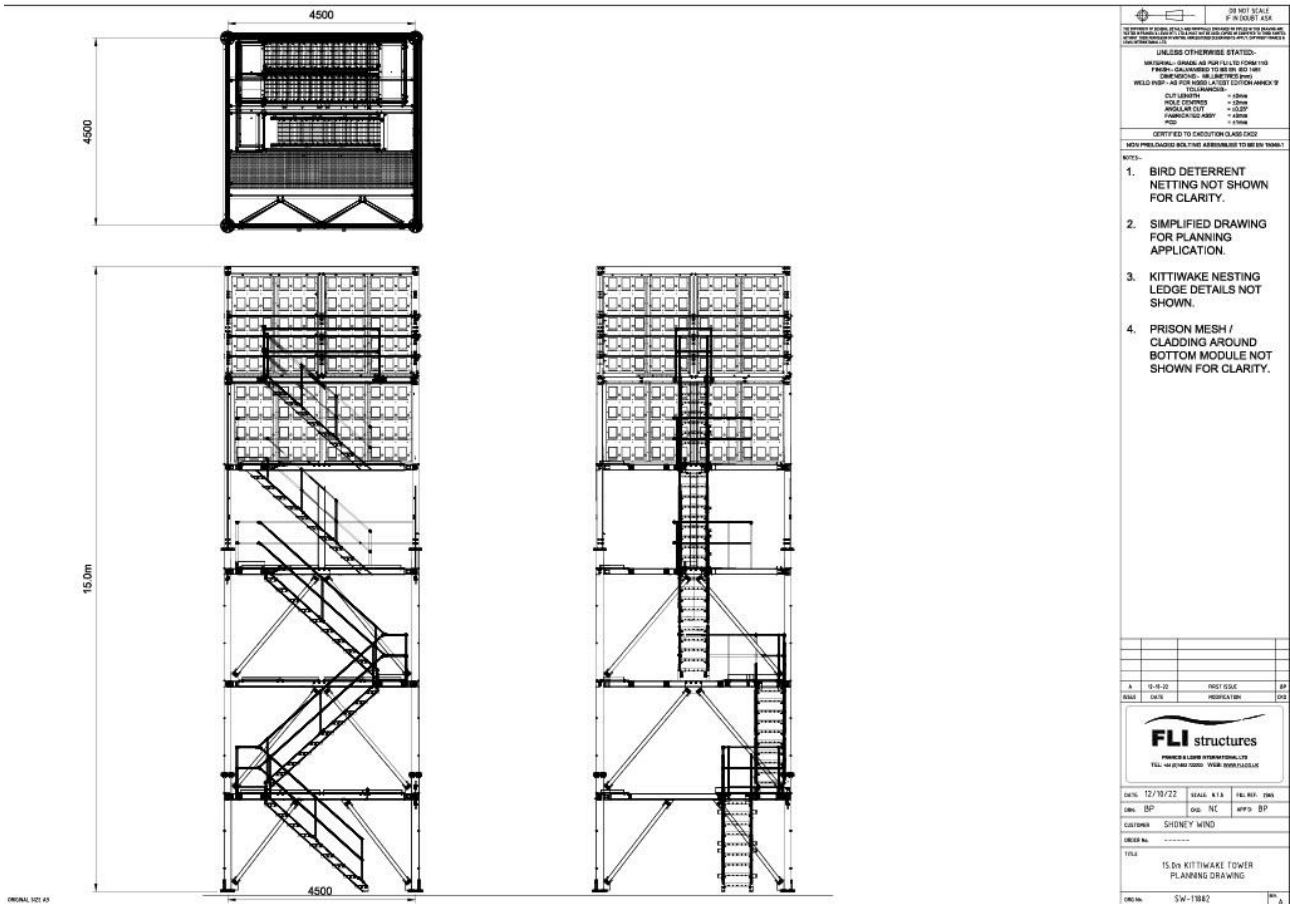
- 6.2.24 'Like-for-like' measures (targeted at providing benefit to the specific habitat or species that is being impacted) are preferred by Government and regulators.
- 6.2.25 However, the UK Government wishes to consider a broader approach to compensatory measures for offshore wind developments. To support accelerated deployment, where like-for-like measures are not possible, the Government intends to consider enabling developers to provide broader measures that improve wider marine ecosystems but are not targeted at specific impacted habitats, species, or protected sites. The Government is also considering enabling developers to undertake work already identified by SNCBs to improve the condition of protected species and habitats. This would substantially increase the number of measures available to developers and accelerate marine recovery for some sites.
- 6.2.26 Defra is working in partnership with industry and environmental stakeholders on pilot projects to identify effective strategic compensatory measures. These will be added to a library and be made available to developers as good examples of how to move forward where compensation needs to be considered.
- 6.2.27 However, in the absence of the strategic compensatory measure options detailed in the previous paragraphs, it is considered necessary for projects to adhere to current guidance and advice from regulators which advocates like-for-like compensation.
- 6.2.28 In keeping with this proportionate approach and Natural England's advice (**Section 6.1**), delivery of compensation through collaboration with another OWF project or other organisation is proposed for Rampion 2.
- 6.2.29 A proportionate compensatory measure selection process, as set out above, resulted in the following list of potential options for compensation as part of the derogation case for Rampion 2:
- 6.2.30 In terms of kittiwake, the following potential measures are considered:
- providing a monetary contribution to strategic compensation through the MRF;
 - collaborating with another OWF project (e.g. Dogger Bank South OWF) to provide additional nesting spaces for kittiwake through either purpose-built artificial nesting structure, artificial ledges or other means;
- 6.2.31 In terms of guillemot and razorbill, the following potential measures are considered:
- providing a monetary contribution to strategic compensation through the MRF; and
 - reducing recreational disturbance through measures at selected sites.

Feasibility of Proposed Compensatory Measures (technical, legal and financial)

Provision of additional Nesting Spaces for Kittiwake

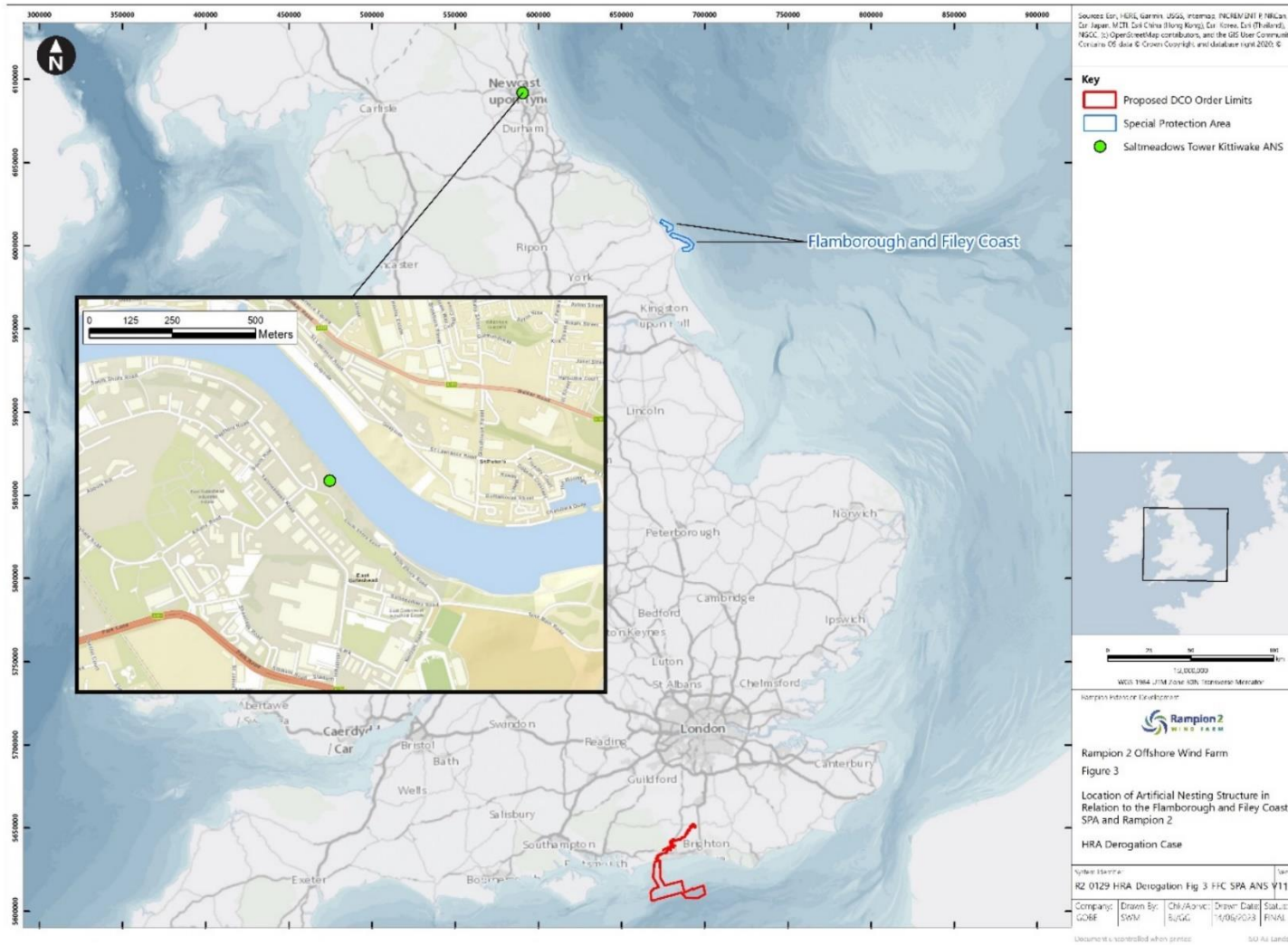
- 6.2.32 In terms of like-for-like compensatory measures for kittiwake, those already consented (with derogation) OWF projects in the UK (Norfolk Boreas, Norfolk Vanguard, Hornsea 3, Hornsea 4, the East Anglia OWF projects and SEP and DEP OWF projects) have set a precedent and provide confidence in the SoS's support for the development of additional nesting spaces as a compensatory measure for kittiwake.
- 6.2.33 It is noteworthy that these forerunning projects have provided significant information and evidence/ data within the public domain to support and inform the delivery of this measure elsewhere, including for Rampion 2.
- 6.2.34 On this basis it is unnecessary to re-assess the feasibility for this proposed measure – especially considering the relatively minor compensation provision required from Rampion 2.
- 6.2.35 Collaboration with other RWE OWF projects, such as Five Estuaries OWF, North Falls OWF or Dogger Bank South OWF, would seem most sensible considering the programme to consent for these projects is broadly comparable with that for Rampion 2. This would likely provide the SoS with the necessary confidence regarding deliverability of Rampion 2 compensation.
- 6.2.36 Rampion 2 has considered options for collaboration across the RWE portfolio of OWF project proposals. A feasible option for collaborative working would be the Dogger Bank South OWF project (TCE Leasing Round 4), although still in the pre-consent phase, has constructed and installed an artificial nesting structure to offset the predicted impact from the project on kittiwake. The 15m structure is located on the River Tyne, near Gateshead. The new structure, which can accommodate up to 200 kittiwake nests, will be adjacent to the existing nesting tower at Saltmeadows, which currently supports the furthest inland kittiwake colony in the world (**Figure 6-1**).
- 6.2.37 It is therefore considered that this proposed measure to provide additional kittiwake nesting spaces are a viable compensatory measure option for the minimal predicted impacts to kittiwake from Rampion 2.

Figure 6-1 Existing Kittiwake tower plans



6.2.38 **Figure 6-2** (located in this document below) shows the location of the artificial nesting structure in relation to the Rampion 2 proposed DCO Order Limits.

Figure 6-2 Location of Artificial Nesting Structure in Relation to the FFC SPA and Rampion 2



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Location of measures

- 6.2.39 Whilst compensation provision within the affected European site is preferred, this is not always possible or feasible. The FFC SPA represents the largest kittiwake breeding colony in the UK, however there are a number of kittiwake colonies within the UK that are expected to be biogeographically linked to the FFC SPA.
- 6.2.40 Kittiwake are generally shown to have low philopatry, with a large proportion of the natal population not returning to the natal colony to breed (Coulson, 2016). For example, in a long-term study at colonies at North Shields (36-year study) and Coquet Island (16 year study), Coulson (2007) found that only 23% and 4.2% of birds respectively bred in their natal colonies. This illustrates that kittiwake hatched in one colony are highly likely to disperse and be found breeding at other colonies in subsequent years. In addition, substantial dispersal distances have been recorded. Coulson (2016) reports birds recruiting to breed from natal sites as far as 1000km away.
- 6.2.41 Given these low philopatry rates and high dispersal distances, it can thus be concluded that compensatory measures to enhance kittiwake populations delivered outside of FFC SPA, within the UK, will benefit the wider UK population of kittiwake including the breeding colony at FFC SPA.
- 6.2.42 On this basis, the identified compensatory measure options are all considered satisfactory in terms of connectivity to the affected SPA.

Reducing Recreational Disturbance for Guillemot and Razorbill

- 6.2.43 As detailed in **Guillemot and Razorbill Evidence and Roadmap [REP3-060]** guillemot and razorbill colonies are at risk of threats from recreational disturbance (including disturbance from walking, rock climbing and coastering, birdwatching, watercraft, and aircraft) are discussed.
- 6.2.44 Compensation for the Rampion 2 Offshore Wind Farm, for these species, focusses on mitigating the effects of recreational disturbance. This means of compensation was selected due to the high number of measures that could potentially address the effects of recreational disturbance and the speed at which they can be implemented using the resources and timelines available to the project. These measures include strategies to reduce disturbance from recreational activity, such as signage, visitor access statements, restriction of dogs, restriction of visitor time, restriction of visitor approach distance, restriction of boat time, restriction of boat approach distance, seasonal closures, birdwatching codes, wardens, and coordination with equipment hire businesses and recreational organisations.
- 6.2.45 In addition, there are links between recreational disturbance and other key seabird threats, including avian flu, predation, and litter. Therefore, selecting recreational disturbance as a focus for compensation can also bring added benefits to guillemot and razorbill by indirectly addressing or alleviating other threats.

Location of measures

- 6.2.46 Sites for compensation were selected based on a longlisting and shortlisting process. Potential longlist sites that could be selected for compensation were

limited to the south west of England due to its relatively high abundance of guillemot and razorbill and the sought provision of compensation for English guillemot and razorbill colonies (given the location of Rampion 2 Offshore Wind Farm).

- 6.2.47 After the longlist of sites was compiled, the desk-based shortlisting process involved determining each colony's population, population trend, and location to identify colonies that have opportunities for growth and are currently subjected to tourist pressure. Bawden Rocks, Carters Rock, Carvannet – Portreath 3, Grower Rock, Highveer Point, Lye Rock, and Lynton1 & 2, North Cornwall 2, Tresungers Point, and Treyarnon - Merope were selected as key colonies to investigate further for compensation measures. Refer to the [Guillemot and Razorbill Evidence and Roadmap \[REP3-060\]](#) for further details on these shortlisted sites.

Step 4 – Identify Proposed Measures and Justify Sufficiency

- 6.2.48 Following the identification of a list of compensatory measure options (above), this Step provides details on the potential measures in terms of the sufficiency of each measure. au

Sufficiency of Preferred Compensatory Measures

- 6.2.49 For each compensatory measure the following criteria are used to assess its sufficiency:
- follow a 'Hierarchy Approach' - in gauging level of sufficiency;
 - substance and scale – of the anticipated benefits from the measure in relation to assessed impacts on key species;
 - location and connectivity – of the proposed measure to the SPA network (for the relevant key species);
 - timing – of anticipated benefits for each key species in relation to commencement of impacts from the Proposed Development;
 - additionality – demonstrating that the proposed compensatory measure is additional to normal SPA management practices or other planned initiatives; and
 - SPA network coherence – contribution of the measure to SPA network coherence.

Assessment of Likely Success – Strategic compensation through the MRF

- 6.2.50 As outlined above, provision of a monetary contribution to strategic compensation through the MRF is preferred for Rampion 2 – especially considering the minimal proportionate impacts expected from the project.
- 6.2.51 The MRF, however, is currently in development (expected in late 2023) with little information available to undertake a measure-specific assessment of likely success - through following the criteria set out above.

- 6.2.52 However, the MRF (which sits under the OWEIP) is underpinned by the Energy Security Bill and is driven by the UK Government. The Bill also includes new powers to amend the HRA process to accommodate for strategic compensation through the MRF (UK Gov, 2023).
- 6.2.53 The Applicant considers these are sufficient assurances, for the SoS, that strategic compensation through the MRF can/ will be appropriately and competently secured, implemented and managed.
- 6.2.54 Strategic compensation delivered through the MRF will therefore not be considered any further in this section.

Assessment of Likely Success – Provision of additional nesting spaces for kittiwake

Hierarchy Approach

- 6.2.55 The Applicant has used the 'Hierarchy Approach' framework, developed by Defra (Defra, 2021; Table 4), as a helpful tool in choosing compensatory measures and identifying any uncertainties in each measure. The hierarchy approach follows the underlying principle and general expectation that compensatory measures that benefit the same feature which is impacted by the development will be the most preferable as they balance the damage caused by the development. Each step down the hierarchy moves away from like for like measures and therefore may decrease the certainty of success, and therefore increase the extent of compensation required.

Table 6-1: Hierarchy Framework (Defra, 2021)

Hierarchy of Measures	Description	Marine Example
1. Address same impact at same location	Address the specific impact caused by the permitted activity in the same location (within the site boundary).	On-site creation, restoration or relocation of feature that will be harmed/lost. e.g. replace seabirds lost to 'birdstrike' by controlling predators at nesting sites in SPA.
2. Same ecological function different location	Provide the same ecological function as the impacted feature; if necessary, in a different location (outside of the National Site boundary).	Off-site creation or restoration of feature that will be harmed/lost Measures taken to enhance a seabird population delivered in a different location to the impacted population of same species, e.g. Artificial nesting platforms.
3. Comparable ecological function same location	Provide ecological functions and properties that are comparable to those	On- site creation or restoration of a similar feature to the one that will be damaged / lost. Broader measures taken to benefit a feature of the site that

Hierarchy of Measures	Description	Marine Example
	that originally justified the designation in the same location as the impact.	provides a similar environmental benefit to the one that is lost or damaged, e.g. measures to enhance population of the protected seabird species.
4. Comparable ecological function different location	Provide ecological functions and properties that are comparable to those that originally justified designation; if necessary, in a different location (outside of the site boundary).	Off-site creation or restoration of a similar feature to the one that will be damaged or lost. Broader measures taken to benefit a feature of the site that provides a similar environmental benefit to the one that is lost or damaged, e.g. measures to enhance population of a different protected seabird species in a different location to where the impact has occurred.

6.2.56 The provision of additional kittiwake nesting spaces through collaboration will fit with Hierarchy Measure 2 as it will replace (i.e. compensate) seabirds potentially lost to collision through increasing breeding habitat/ nesting spaces within kittiwake foraging range of the FFC SPA (impacted SPA). The high ranking of 2 would suggest, based on the hierarchy framework, that the proposed compensatory measure is preferable and has a high certainty of success.

Substance / scale (compensatory ratio)

- 6.2.57 As set out above, provision of additional nesting/ breeding habitat for the benefit of kittiwake is considered a strong compensatory measure (ranked 2 in the compensation hierarchy) demonstrating an increased likelihood of success compared with lower ranking measures.
- 6.2.58 Rampion 2 will contribute (through collaboration) several additional nesting spaces for kittiwake, aiming for a compensation scale/ ratio of at least 5:1.

Timing

- 6.2.59 The Applicant will collaborate with existing/ developed projects (namely the existing kittiwake nesting structure for Dogger Bank South OWF, on the River Tyne, near Gateshead), which will ensure that there is an immediate benefit to seabirds through increased adult breeding habitat. This will likely lead to an increase in seabird populations by the time the impact occurs (OWF operation).

Additionality

- 6.2.60 Compensation must be additional to the normal practices required for the protection and management of the impacted SPA so that measures should provide additional benefit. This reflects EC guidance (MN 2000 (European Commission, 2018) and the EC's Methodological Guidance (European Commission, 2021))

which states that, in order to ensure the overall coherence of the network, compensatory measures should be 'additional' to the actions which are normal practice under the Habitats and Birds Directives.

- 6.2.61 Additionality will be ensured in that the provision of additional nesting spaces for kittiwake, which will be located within the foraging range of the FFC SPA, is not standard management practice and will be provided in addition to that provided through other OWF projects.

SPA Network Coherence

- 6.2.62 The provision of additional kittiwake nesting spaces (through collaboration with others e.g. Dogger Bank South OWF) will provide sufficient compensation for the predicted impacts on kittiwake, from Rampion 2. There is sufficient strength in the evidence presented for previous consented OWF's and case precedent in terms of the SoS's decision on those cases, to be sufficiently certain that the proposed compensatory measure will address Rampion 2's minimal effect on the coherence of the UK SPA network.

Assessment of Likely Success - Improving key kittiwake habitat within the FFC SPA

Hierarchy Approach

- 6.2.63 The proposed improvement of key kittiwake habitat in FFC SPA will fit under Hierarchy Measure 1, of **Table 6-1**, as it will enhance the population of the same seabird feature (kittiwake) that is being impacted by Rampion 2. The highest ranking of 1 would suggest, based on Defra's guidance, that the proposed compensatory measure has a significantly high certainty of success.

Substance / scale (compensatory ratio)

- 6.2.64 Collaborating with Natural England to deliver additional kittiwake habitat enhancement/ restoration within the impacted site (FFC SPA) is considered a relatively easily deliverable measurable, with the potential to provide substantial, quantifiable benefits. The Applicant will ensure that measures are sufficient to address the minimal effect of Rampion 2 on kittiwake. It is envisaged that this will be through pre-implementation discussions and agreement with Natural England.

Location/ connectivity

- 6.2.65 Following discussion and agreement with Natural England, the Applicant will (in partnership with Natural England) provide this compensatory measure in a location within the FFC SPA where additional management or restoration measures are considered necessary.

Timing

- 6.2.66 Discussions with Natural England will begin immediately post consent, and it is expected that additional management measures for kittiwake habitat recovery will be implemented by late 2024. It is expected that subsequent population increases could take place within five years.

- 6.2.67 It is therefore expected that this measure can deliver the additional increase to kittiwake populations (for a minimal impact of 0.72 birds per annum) before Rampion 2 becomes operational and the potential impact is realised.

Additionality

- 6.2.68 The Applicant will, through discussions and agreement with Natural England, ensure that any management measures for the FFC SPA are additional to the work currently undertaken or planned at that site. This could be through providing additional funding to Natural England to increase/ maximise the success of an existing initiative, accelerate delivery not possible otherwise or extend the timescales of an existing successful programme – where finances are otherwise not available.

SPA Network Coherence

- 6.2.69 Improving key kittiwake habitat within the FFC SPA (through collaboration) is a high-ranking measure that therefore has a significantly high chance of successfully providing necessary compensation with the impacted SPA for any minimal impacts from Rampion 2 on the FFC SPA kittiwake, therefore ensuring SPA network coherence.

Assessment of Likely Success - Improving key kittiwake habitat outside the FFC SPA

- 6.2.70 Rampion 2 will support (through collaboration) current or planned initiatives led by other organisations, such as Natural England and the RSPB or other OWF developers, to improve kittiwake productivity through providing a warden to address issues such as disturbance, suboptimal habitat and marine litter.
- 6.2.71 Recent research undertaken for Berwick Bank OWF at a kittiwake colony at Dunbar, Scotland indicates that the issues at that location relate to colony management rather than prey (Searle *et al.* 2023). This suggests there is reasonable certainty that managing issues such as disturbance, habitat condition and marine litter would be effective in improving the success of other kittiwake colonies.
- 6.2.72 The Applicant will work with other organisations to provide a warden in a location where there is currently no dedicated warden.
- 6.2.73 It is anticipated that the warden will also be tasked with improving suboptimal habitat for kittiwake in a manner that will benefit the birds through the provision of additional nesting habitat in more favourable locations. Habitat enhancement is likely to involve adding ledges and overhangs in these areas, which will be sized correctly to prevent herring gulls from landing and predating nests. Nests that occur naturally with overhangs are routinely observed to be successful on the Isle of May for this reason (F. Daunt, pers. comm).
- 6.2.74 In terms of marine litter, this will work to further improve kittiwake habitat and health by introducing measures to reduce the amount of marine litter (fishermen discards etc) and remove existing litter (potentially through help from local charities, councils and voluntary groups), especially that which may be hazardous to breeding kittiwake.

- 6.2.75 Further activities for the warden could involve removing pieces of plastic from nests that could be ingested, clipping/ removing trailing nets or ropes that could cause entanglement and ensuring that the colony remains debris-free into the future.

Hierarchy Approach

- 6.2.76 The proposed safeguarding of kittiwake would fit under Hierarchy Measure 2, of **Table 6-1**, as it will enhance the population of the same seabird feature (kittiwake) that is being impacted by Rampion 2, albeit taking place outside of the impacted SPA. The high ranking of 2 would suggest, based on Defra's guidance, that the proposed compensatory measure has a higher certainty of success.

Substance / scale (compensatory ratio)

- 6.2.77 Employing an individual site warden is not a novel technique to protect and enhance bird species and habitats in the UK, and further afield. The Applicant will ensure that measures are sufficient to address the minimal effect of Rampion 2 on kittiwake. It is envisaged that this will be through pre-implementation discussions and agreement with Natural England.

Location/ connectivity

- 6.2.78 The Applicant will provide this compensatory measure in a location that is within the biogeographic range of the FFC SPA of which kittiwake is a designated feature.

Timing

- 6.2.79 Implementation of the kittiwake management plan (through provision of a warden) would most likely begin immediately post DCO consent and it is expected that population recovery could take place within five years. However, this timeframe could be reduced if the Applicant were to contribute ('add') to an established management programme.
- 6.2.80 This measure is therefore able to deliver the additional increase to kittiwake populations (for a minimal impact of 0.72 birds per annum) before Rampion 2 becomes operational and the potential impact is realised.

Additionality

- 6.2.81 The Applicant will ensure that any provision of a dedicated site warden and targeted management of disturbance, and other factors which are negatively impacting on the chosen kittiwake colony, are additional to the work currently undertaken at that site. This could be through providing additional funding for another site warden (to implement additional management initiatives/measures) or to extend the contract of an existing warden – where finances are otherwise not available.

SPA Network Coherence

- 6.2.82 Improvement of kittiwake habitat, within the biogenic range of FFC SPA, through collaboration, is therefore likely to fully provide the necessary compensation, for predicted minimal impacts from Rampion 2 on the FFC SPA kittiwake, therefore ensuring SPA network coherence.

Assessment of likely success - Improving kittiwake breeding success through reducing avian predation

Diversionsary feeding of avian predators

- 6.2.83 Since offsetting the impacts of the windfarm requires compensation to 'replace' the number of adult birds that may be lost to the wind farm, another compensatory measure option involves reducing kittiwake adult mortality by reducing predation pressure. Although many large gulls and raptors may take smaller seabirds (adults and chicks), there are some individuals that develop a specialism and consequently may take little else thus exerting a disproportionate impact on prey populations (Sutton & Loram 2021).
- 6.2.84 Although using non-lethal methods to displace specialist predators may still result in undesirable negative impacts on the predator, diversionsary feeding was suggested as a mechanism for tackling specialist predators that does not result in any negative impacts on the predator.
- 6.2.85 The suggestion of diversionsary feeding was felt to have some merit on the basis that, in many cases, it involves a direct saving of adults (and/or chicks), as opposed to tackling other indirect factors (e.g. prey, human disturbance etc.) in order to bring about an improvement in productivity. Diversionsary feeding of raptors has been successful in doubling the productivity of Little Terns *Sternula albifrons* (Smart and Amar 2018) and Northern Lapwings *Vanellus vanellus* (Mason *et al.* 2021), and presumably diversionsary feeding could therefore work for Peregrine Falcon *Falco peregrinus* (if the nest site is accessible).
- 6.2.86 In terms of specialist Great Black-backed Gulls *Larus marinus*, recent studies suggest that in many cases specialist Great Black-backed Gulls nest well away from the main colony, occupying their own territory in which they forage primarily on Puffins and rabbits, making diversionsary feeding a viable option at least in some cases (S. Lopez pers. comm.). There is clear evidence to suggest that a small number of specialist Great Black-backed Gulls exert significant predation pressure on kittiwake chicks, as well as other adult birds and chicks, over the course of a breeding season. The same would apply for specialist Herring Gulls *Larus fuscus*.

Hierarchy Approach

- 6.2.87 The proposed safeguarding of kittiwake chicks through diversionsary feeding would fit under Hierarchy Measure 2, of **Table 6-1**, as it will enhance the population of the same seabird feature (kittiwake) that is being impacted by Rampion 2, albeit taking place outside of the impacted SPA. The high ranking of 2 would suggest, based on Defra's guidance, that the proposed compensatory measure has a higher certainty of success.

Substance / scale (compensatory ratio)

- 6.2.88 Safeguarding of kittiwake chicks through diversionary feeding, whilst a relatively untested measure, will be able to provide immediate and direct benefits to kittiwake populations. The Applicant will ensure that measures are sufficient to address the minimal effect of Rampion 2 on kittiwake. It is envisaged that this will be through pre-implementation discussions and agreement with Natural England.

Location/ connectivity

- 6.2.89 The Applicant will provide this compensatory measure in a location that is within the biogeographic range of the FFC SPA of which kittiwake is a designated feature.

Timing

- 6.2.90 Implementation of a diversionary feeding plan (through collaboration) will most likely begin immediately post DCO consent and it is expected that population recovery would take place immediately as predation on kittiwake chicks reduces.
- 6.2.91 This measure is therefore able to deliver the additional increase to kittiwake populations (for a minimal impact of 0.72 birds per annum) before Rampion 2 becomes operational and the potential impact is realised.

Additionality

- 6.2.92 The Applicant will ensure that implementing diversionary feeding for a particular kittiwake colony is additional to the work currently undertaken at that site. This could be through providing additional funding to increase/ maximise the success of an existing initiative or extend the timescales of an existing successful programme – where finances are otherwise not available.

SPA Network Coherence

- 6.2.93 Safeguarding of kittiwake through diversionary feeding of predators (through collaboration) is likely to fully provide the necessary compensation, for predicted minimal impacts from Rampion 2 on the FFC SPA kittiwake, therefore ensuring SPA network coherence.

Removal of avian predators (large gulls or corvids)

- 6.2.94 Removal of bird species that prey on kittiwake is synonymous with the section above (Diversionary Feeding), albeit with biosecurity measures in place of diversionary feeding. Therefore, it is considered unnecessary to consider avian predator removal further in this section.

Assessment of Likely Success - Supplementary feeding of kittiwake

- 6.2.95 As detailed above, several studies show that supplementary feeding of kittiwake chicks can be effective and directly benefit kittiwake populations. Supplementary feeding of kittiwake is therefore a potential compensatory measure for the minimal predicted impacts on kittiwake from Rampion 2.

Hierarchy Approach

- 6.2.96 The proposed supplementary feeding of kittiwake would fit under Hierarchy Measure 2, of **Table 6-1**, as it will enhance the population of the same seabird feature (kittiwake) that is being impacted by Rampion 2, albeit taking place outside of the impacted SPA. The high ranking of 2 would suggest, based on Defra's guidance, that the proposed compensatory measure has a higher certainty of success.

Substance / scale (compensatory ratio)

- 6.2.97 Improving breeding success of kittiwake through supplementary feeding of chicks will be able to provide immediate and direct benefits to kittiwake populations. The Applicant will ensure that measures are sufficient to address the minimal effect of Rampion 2 on kittiwake. It is envisaged that this will be through pre-implementation discussions and agreement with Natural England.

Location/ connectivity

- 6.2.98 The Applicant will provide this compensatory measure in a location that is within the biogeographic range of the FFC SPA of which kittiwake is a designated feature. This could include the Dogger Bank South OWF artificial nesting structure, as detailed above.

Timing

- 6.2.99 Implementation of a supplementary feeding plan (through collaboration) will most likely begin immediately post DCO consent and it is expected that population recovery would take place immediately due to increased survivability of kittiwake chicks.
- 6.2.100 This measure is therefore able to deliver the additional increase to kittiwake populations (for a minimal impact of 0.72 birds per annum) before Rampion 2 becomes operational and the potential impact is realised.

Additionality

- 6.2.101 The Applicant will ensure that implementing supplementary feeding for a particular kittiwake colony is additional to the work currently undertaken at that site. This could be through providing additional funding to increase/ maximise the success of an existing initiative or extend the timescales of an existing successful programme – where finances are otherwise not available.

SPA Network Coherence

- 6.2.102 Supplementary feeding of kittiwake (through collaboration) is likely to fully provide the necessary compensation, for predicted minimal impacts from Rampion 2 on the FFC SPA kittiwake, therefore ensuring SPA network coherence.

Assessment of Likely Success – Reducing Recreational Disturbance on Guillemot and Razorbill Colonies

Hierarchy Approach

- 6.2.103 The proposed reduction in recreational disturbance to guillemot and razorbill species of FFC SPA and Farne Islands SPA will fit under Hierarchy Measure 2 of **Table 6-1**, as it will enhance the population of the same seabird features (guillemot and razorbill) that are being impacted by Rampion 2, albeit outside the affected site boundary. The high ranking of 2 would suggest, based on Defra's guidance, that the proposed compensatory measure has a high certainty of success.

Substance / scale (compensatory ratio)

- 6.2.104 Reducing recreational disturbance on guillemot and razorbill will provide immediate and direct benefits to guillemot and razorbill populations. The Applicant will ensure that measures are sufficient to address the minimal effect of Rampion 2 on these species. Further details including predicted quantum ratios are presented in Table 6.2 of the **Guillemot and Razorbill Evidence and Roadmap [REP3-060]**.

Location/ connectivity

- 6.2.105 The Applicant will provide recreational disturbance reduction measures in locations within the biogeographic range of the FFC SPA and Farne Islands SPA for guillemot and razorbill designated features.

Timing

- 6.2.106 Discussions with Natural England and other relevant stakeholders will begin immediately post consent, and management measures for guillemot and razorbill disturbance reduction will be implemented within an agreed timeframe. It is expected that subsequent population increases could take place within five years.
- 6.2.107 It is therefore expected that this measure will deliver some benefit to guillemot and razorbill populations before Rampion 2 becomes operational and the potential impact is realised.

Additionality

- 6.2.108 The Applicant will, through discussions and agreement with Natural England and other relevant stakeholders, ensure that any recreational disturbance reduction measures for guillemot and razorbill are additional to any work currently undertaken or planned at selected sites. If that is the case, this could be achieved through providing additional funding to increase/ maximise the success of an existing initiative, accelerate delivery not possible otherwise or extend the timescales of an existing successful programme – where finances are otherwise not available.

SPA Network Coherence

- 6.2.109 Reducing recreational disturbance at key locations for guillemot and razorbill colonies is a high-ranking measure that therefore has a significantly high chance of successfully providing necessary compensation for any minimal impacts from Rampion 2 on the FFC SPA guillemot and razorbill features, and the guillemot feature of Farne Islands SPA, therefore ensuring SPA network coherence.

Step 5 – Prepare Implementation and Monitoring Plan

Kittiwake Compensatory Measure Implementation

- 6.2.110 In terms of compensatory measure implementation, the intended collaborative approach is of significant benefit to Rampion 2 as, in most cases, there will likely already be a 'lead organisation' with an existing implementation plan. Therefore Rampion 2 will need to ensure implementation of its additional compensation requirements only.
- 6.2.111 With regards to collaborating with Dogger Bank South OWF on its existing artificial nesting structure, RED are currently in the process of drafting terms of agreement, between the Applicant and Dogger Bank, this will be presented for the DCO Examination.
- 6.2.112 The collection of baseline data from the location of the proposed measure (in advance of implementing any Rampion 2 compensatory measures) is required to gather baseline data on the colony as it stands, to ensure any compensatory measures are appropriate and can be quantitatively monitored.

Kittiwake Management Plan

- 6.2.113 A Rampion 2 Kittiwake Implementation and Monitoring Plan [REP3-058] will be produced post consent for the chosen measure, outlining the Rampion 2-specific measures to be implemented and the protocols to follow to monitor the kittiwake colony. An outline KIMP is provided as **Appendix A: Outline Kittiwake Implementation and Monitoring Plan**; however, the final KIMP will be agreed with the collaborative partner to ensure all proposed management measures can be feasibly implemented and monitored.

Monitoring, Reporting and Adaptive Management

- 6.2.114 Monitoring of the relevant kittiwake colony will be undertaken to show whether the compensatory measure has been successfully implemented and reached its objectives.
- 6.2.115 Alongside the production of the Kittiwake Management Plan a Monitoring Plan will be developed following the collection of baseline data. This will outline how the collaborative partnership will monitor kittiwake. Progress indicators will be included in the Monitoring Plan to allow the collaborative partnership to determine the success of the compensatory measure i.e. monitoring of the kittiwake colony (numbers, productivity, nesting etc.).

- 6.2.116 With regards to reporting, the monitoring outlined above should be considered as progress indicators to be used to measure the implementation of the measure against the outcomes of monitoring and this will be detailed in a periodic monitoring report, which is anticipated to be initially yearly and then become less frequent (three years, five years, ten years) depending on success. The monitoring report and data collected will be shared with key stakeholders including Natural England. The results of the monitoring report will be used to update the Kittiwake Management Plan.
- 6.2.117 In terms of adaptive management, Rampion 2 is committed to take appropriate action should measures fail to work as expected. If monitoring shows that the compensatory measure has not reached its objectives, adaptations to the measure will be made or new measures will be considered. These corrective measures would be developed as a result of monitoring (as outlined within each annual Monitoring Report), included within the annual update of the Kittiwake Management Plan, and subsequently be implemented and then monitored.

Guillemot and Razorbill Compensatory Measure Implementation

- 6.2.118 As detailed in **Guillemot and Razorbill Evidence and Roadmap [REP3-060]** initial visits to all the shortlisted sites will be necessary to determine what pressures are present in the area. It may be necessary to pursue site-specific surveys during breeding season to conduct productivity monitoring that can be used as a baseline upon which the population-level effects of any compensation measures can be analysed. These initial baseline surveys will need to take place in coordination with the relevant landowners and lease holders and include agreements to undertake this research with experienced surveyors.
- 6.2.119 After the initial site visits and surveys have been completed, the final site and compensation measures selections can be made using the in-situ data and coordination with relevant stakeholders. Agreements with the relevant landowners and lease holders, along with the obtainment of rights to conduct these measures will be secured before any compensation measures are implemented.

Monitoring, Reporting and Adaptive Management Plan

- 6.2.120 A monitoring plan will be developed to help evidence the benefits of these measures at the population level, as these measures must offset any potential population losses from Rampion 2. Productivity monitoring will build upon the pre-implementation surveys.
- 6.2.121 An adaptive management plan will also be developed in case any compensation measures need to be adjusted to improve their efficacy in the post-implementation phase. Future monitoring, reporting, and adaptive management plans will be decided through coordination with relevant stakeholders.
- 6.2.122 Finally, a reporting system will be developed to communicate the efficacy of any compensation measures to relevant stakeholders. During the examination stage, further engagement with NE has continued, to refine the "without prejudice" **Alternative Schedule 17 [PEPD-017]** (updated at Deadline 4) to deal with how any compensation measures would be secured, implemented and monitored.

6.3 Summary of compensatory measures selection process

- 6.3.1 The Applicant has followed a five-step process to demonstrate that it has selected a list of potential compensatory measures, for the minimal in-combination impact of Rampion 2, that are effective, securable, deliverable, and scalable.
- 6.3.2 This proportionate compensatory measure selection process, together with advice from Natural England and previous OWF derogation case examples, has resulted in the following list of compensatory measure options being chosen for Rampion 2:
- providing a monetary contribution to strategic compensation through the MRF;
 - collaborating with another OWF project (e.g. Dogger Bank South OWF) to provide additional nesting spaces for kittiwake through either purpose-built artificial nesting structure, artificial ledges or other means; and
 - reducing recreational disturbance to guillemot and razorbill colonies in the south-west of England.
- 6.3.3 It is established that there is sufficient confidence and wide support for strategic compensation through the MRF (including underpinning UK Government policy), however there remains uncertainty regarding when the MRF will be up and running and receiving monetary contributions. Therefore, further potential measures have also been selected for Rampion 2.
- 6.3.4 Each selected measure is considered effective, feasible and deliverable, when provided in collaboration, to successfully offset the minimal effects on the FFC SPA and Farne Islands SPA from Rampion 2.
- 6.3.5 This is in alignment with draft Energy NPS HRA which states that *“compensatory measures will need to demonstrate that they are sufficient to offset the harm caused by development. They should limit harm to the European Site, for example, by ensuring the project is timed so that the compensatory habitat is able to become established before any habitat loss takes place, so as to maintain the conservation status of the qualifying species.”*

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7. Conclusion

- 7.1.1 The UK needs to urgently deploy significant volumes of large-scale low carbon generation to meet its legally binding net zero commitment. Rampion 2 is a major infrastructure project which responds directly to fundamental and urgent national objectives, delivering significant volumes of low carbon generation in the 2020s, whilst also contributing to the essential tasks of ensuring security of supply and providing low-cost energy for consumers in line with the UK government's national policies.
- 7.1.2 Rampion 2 is a favoured Extension project that brings the additional benefits of making the best use of favourable 'tried and tested' locations and existing infrastructure – thereby minimising environmental risks whilst increasing renewable energy generation at a lower cost.
- 7.1.3 The potential contribution of Rampion 2 to the in-combination total kittiwake, guillemot and razorbill mortality due to collision and displacement is very low relative to the contributions from other UK OWF's that have been consented through derogation. Therefore, proportionately, Rampion 2 demonstrates a very strong case for expected benefits versus potential effects.
- 7.1.4 The Applicant strongly believes the evidence is clear to support the Application position that no Alternative Solutions exist, and a favourable derogation conclusion can confidently be reached.
- 7.1.5 The Applicant is confident that the HRA without prejudice derogation case submitted provides the necessary information to support a clear and overriding case for Rampion 2 should the SoS conclude AEol for kittiwake, guillemot or razorbill from FFC SPA and Farne Islands SPA.
- 7.1.6 If the SoS finds AEol in respect of any of these sites/ features then there is a demonstrable overriding public interest in Rampion 2 and the policy objectives it will serve, which outweighs the risk of any adverse impact on the FFC SPA and Farne Islands SPA.
- 7.1.7 Without prejudice to the Applicant's position that Rampion 2 will not give rise to an AEol on the FFC SPA and Farne Islands SPA, the Applicant has provided the SoS with information to support an alternative route for the SoS to approve Rampion 2.

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8. Glossary of terms and abbreviations

Table 8-1 Glossary of terms and abbreviations

Term (Acronym)	Definition
AA	Appropriate Assessment
AEoI	Adverse Effect on Integrity
BEIS	Department for Business, Energy & Industrial Strategy
CRM	Collision risk modelling
Defra	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security & Net Zero.
Development Consent Order (DCO) Application	An application for consent under the Planning Act 2008 to undertake a Nationally Significant Infrastructure Project made to the Planning Inspectorate who will consider the application and make a recommendation to the Secretary of State, who will decide on whether development consent should be granted for the Proposed Development.
DTA	David Tydsley Associates
EC	European Commission
EEZ	Exclusive Economic Zone
Environmental Impact Assessment (EIA)	The process of evaluating the likely significant environmental effects of a proposed project or development over and above the existing circumstances (or 'baseline').
EPP	Evidence Plan Process
EU	European Union
FFC	Flamborough and Filey Coast
HDD	Horizontal Directional Drilling
Habitats Regulation Assessment (HRA)	The assessment of the impacts of implementing a plan or policy on a European Site (as required by the Conservation of Habitats and Species Regulations 2017 (as amended) and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended)), the purpose being to consider the impacts of a project against

Term (Acronym)	Definition
	conservation objectives of the site and to ascertain whether it will adversely affect the integrity of the site.
HVAC	High Voltage Altering Current
IROPI	Imperative reasons of overriding public interest.
LSE	Likely Significant Effects
MHWS	Mean High Water Springs
MRF	Marine Recovery Fund
MW	Megawatts.
National Policy Statement (NPS)	<p><i>"Part 2 of the Planning Act 2008 sets out the national policy against which NSIP applications are assessed. NPSs set out guidance to inform the decision-making process for NSIPs. NPSs relevant to energy generation include:</i></p> <p><i>Overarching National Policy Statement for Energy (EN-1) (DECC, 2011a);</i></p> <p><i>National Policy Statement for Renewable Energy (EN-3) (DECC, 2011b); and</i></p> <p><i>National Policy Statement for Electricity Networks (EN-5) (DECC, 2011c)."</i></p>
NSIP	Nationally Significant Infrastructure Projects are major infrastructure developments in England and Wales which are consented by DCO under the Planning Act 2008. These include proposals for offshore wind farms with an installed capacity over 100MW.
OFTO	Offshore Transmission Owner
OWF	Offshore wind farm
The Planning Act (PA) 2008	The legislative framework for the process of approving major new infrastructure projects.
Proposed Development	The development that is subject to the application for development consent, as described in Chapter 4: The Proposed Development, Volume 2 of the Environmental Statement (Document Reference: 6.2.4).
Proposed DCO Order Limits	The proposed DCO Order Limits combines the search areas for the offshore and onshore infrastructure associated with the Proposed Development. It is defined as the area within which the Proposed Development and associated infrastructure will be located, including the

Term (Acronym)	Definition
	temporary and permanent construction and operational work areas.
RED	Rampion Extension Development Limited (the Applicant)
RIAA	Report to Inform Appropriate Assessment
RSPB	Royal Society for the Protection of Birds
Special Area of Conservation (SAC)	A protected site under the Conservation of Habitats and Species Regulations (2017).
SNCBs	Statutory Nature Conservation Bodies
SoS	Secretary of State
Special Protection Area (SPA)	Sites designated under EU Regulations (79/409/EEC) to protect habitats of migratory birds and certain threatened birds under the Birds Directive Regulations.
TCE	The Crown Estate
UK	United Kingdom
WTG	Wind Turbine Generator

9. References

Arun District Council, (2022). *Carbon Neutral Strategy 2022-2030* [Online]. Available at: <https://www.arun.gov.uk/download.cfm?doc=docm93jjim4n18057.pdf&ver=18990> [Accessed May 2023].

Bradbury, G., Trinder, M., Furness, B., Banks, A.N., Caldow, R.W. and Hume, D., (2014). *Mapping seabird sensitivity to offshore wind farms. PloS one, 9(9), p.e106366.* [Online] Available at: [REDACTED]

Climate Change Act 2008 (c.27). (2008). [Online]. Available at: <https://www.legislation.gov.uk/ukpga/2008/27/contents> [Accessed May 2023].

Climate Change Committee (2019). *Reducing UK emissions – 2019 Progress Report to Parliament.* [Online] Available at: [REDACTED] [Accessed May 2023].

Climate Change Committee (2020). *Reducing UK emissions: 2020 Progress Report to Parliament.* [Online]. Available at [REDACTED] [Accessed May 2023].

Climate Change Committee (2021). *Independent Assessment of UK Climate Risk.* [Online]. Available at: [REDACTED]

Climate Change Committee (2022). *Reducing UK emissions: 2022 Progress Report to Parliament.* [Online]. Available at [REDACTED] [Accessed May 2023].

Council Regulations 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora 1992. [Online] Available at: <https://www.legislation.gov.uk/eudr/1992/43/introduction> [Accessed May 2023].

David Tyldesley and Associates (DTA) Ecology (2021a: in draft). *Policy guidance document on demonstrating the absence of Alternative Solutions and imperative reasons for overriding public interest under the Habitats Regulations for Marine Scotland. Draft report 31 November 2021, not out to general consultation.* Doc. Ref. 1116 AS and IROPI Guidance.

David Tyldesley and Associates (DTA), (2021b). *The Habitats Regulations Assessment Handbook.* [Accessed May 2023].

Davies J.G., Humphreys, E.M. and Pearce-Higgins, J.W. (2021). *Projected future vulnerability of seabirds within the INTERREG VA area to climate change.* BTO report to AFBI and Marine Scotland.

Department for Business, Energy & Industrial Strategy (BEIS), (2017). *The Clean Growth Strategy: Leading the way to a low carbon future 2017 (as amended).* [Online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf [Accessed May 2023].

Department for Business, Energy & Industrial Strategy (BEIS), (2019). *Industrial Strategy Offshore Wind Sector Deal*. [Online]. Available at: <https://www.gov.uk/government/publications/offshore-wind-sector-deal> [Accessed May 2023].

Department for Business, Energy & Industrial Strategy (BEIS), (2020a) *Decision Letter for Hornsea Three. 31 December 2020*. Available at: <https://infrastructure.planninginspectorate.gov.uk/wpcontent/ipc/uploads/projects/EN010080/EN010080-003265-EN010080%20Hornsea%20Three%20%20Secretary%20of%20State%20Decision%20Letter.pdf>. [Accessed January 2022].

Department for Business, Energy & Industrial Strategy (BEIS), (2020b). *The Ten Point Plan for a Green Industrial Revolution*. [Online]. Available at: <https://www.gov.uk/government/publications/the-ten-point-plan-for-a-green-industrial-revolution> [Accessed May 2023].

Department for Business, Energy & Industrial Strategy (BEIS), (2020c). *Energy White Paper: Powering our net zero future*. [Online]. Available at: <https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future> [Accessed May 2023].

Department for Business, Energy & Industrial Strategy (BEIS), (2021a). *Norfolk Boreas Decision Letter*. [Online]. Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010087/EN010087-002917-NORB-Boreas-Decision-Letter.pdf> [Accessed May 2023].

Department for Business, Energy & Industrial Strategy (BEIS), (2021b). *Net Zero Strategy: Build Back Greener*. [Online]. Available at: <https://www.gov.uk/government/publications/net-zero-strategy> [Accessed May 2023].

Department for Business, Energy & Industrial Strategy (BEIS), (2022a). *Norfolk Vanguard Decision Letter*. [Online]. Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010079/EN010079-004529-Vanguard%20decision%20letter%20280922.pdf> [Accessed May 2023].

Department for Business, Energy & Industrial Strategy (BEIS), (2022b). *East Anglia ONE North Decision Letter*. [Online]. Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010077/EN010077-009806-EA1N%20-%20Decision%20Letter%20-%20Signed.pdf> [Accessed May 2023].

Department for Business, Energy & Industrial Strategy (BEIS), (2022c). *East Anglia TWO North Decision Letter*. [Online]. Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010078/EN010078-010064-EA2%20-%20Decision%20Letter%20Signed.pdf> [Accessed May 2023].

Department for Business, Energy & Industrial Strategy (BEIS), (2022d). *British Energy Security Strategy*. [Online]. Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment>

[data/file/1069969/british-energy-security-strategy-web-accessible.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1069969/british-energy-security-strategy-web-accessible.pdf) [Accessed May 2023].

Department for Business, Energy & Industrial Strategy (BEIS), (2023). *Energy Security Bill Policy Statement: Offshore Wind Environmental Improvement Package Measures*. [Online]. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1127791/Policy_Statement_Offshore_Wind_Environmental_Improvement_Package_Measures.pdf [Accessed May 2023].

Department of Energy and Climate Change (DECC), (2011a). *Overarching National Policy Statement for Energy (EN-1)*. [Online]. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf [Accessed May 2023].

Department of Energy and Climate Change (DECC), (2011b). *Overarching National Policy Statement for Renewable Energy Infrastructure (EN-3)*. [Online]. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47856/1940-nps-renewable-energy-en3.pdf [Accessed May 2023].

Department of Energy and Climate Change (DECC), (2011c). *Overarching National Policy Statement for Energy (EN-5)*. [Online]. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47858/1942-national-policy-statement-electricity-networks.pdf [Accessed May 2023].

Department of Energy and Climate Change (DECC), (2013). *UK Renewable Energy Roadmap*. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/255182/UK_Renewable_Energy_Roadmap_-_5_November_-_FINAL_DOCUMENT_FOR_PUBLICATION.pdf

Department for Energy Security & Net Zero (DESNZ). (2022). *Net Zero Strategy: Build Back Greener*. Available at: <https://www.gov.uk/government/publications/net-zero-strategy>

Department for Energy Security & Net Zero (DESNZ). (2023a). *Draft Overarching National Policy Statement for Energy (EN-1)*. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147380/NPS_EN-1.pdf

Department for Energy Security & Net Zero (DESNZ) (2023b) *Hornsea Project 4 Offshore Windfarm*. Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010098/EN010098-002331-DESNZ%20HRA%20-%20Hornsea%20Four_Final.pdf (Accessed: 28 May 2024).

Department for Energy Security & Net Zero (DESNZ). (2023c). *Draft Overarching National Policy Statement for Renewable Energy Infrastructure (EN-3)*. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147382/NPS_EN-3.pdf

Department for Environment, Food and Rural Affairs (DEFRA), (2012). *Habitats Regulations: guidance on the application of article 6(4)*. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/969512/pb13840-habitats-iropi-guide-20121211.pdf [Accessed May 2023].

Department of Energy Security & Net Zero (DESNZ) (2024). *Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Projects*. [Online] Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010109/EN010109-002342-SADEP%20HRA%20DESNZ%2017042024.pdf> [Accessed 28 May 2024].

Department for Environment, Food and Rural Affairs (DEFRA), (2021). *Best practice guidance for developing compensatory measures in relation to Marine Protected Areas*. [Online] Available at: https://consult.defra.gov.uk/marine-planning-licensing-team/mpa-compensation-guidance-consultation/supporting_documents/mpacompensatorymeasuresbestpracticeguidance.pdf [Accessed May 2023].

Department for the Environment Food and Rural Affairs (Defra), (2021). *Best practice guidance for developing compensatory measures in relation to Marine Protected Areas*. [Online] Available at: https://consult.defra.gov.uk/marine-planning-licensing-team/mpa-compensation-guidance-consultation/supporting_documents/mpacompensatorymeasuresbestpracticeguidance.pdf

Department for Environment Food & Rural Affairs (Defra), (2021). *Changes to the Habitats Regulations 2017*. [Online] Available at: <https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017#setting-network-objectives>

Electricity Act 1989 (c. 29). (1989). [Online]. Available at: <https://www.legislation.gov.uk/ukpga/1989/29/contents> [Accessed May 2023].

European Commission, (2010). *Wind energy developments and Natura 2000*. [Online] Available at: [REDACTED] [Accessed May 2023].

European Commission, (2018). *Managing Natura 2000 sites The provisions of Article 6 of the 'Habitats' Regulations 92/43/EEC*. [online] Available at: [REDACTED] [Accessed May 2023].

European Commission, (2020a). *2030 Climate Target Plan*. [Online] Available at: [REDACTED] [Date accessed: 3 August 2023].

European Commission, (2020b). *Guidance document on wind energy developments and EU nature legislation*. [Online] Available at: <https://tethys.pnnl.gov/sites/default/files/publications/EC-Guidance-2020-Wind-Energy.pdf> [Accessed May 2023].

European Commission, (2021). *Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Regulations 92/43/EEC*. [Online]. Available at: [REDACTED] [Accessed May 2023].

European Parliament, (2020). *EU climate target plan Raising the level of ambition for 2030*. [Online] Available at:

[Redacted]
[Redacted]
[Redacted]
[Redacted]. [Accessed May 2023].

European Union (Withdrawal) Act 2018 (c16) . (2018). [Online]. Available at:
<https://www.legislation.gov.uk/ukpga/2018/16/contents/enacted> [Accessed May 2023].

Glasgow Climate Pact 2021. [Online] Available at:

[Redacted] [Accessed May 2023].

HM Government (2022). *Offshore wind best practice advice to facilitate sustainable development*. [Online] Available at:
<https://naturalengland.blog.gov.uk/2022/04/13/offshore-wind-best-practice-advice-to-facilitate-sustainable-development/> [Accessed May 2023].

HM Government, (2022). *UK Climate Change Risk Assessment 2022*. [Online] Available at:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1047003/climate-change-risk-assessment-2022.pdf [Accessed May 2023].

Hornsea Project Three Offshore Wind Farm, (2020). *MCZ Derogation Case*. [Online] Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-003192-HOW03_CON02_Appendix3_MCZ.DerogationCase.pdf [Accessed May 2023].

Horsham District Council, (2022). *Horsham District's Draft Climate Action Strategy* [Online]. Available at:
https://www.horsham.gov.uk/_data/assets/pdf_file/0014/123053/Horsham-District-Climate-Action-Strategy-v2.pdf [Accessed May 2023].

Intergovernmental Panel on Climate Change (IPCC), (2021). *Sixth Assessment Report – Climate Change 2021: The Physical Science Basis*. [Online] Available at:
[Redacted] [Accessed May 2023]

IPCC. (2023). *AR6 Synthesis Report*. [Online] Available at:
[Redacted] [Accessed June 2023]

Marine and Coastal Access Act 2009 (c.23). (2009), c.23. [Online] Available at:
<https://www.legislation.gov.uk/ukpga/2009/23/contents> [Accessed May 2023].

Mason, L.R., Green, R.E., Hirons, G.J.M., Skinner, A.M.J., Peault, S.C., Upcott, E.V., Wells, E., Wilding, D.J., and Smart, J. (2021). *Experimental diversionary feeding of red kites *Milvus milvus* reduces chick predation and enhances breeding productivity of northern lapwings *Vanellus vanellus**. *Journal for Nature Conservation*, 64. [Online]. Available at:
[Redacted] [Accessed Nat 2023].

Mid Sussex District Council, (2022). *Sustainable Economy Strategy* [Online]. Available at:
<https://www.midsussex.gov.uk/media/8159/ses-document-2022-combined-05-05-22.pdf> [Accessed May 2023].

Mitchell, P.I., Newton, S.F., Ratcliffe, N. and Dunn, T.E. (2004). *Seabird Populations of Britain and Ireland*. T & AD Poyser, London.

MMO. (2019). *Identifying sites suitable for marine habitat restoration or creation (MMO1135)*. [Online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/798829/20190430_MMO1135_Identifying_sites_for_habitat_creation_datalayers_Report_a.pdf

National Grid ESO (2022). *Future Energy Scenarios*. [Online] Available at: [REDACTED]

National Infrastructure Commission. (2020). *Design Principles for National Infrastructure*. [Online]. Available at: [REDACTED] [Accessed May 2023].

Natural England. (2019). *Flamborough and Filey Coast SPA Conservation Objectives*. [Online] Available at: [REDACTED] [Accessed June 2023].

Natural England. (2021). *Rampion 2 PEIR Section 42 Consultation Letter*.

Natural England. (undated). *Designated Sites View: Flamborough and Filey Coast SPA*. [Online] Available at: [REDACTED]

OCT. (2021). *Plymouth Sound National Marine Park*. [Online] Available at: [REDACTED]

OSPAR Commission (2009). *Background document for black-legged Kittiwakes *Rissa tridactyla tridactyla**. OSPAR Biodiversity Series.

Paris Agreement 2015. [Online] Available at: [REDACTED] Accessed May 2023].

Parker, J., Fawcett, A., Banks, A., Rowson, T., Allen, S., Rowell, H., Harwood, A., Ludgate, C., Humphrey, O., Axelsson, M., Baker, A. & Copley, V. (2022c). *Offshore Wind Marine Environmental Assessments: Best Practice Advice for Evidence and Data Standards. Phase III: Expectations for data analysis and presentation at examination for offshore wind applications*. Natural England. Version 1.2. 140 pp.

Planning Act 2008 (c. 29). (2008) UK: The Stationery Office Limited. [online] Available at: <https://www.legislation.gov.uk/ukpga/2008/29/contents> [Accessed May 2023].

Planning Inspectorate (PINS). (2022). *Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects*. [Online] Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-ten/> [Accessed June 2023].

Rampion Offshore Wind, (2023). *Questions and answers*. [Online]. Available at: [REDACTED] [Accessed June 2023].

Rampion Extension Development Limited (RED), (2021). *Preliminary Environmental Information Report (PEIR)*. [Online] Available at: [REDACTED] / [Accessed May 2023].

Rampion Extension Development Limited (RED), (2022). *Updated Statement of Community Consultation*. [Online] Available at: [REDACTED] [Accessed May 2023].

Royal Society for the Protection of Birds (RSPB). (2017). *Kittiwake joins the Red List of birds facing risk of global extinction*. [Online]. Available at: [REDACTED]

Sadykova, D., Scott, B. E., De Dominicis, M., Wakelin, S.L., Wolf, J., Sadykov, A. (2020). *Ecological costs of climate change on marine predator–prey population distributions by 2050*. *Ecology and Evolution*, 10(2), pp. 1069-1086.

Scottish Government, (2020). *Offshore Wind Policy Statement*. [Online]. Available at: <https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2020/10/offshore-wind-policy-statement/documents/offshore-wind-policy-statement/offshore-wind-policy-statement/govscot%3Adocument/offshore-wind-policy-statement.pdf> [Accessed May 2023].

Scottish Government, (2020). *Sectoral Marine Plan for Offshore Wind Energy*. [Online]. Available at: <https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2020/10/sectoral-marine-plan-offshore-wind-energy/documents/sectoral-marine-plan-offshore-wind-energy/sectoral-marine-plan-offshore-wind-energy/govscot%3Adocument/sectoral-marine-plan-offshore-wind-energy.pdf> [Accessed May 2023].

Scottish Government, (2021). *Scotland's Marine Assessment 2020 Headlines and Next Steps*. [Online]. Available at: [REDACTED] cessed May 2023].

Searle, K.R., Regan, C.E., Perrow, M.R., Butler, A., Rindorf, A., Harris, M.P., Newell, M.A., Wanless, S., & Daunt, F. (2023). *Effects of a fishery closure and prey abundance on seabird diet and breeding success: implications for strategic fisheries management and seabird conservation*. Submitted to *Biological Conservation*. *Biological Conservation*; 281. [Online] Available at: [REDACTED]

Smart, J., and Amar, A. (2018). *Diversivory feeding as a means of reducing raptor predation and seabird breeding colonies*. *Journal for Nature Conservation*; 46. [Online] Available at: [REDACTED]

Smith, R.K., Pullin, A.S., Stewart, G.B., and Sutherland, W.J. (2010). *Effectiveness of predator removal for enhancing bird populations*. *Conservation Biology*; 24(3):820-9. [Online] Available at: [REDACTED]

South Downs National Park, (2020). *Climate Change Adaptation Plan* [Online]. Available at: <https://www.southdowns.gov.uk/wp-content/uploads/2015/01/SDNPA-Climate-Change-Adaptation-Plan-Final-On-line-version.pdf> [Accessed May 2023].

Sutton, L.J., and Loram. (2021). *Diet specialization in an insular population of coastal Peregrine Falcons*. [Online] Available at:

[REDACTED] f [Accessed May 2023].

TCE. (2018) *Offshore wind operational report*. [Online] Available at:

TCE. (2019). *OWF Extensions Plan-Level Habitats Regulations Assessment*. [Online]

Available at: [h \[REDACTED\]](#)
[REDACTED]
[Accessed June 2023]

TCE. (2021). *Offshore Wind Leasing Round 4 Plan Level HRA: Screening Report*. [Online] Available at: [REDACTED]

TCE. (2022). *Offshore Wind Report 2022*. [Online] Available at:

TCE. (2023). *Round 4: Document Library*. [Online] Available at:

The Conservation (Natural Habitats, &c.) Regulations 1994. (SI 2716). [Online] Available at: <https://www.legislation.gov.uk/ukxi/1994/2716/contents/made> [Accessed May 2023].

Town and Country Planning Act 1990 (c.8). (SI 1990). [Online]. Available at: <https://www.legislation.gov.uk/ukpga/1990/8/contents> [Accessed May 2023].

UK Government. (1994). *The Conservation (Natural Habitats, &c.) Regulations 1994*. [Online]. Available at: <https://www.legislation.gov.uk/ukxi/1994/2716/contents/made>

UK Government. (2015). *Planning Act 2008: guidance on the pre-application process for major infrastructure projects*. [Online]. Available at: <https://www.gov.uk/government/publications/guidance-on-the-pre-application-process-for-major-infrastructure-projects>

UK Government. (2017a). *The Conservation of Habitats and Species Regulations 2017*. (SI 1012). [Online] Available at: <https://www.legislation.gov.uk/ukxi/2017/1012/introduction/made> [Accessed May 2023].

UK Government. (2017b). *The Conservation of Offshore Marine Habitats and Species Regulations 2017*. (2017). [Online]. Available at: <https://www.legislation.gov.uk/ukxi/2017/1013/contents/made> [Accessed May 2023].

UK Government. (2022). *British Energy Security Strategy: Policy Paper*. Available at: <https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy> [Accessed June 2023].

UK Government, (2023). *Planning for new energy infrastructure: revisions to National Policy Statements* [Online] Available at: [https://www.gov.uk/government/consultations/planning-for-new-energy-infrastructure-revisions-to-national-policy-statements#:~:text=The%20energy%20National%20Policy%20Statements%20\(%20NPS%20\)%20set%20out%20the%20government's,designated%20and%20published%20in%2002011.](https://www.gov.uk/government/consultations/planning-for-new-energy-infrastructure-revisions-to-national-policy-statements#:~:text=The%20energy%20National%20Policy%20Statements%20(%20NPS%20)%20set%20out%20the%20government's,designated%20and%20published%20in%2002011.) [Accessed June 2023].

UK Gov. (June 2023). *Energy Security Bill factsheet: Offshore wind environmental improvement package*. [Online] Available at: <https://www.gov.uk/government/publications/energy-security-bill-factsheets/energy-security-bill-factsheet-offshore-wind-environmental-improvement-package>

UK Parliament. (May 2019). “*The most important issue of our time,*” *Opposition calls to declare climate emergency*. [Online] Available at:



West Sussex County Council, (2020). *Climate Change Strategy* [Online]. Available at: https://www.westsussex.gov.uk/media/14787/climate_change_strategy_2020-2030.pdf [Accessed May 2023]

Appendix A

Outline Kittiwake Implementation and Monitoring Plan



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Rampion 2 Wind Farm

Category 8: Examination Documents: Kittiwake Implementation and Monitoring Plan (clean)

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Revision A

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1. Background

1.1 Project overview

- 1.1.1 Rampion Extension Development Limited (hereafter referred to as 'RED') (the 'Applicant') is developing the Rampion 2 Offshore Wind Farm Project ('Rampion 2') located adjacent to the existing Rampion Offshore Wind Farm Project ('Rampion 1') in the English Channel.
- 1.1.2 Rampion 2 will be located between 13km and 26km from the Sussex Coast in the English Channel and the offshore array area will occupy an area of approximately 160km². A detailed description of the Proposed Development is set out in **Chapter 4: The Proposed Development, Volume 2** of the Environmental Statement (ES) **[APP-045]**, submitted with the Development Consent Order (DCO) Application.
- 1.1.3 Before a DCO can be granted, the Secretary of State of the Department for Energy Security and Net Zero is required to undertake a Habitats Regulations Assessment (HRA) under Regulation 63 of the Habitats Regulations (2017 and Regulation 28 of the Offshore Marine Conservation (Natural Habitats, &c.) Regulations (2017)). The Applicant must therefore provide the Examining authority and the Secretary of State with the information it needs to undertake the HRA and establish the potential implications of Rampion 2 for The National Site Network. The National Site Network comprises of 'European sites' in the UK that already existed on 31 December 2020 (or proposed to the EC before that date) and established under the Nature Directives (Department for the Environment, Food and Rural Affairs (Defra), 2021).
- 1.1.4 Where the potential for adverse effects on integrity (AEol) cannot be ruled out, measures providing compensation for the impacted populations can be considered. In the case of Rampion 2, the Applicant's **Report to Inform Appropriate Assessment [APP-038]** concluded that Rampion 2 will not result in an AEol on any sites within the National Site Network alone or in-combination with other plans / projects, however this Kittiwake Implementation and Monitoring Plan ("KIMP") has been developed in the event that the Secretary of State does not agree with the conclusions of the Applicant's **Report to Inform Appropriate Assessment [APP-038]** in relation to the impact on kittiwake at Flamborough and Filey Coast Special Protection Area (FFC SPA) from the operation of the proposed wind farm.

1.2 Document Purpose

- 1.2.1 This document will outline the KIMP for the delivery of the Rampion 2 without prejudice kittiwake compensation (see **Habitats Regulations Assessment (Without Prejudice) Derogation Case [APP-039]**). The preferred compensation strategy of using artificial nesting structures (ANS) will be justified and presented along with any previous stakeholder input or consultation. An ANS that has already been constructed at Gateshead has been identified as a suitable site, after consultation with Natural England. This document also outlines the other stakeholders that will be involved in this compensation process, including any

landowners and partner offshore wind farm (OWF) developers. In addition, this document presents a timeline for the implementation of the ANS compensation measure. The ongoing maintenance, monitoring, and adaptive management programs are also presented.

- 1.2.2 The Applicant also proposes participating in the Department for Environment Food and Rural Affairs (Defra) strategic compensation via the Marine Recovery Fund (MRF) as an alternative option to the Gateshead ANS. If the MRF is progressed as the preferred option then the Project will cease involvement in respect of the Gateshead tower.
- 1.2.3 This document supersedes **8.25.7 Appendix 7 - Further information for Action Point 33 – Kittiwake Implementation and Monitoring Plan [REP1-026]**.

1.3 Species Overview

- 1.3.1 Kittiwake are predicted to be affected by the Proposed Development due to their high collision risk with OWF (Bradbury *et al.*, 2014). Both their sensitivity to OWF and potential as a compensatory subject are determined by their yearly movements and seasons and their ecology.
- 1.3.2 Kittiwake are small (38-40cm) (del Hoyo *et al.*, 1996), surface feeding gulls (Robinson, 2005; Coulson, 2011). Their diet consists of predominantly energy rich prey like sandeels (*Ammodyte* sp.) (Joint Nature Conservation Committee (JNCC), 2021), especially during their breeding season, as well as other gadoids, clupeids and discards from fishing vessels (Harris and Wanless, 1997; Bull *et al.*, 2004; Swan *et al.*, 2008; Chivers *et al.*, 2012).
- 1.3.3 There are approximately 380,000 breeding pairs in the UK, ~20% of which (76,000 pairs) are within England (JNCC, 2021). During the UK breeding season (March-August) kittiwake nest on narrow ledges along steep cliffs (Coulson, 2019), ranging from the North Atlantic (from Spain) to the Arctic Ocean (Furness, 2015). During the non-breeding season kittiwake are largely pelagic and disperse across the North Atlantic and North Sea during the winter (Bogdanova *et al.*, 2011; Frederiksen *et al.*, 2012). Kittiwakes undertake two migrations during the non-breeding season; autumn or post breeding migration (August to December) and spring or return migration (January to April) (Furness, 2015).
- 1.3.4 Between the late 1960s and mid-1980s, the UK kittiwake population increased rapidly, concurrently kittiwake began breeding on artificial structures in coastal urban environments (Coulson, 2011; JNCC, 2021). However, from 1995 the UK population declined rapidly and despite an overall increase since then, UK kittiwake populations remain ~50% under the 1986 baseline (Burnell *et al.*, 2023). Regardless of the population declines this species continues to urbanise, with kittiwake increasingly colonising buildings and piers (Coulson, 2011; Christensen-Dalsgaard *et al.*, 2020). These man-made structures provide similar and at times better (e.g. positioning can be created to maximise use and success, i.e., north facing etc.) nesting requirements than the species natural sites (i.e., narrow ledges on steep cliffs near water) and refuge to kittiwake as natural populations decline (Coulson, 2011; Christensen-Dalsgaard *et al.*, 2020).

1.4 The need for compensation

- 1.4.1 As noted above, the Applicant's **Report to Inform Appropriate Assessment [APP-038]** concluded that Rampion 2 will not result in an AEoI on the National Site Network alone or in-combination with other plans / projects. However, Natural England disagrees with the conclusion of no AEoI for kittiwake FFC SPA when in-combination with other plans / projects. While Natural England has recognised that the predicted impacts from the Proposed Development are low, they have stated that even small contributions risk furthering the adverse effect to existing in-combination impacts on the kittiwake feature of FFC SPA (Natural England's Relevant Representations **[RR-265]**). Natural England therefore considers that an AEoI cannot be ruled out.
- 1.4.2 There are no paragraphs in the 2011 NPS relevant to the application in terms of the requirements for the securability and provision of compensation options. The Applicant has therefore progressed a without prejudice derogation case, which aligns with requirements within the Energy National Policy Statement (EN-1) revised 2023 version (DESNZ, 2023) which is a material consideration for the determination of the application:
- 1.4.3 *"Before submitting an application, applicants should seek the views of the SNCB and Defra/Welsh Government as to the suitability, securability and effectiveness of the compensation plan to ensure the development will not hinder the achievement of the conservation objectives for the protected site" [5.4.31].*
- 1.4.4 *"Provision of such information will not be taken as an acceptance of adverse impacts and if an applicant disputes the likelihood of adverse impacts, it can provide this information as part of its application 'without prejudice' to the Secretary of State's final decision on the impacts of the potential development" [5.4.28].*
- 1.4.5 Having demonstrated that there are no Alternative Solutions and that there are imperative reasons of overriding public interest (IROPI) for Rampion 2 (**Habitats Regulations Assessment (Without Prejudice) Derogation Case [APP-039]**), this report demonstrates that compensatory measures can be put in place, if necessary, to ensure the overall coherence of the National Site Network is protected, should the Secretary of State conclude AEoI in respect to the kittiwake feature of the FFC SPA.

2. Consultation

- 2.1.1 The Applicant recognises the importance of engaging with the relevant stakeholders with respect to derogation and the development of any potential compensation measures. The Applicant has therefore sought the advice of key stakeholders and kept them updated on project developments. The Applicant has engaged openly through consultations and a series of online Evidence Plan Process (EPP) Expert Topic Group (ETG) meetings from December 2020 to April 2023. Attendees have included Natural England (the SNCB), the Marine Management Organisation (MMO), Centre for Environment, Fisheries and Aquaculture Science (Cefas), Sussex Ornithology Society, Sussex Wildlife Trust, The Wildlife Trust, and the Royal Society for the Protection of Birds (RSPB).
- 2.1.2 The Applicant will summarise all relevant consultation that has been undertaken during the development of the Final KIMP. Going forward, key decisions, agreements, and any outstanding issues remaining under discussion (with resolution pathways) will be captured. Ongoing engagement, for example to provide updates on monitoring, (post-discharge of the KIMP) will be outlined here.

Table 2-1 Summary of relevant consultation

Date	Consultee	Consultation	Description / Agreement
December 2020 to April 2023	Natural England, MMO, Cefas, RSPB	Evidence Plan Process (EPP) Expert Topic Group (ETG)	An EPP was adopted by the Applicant to ensure that key technical stakeholders were consulted on a regular and formalised basis. Final outcomes of the Evidence Plan Process prior to DCO application, reflecting the discussions and agreements made with its members throughout the pre-application process can be found in the Evidence Plan (Part 10 of 11) [APP-252] .
September 2023	Natural England	Kittiwake Strategic Compensation Meeting	The Applicant held a 'Kittiwake Strategic Compensation Meeting' with Natural England in September 2023, with the aim being to focus discussion on the potential need for HRA derogation and relevant compensatory measure options.
November 2023	Natural England	Relevant Representation [RR-265]	Key comments from Natural England relating to kittiwake compensation measures:

Date	Consultee	Consultation	Description / Agreement
			<p><i>“Natural England does not agree with the Applicant’s conclusion that there is no increased risk of Adverse Effect on Integrity (AEOI) for kittiwake at Flamborough and Filey Coast (FFC) Special Protection Area (SPA). This site has already reached AEol for this species, and therefore even small increases could have the potential to act in-combination.”</i></p> <p><i>“The most promising opportunity is the provision of additional nest spaces on an existing or proposed Artificial Nesting Structure (ANS) through a collaborative approach. This intervention is likely to be practicable and proportionate to the level of risk and given any AEOI will be in-combination with other projects, a collaborative approach is logical and appropriate. At present, insufficient details on the proposals are provided for the compensatory measures to be considered secured.”</i></p> <p><i>“We also consider that a Marine Recovery Fund (MRF) payment could provide an opportunity to contribute to strategic compensatory measures in the future but highlight that at present the MRF is not in place, and that limited information on the likely scope and delivery mechanism of the Fund is available. Therefore, it may be that at the point of decision-making, the Secretary of State may not have sufficient confidence in the MRF to mandate its use as a compensatory measure.”</i></p>

2.1.4 The recommendation from Natural England with regards to kittiwake compensation within Natural England’s Relevant Representations **[RR-265]** was:

“We recommend that the Applicant develop the collaborative ANS option further, and that specific proposals (i.e. confirmed location of the ANS to be used, number of nest spaces to be provided etc.) are submitted into the Examination in due course through an updated Kittiwake Implementation and Monitoring Plan (KIMP).”

2.1.5 The following sections of the KIMP provide an update of the Applicant's position with regard to this.

3. Proposed compensation measures

- 3.1.1 Following Natural England's advice detailed in Section 6.1 of the Applicants **Habitats Regulations Assessment (Without Prejudice) Derogation Case [APP-039]** the delivery of compensation through collaboration with other OWF developers is proposed for Rampion 2. A proportionate compensatory measure selection process, in the **Habitats Regulations Assessment (Without Prejudice) Derogation Case [APP-039]**, resulted in the following list of options selected for compensation as part of the derogation case for Rampion 2:
- Onshore kittiwake tower at Gateshead.
 - Participating in the DEFRA strategic compensation via the MRF.
- 3.1.2 Although Natural England no longer generally supports the use of onshore artificial nesting structures for kittiwake, they have stated support for its use for Rampion 2 as a measure, which is proportionate to an impact of less than one breeding adult per annum (Natural England's Relevant Representations **[RR-265]**). This collaborative approach between developers has been supported and encouraged by Natural England during consultation.
- 3.1.3 The Secretary of State recently approved measures for strategic compensation via the MRF including offshore ANS for kittiwakes in English Waters for projects up to and including Round 4. The Applicant will propose participating in the Defra strategic compensation via the MRF as an alternative option to the Gateshead ANS.

4. Scale and location of compensation.

4.1 Predicted Impact

- 4.1.1 As detailed in Section 8.5 of the Applicant's **Report to Inform Appropriate Assessment [APP-038]**, the Proposed Development will potentially impact the kittiwake feature of the FFC SPA through a minimal in-combination contribution of 0.72 kittiwake mortalities per annum. The **Report to Inform Appropriate Assessment [APP-038]** concludes therefore that there is no potential for an increased risk of an AEol to the conservation objectives of the kittiwake feature of the FFC SPA in relation to collision effects from Rampion 2 alone and in-combination with other OWFs.
- 4.1.2 At Natural England's request [REP1-026], the Applicant also calculated the predicted impact for the kittiwake feature of the FFC SPA utilising the Upper 95% Confidence Interval (CI) which resulted in a predicted impact of 1.69 mortalities per annum. The Applicant considers the central estimate, and not the Upper 95% CI, to be the most appropriate to calculate compensation requirements. There are already several levels of significant precaution included within the assessment process including parameters for flight heights, avoidance rates, flight speeds, and nocturnal activity, which combined lead to a highly precautionary level of predicted impact. An example of the sensitivity of these inputs to influencing the level of impact predicted when using precautionary values vs more recent evidence is demonstrated within Section 3 of the **Great black-backed gull assessment [REP1-038]**, which is also equally applicable for kittiwake collision impacts. This found differences in assessment approach of over 85% when changing a single input value. A similar impact sensitivity study was also undertaken for kittiwake as part of the Hornsea Four Examination process (APEM, 2022), which found a difference of over 90% in impact values when comparing Natural England's recommended approach against latest empirical evidence to inform assessments. The recommendation of Natural England to then provide further inclusion of precaution via the use of the 95% CI will mean that the Applicant may be required to compensate for an impact level which is unrealistic and does not reflect the level of impact expected from the Project, when considering impacts recorded from recent post construction collision studies (Skov et al., 2018; AOWFL, 2023).
- 4.1.3 Furthermore, for the most recent kittiwake derogation cases in England (Hornsea Four (DESNZ, 2023) and Hornsea Three (BEIS, 2020)), the Secretary of State has concluded the level of compensation required based on the mean estimate rather than the upper 95% CI, which further suggests that compensation quantum should be informed by the mean estimate only, as undertaken by the Applicant.
- 4.1.4 The RIAA **[APP-038]** concludes therefore that at the central impact, there is no potential for an increased risk of an AEol to the conservation objectives of the Kittiwake feature of the FFC SPA in relation to collision effects from Rampion 2 alone and in-combination with other OWFs.

- 4.1.5 However, the FFC SPA (particularly the kittiwake feature) is considered particularly sensitive to adverse impacts and Natural England has advised that it cannot rule out an AEoI in-combination with other plans and projects.

Estimated compensation quantum

- 4.1.6 The method used to estimate the compensation requirement for the Hornsea Project Three (Ørsted, 2020) was applied to the Rampion 2 Impact of 0.72 breeding adults to calculate the number of additional breeding pairs required to compensate for the impact. This method was accepted by the Secretary of State in determining to grant consent for that project. The compensation requirement for the upper 95% CI impact of mortality of 1.69 breeding adults is also presented.
- 4.1.7 The Hornsea Three method works by using the kittiwake UK national survival and productivity rates in Horswill and Robinson (2015) to calculate the survival until adulthood. This is then multiplied by the productivity to determine the number of nests, and consequently the number of fledglings, required to re-enter the population as breeding adults. In addition to this the natal philopatry rate has been considered. There is also a second stage to the calculations, a preferred option by Natural England for Hornsea Three. Stage 2 considers the number of birds with potential to recruit to different colonies. To achieve this, 0.8 is subtracted from the productivity rate, as this is considered the productivity required for the colony to maintain numbers (i.e. these birds will remain at the same colony). Any residual productivity above 0.8 will export birds to different colonies. Both stages are presented in **Table 4-1** below.
- 4.1.8 A range of compensation ratios have been calculated, in previous examples for the sites that have close connectivity with the FFC SPA a compensation ratio of 1:2 has been used, although up to 1:3 ratio has also been calculated reflecting the ratio adopted for other ANS compensation examples (for example East Anglia One North & Two Offshore Windfarms).

Table 4-1 Estimated additional breeding pairs required to compensate for the impacts to FFC SPA from Rampion 2 on kittiwake (0.72 at CIV, 1.69 at U95% CI) using the Hornsea Project Three method stage 1 and 2

Ratio	Stage 1	Stage 2
Central Impact Value (0.72)		
1:1	2.17	4.66
1:2	4.34	9.32
1:3	6.51	13.99
Upper 95% CI (1.69)		
1:1	5.09	11.00
1:2	10.18	22.00
1:3	15.27	33.00

4.2 Location for implementation

4.2.1 As outlined in **Section 3**, the delivery of artificial nesting for kittiwake may be undertaken using the below option:

- Use of an existing structure at Gateshead;

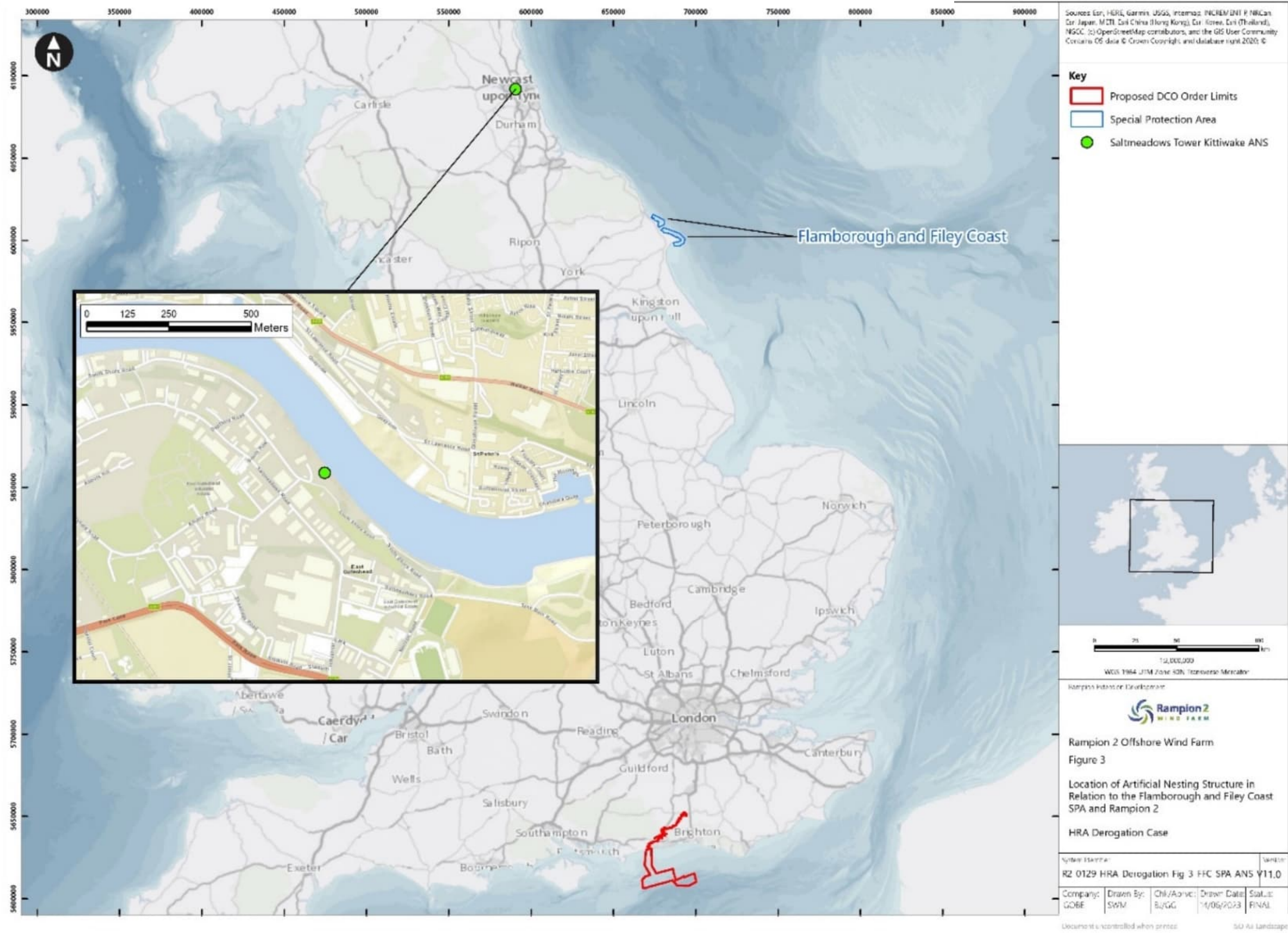
RWE kittiwake tower at Gateshead

4.2.2 RWE Renewables UK Dogger Bank South (East) Limited & RWE Renewables UK Dogger Bank South (West) Limited (together referred to as DBS herein) have interests in an existing kittiwake ANS at Gateshead that was constructed on behalf of DBS.

4.2.3 The Applicant is currently in discussions with DBS and has secured formal agreement to contribute towards a defined share of the kittiwake tower DBS constructed at Gateshead (See Section 6.1 for further details). The Applicant believes that the onshore ANS built at Gateshead is an appropriate site as there is evidence of man-made structures already being utilised in the area (Turner, 2010), and the population using man-made structures is, in some cases, increasing. The east coast of England kittiwake population is mainly found on the stretch of coast between Humberside and Northumberland, so the location of the site has strong connectivity with existing colonies and core foraging areas. The structure is built to allow for reconfiguration until the required breeding success is achieved (FLI Structures, 2023). The design of the structure is aimed to enable the kittiwake to maintain the ideal nesting microclimate by mitigating against solar heat or wind related cold stress (FLI Structures, 2023), thus providing the perfect nesting location for the compensation measure.

- 4.2.4 The location of the ANS at Gateshead is thought to be at the optimal location as it has connectivity with existing kittiwake colonies, including being adjacent to the existing nesting tower at Saltmeadows. With the FFC SPA being the only SPA designated for kittiwake in English waters, and consequently having almost all impacts from OWFs apportioned to it, the compensation measure will likely aim to deliver breeding birds back into the biogeographical region within the North Sea. Further evidence supporting the proposed location of compensation delivery is provided in **Section 5.1**.

Figure 4-1 Location of ANS in relation to the FFC SPA and Rampion 2



5. Design of compensation measures

5.1 Ecological evidence

- 5.1.1 This section will outline the design for the ANS at Gateshead, including ecological considerations, structural designs and layout, which ensure the compensation measure has the maximum potential for success.

Evidence of kittiwake using ANS

- 5.1.2 Kittiwakes have been documented colonising and breeding on man-made structures since the early 90s, across the Norwegian and North Seas (Christensen-Dalsgaard *et al.*, 2020). In the UK, the first known successful breeding on a UK offshore platform occurred in 1998 at Morecambe Gas Platform (Irish Sea) (Unwin, 1999). According to a recent survey 1,394 breeding pairs were recorded across a handful of offshore platforms in the UK southern North Sea (Orsted, 2021). The number of offshore breeding colonies are also thought to be increasing, with kittiwake colonising new structures as recently as 2016 (Christensen-Dalsgaard *et al.*, 2020).
- 5.1.3 Kittiwake have also been colonising artificial structures inland; since 1994 this species has successfully bred on various man-made structures along the River Tyne, Newcastle (Turner, 2010). The most notable colony nests on the Tyne Bridge (17 km inland) which was first colonised in 1996 with 2 successful nests (raised 1 'well grown' chick) (Turner, 2010). The Tyne Bridge colony then grew to 150 pairs the next year (1997) and in recent years there are ~1000 pairs recorded within the colony (Turner, 2010). Kittiwake have colonised other structures along the Tyne including the Baltic Centre for Contemporary Art (201 pairs in 2022), North shields lifeboat house (36 successful pairs between 1994-97), and Newcastle Quayside buildings (26 pairs in 2009) (Turner, 2010). Kittiwake nesting in UK on man-made structures appear to be stable or in some cases increasing (JNCC, 2021; Turner, 2010 & 2018).
- 5.1.4 Kittiwake nests can also be added at natural breeding sites, for example in 2019 the RSPB carved out 50 new ledges into the cliffs on Coquet Island (England) (RSPB, 2022) creating more suitable nesting sites on the cliffs. The following year (2020) all the new ledges were occupied by nesting kittiwake, thereby increasing the colony to 453 pairs, over 100 more pairs than in 2016 (RSPB, 2022; JNCC SMP database). The method of carving the cliff to create ledges was considered too time consuming, therefore instead the RSPB decided to install stainless steel hammocks around Coquet Island, on which kittiwake immediately began to nest and have since successfully raised chicks (RSPB, 2022).

5.2 Design of infrastructure

Design

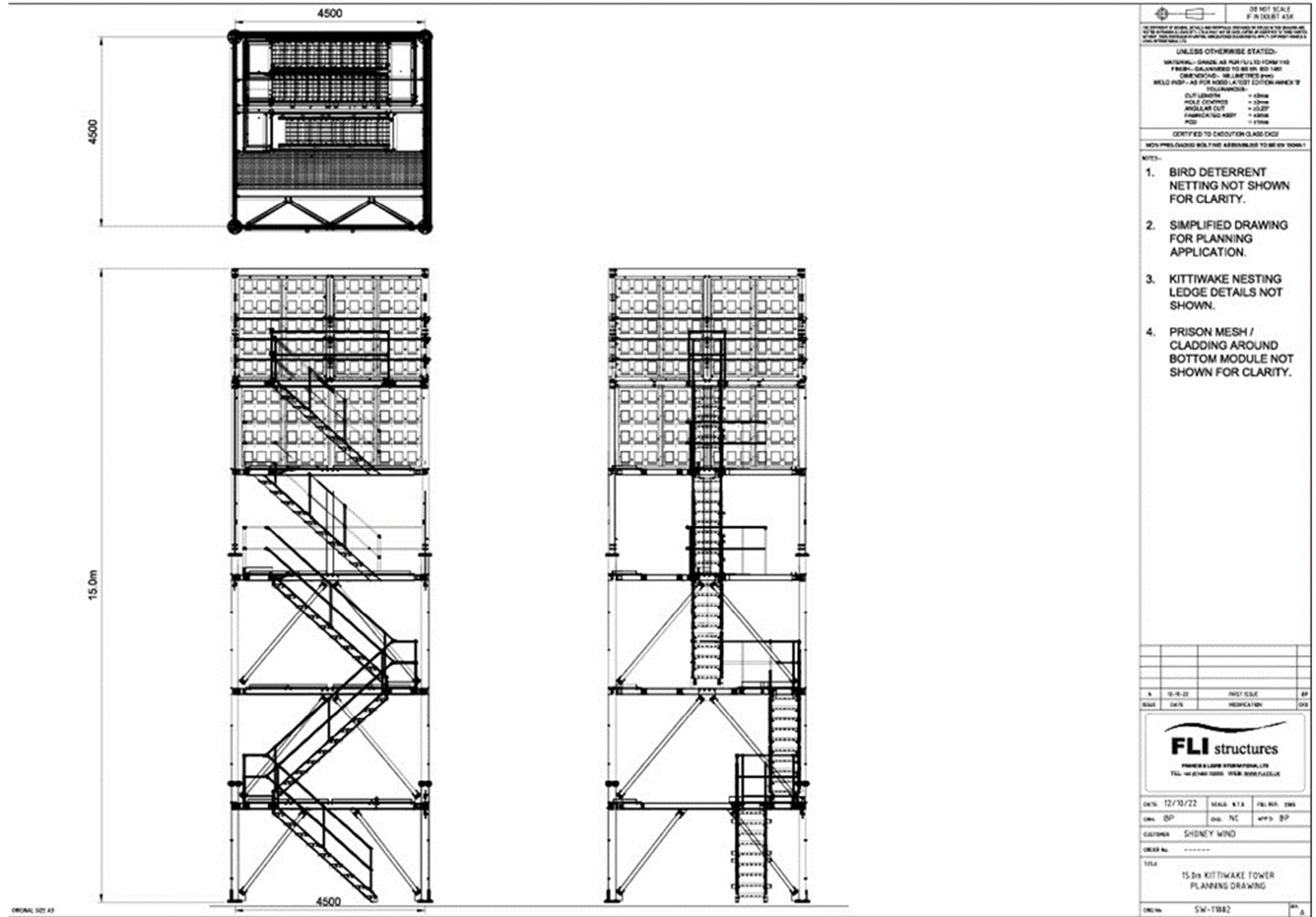
- 5.2.1 The kittiwake ANS at Gateshead was designed, built and installed by FLI Structures in partnership with Shoney Wind for DBS. The tower is tailored to the location and allows reconfiguration until the desired breeding success is achieved. The structure mitigates against solar heat and wind related cold stress due to climate change, enabling kittiwake to maintain the ideal nest microclimate required to successfully incubate eggs and protect young chicks.
- 5.2.2 To achieve the best performance and respond to changes in performance or required performance or the surrounding environment; the tower has a layout of the nest ledges that can be altered, and additional nesting cabins can be added. The tower can be raised, lowered, realigned or extended. The entire tower, complete with foundations can be moved to a new site if required as part of adaptive management measures (and that site can be on land or offshore).
- 5.2.3 The ANS comprises a support structure and a kittiwake module topside up to 15 m in height and accommodates up to 200 nests. The topsides nesting components are a combination of ledges and boxes. The nesting components have inward swinging doors to help with monitoring. The key benefits to the structure's design are:
- Accessible topside to ornithologists (safe design with no need for ropes);
 - Design includes feeding holes for supplemental feeding, if required;
 - Accessible hatches and one-way glass to help monitoring;
 - Designs are modular, such that breeding space can be increased by increasing tower height, or cladding the support structure with further nesting ledges; and
 - The ANS is relocatable, recyclable, and installable with screw piles (subject to ground conditions).
- 5.2.4 The design of the ANS can be found in Site design and layout section below.

Site design and layout

- 5.2.5 In terms of compensation for offshore wind related mortality, a site with more 'predictable' productivity is critical to quantifying the likely success of compensation measures. Thus, coastal locations were not considered because SWL's analysis of historical productivity, historical overnight air temperatures and historical wind data, showed that coastal colonies have widely differing productivities from year to year which correlated with weather conditions.
- 5.2.6 The Gateshead site was selected due to being adjacent to the existing Saltmeadows ANS colony, where there is long term historical data. It offers an opportunity to undertake scientific study and comparisons to the existing tower and other urban inland sites on the Tyne.
- 5.2.7 A further reason for selection of the Gateshead site, was because two sides of the kittiwake ANS are oriented such that one side will experience sunrise and the

other sunset, enabling comparison with each other. According to the 'time limited sun compass theory' (Guilford *et al.* 2014; Padgett *et al.* 2018; Togunove *et al.* 2021) nests facing sunrise or sunset may improve the accuracy of geolocation, which in turn may improve foraging efficiency (RWE, 2022).

Figure 5-1 Artificial Nesting Structure Diagram



6. Delivery and maintenance

6.1 Delivery mechanism

6.1.1 The DBS ANS at Gateshead was constructed on land that has been leased for 60 years from H Nichol and Sons, South Shore Road, Gateshead in 2023. The 60-year time frame exceeds the expected life of DBS and will therefore adequately provide compensation for the lifetime of the project (RWE, 2022: Document Reference 004551509-01).

6.1.2 The Applicant has written agreement with DBS, which was submitted as an appendix to the [Pre-Exam Procedural Deadline Submission – 1.1 - Cover Letter \[PEPD-001\]](#) by the Applicant at Pre-Examination Procedural Deadline 1 on 16 February 2024, outlining their position. The key text from that agreement states that:

“In the event that Secretary of State decides that the Rampion 2 project can only be consented in reliance upon a derogation case then Dogger Bank South confirms that it would be willing to allocate nesting platforms at its existing onshore artificial nesting structure or any other artificial nesting structure that may be provided as part of the Dogger Bank South project to Rampion 2”.

6.1.3 As detailed in Section 8.5 of the Applicant's [Report to Inform Appropriate Assessment \[APP-038\]](#), Rampion 2 will potentially impact the kittiwake feature of the FFC SPA through a minimal in-combination contribution of 0.72 kittiwake mortalities per annum. Therefore, RED are seeking to coordinate with DBS OWF for a defined share of the ANS that will cover the required compensation quantum (**Section 4.1**). This collaboration with another OWF developer is key to the success of these compensation measures.

6.2 Delivery timescales

6.2.1 The DBS kittiwake tower has already been constructed and is already providing artificial nesting spaces for kittiwake to utilise. This will mean the project will be able to deliver compensation in line with NE advice provided in point 11 of Appendix A1: of their Written Representations [\[REP1-059\]](#) submitted at Deadline 1: *“We advise that condition 4 is amended to ensure compensation is delivered four full breeding seasons prior to operation of the offshore wind farm”.* Therefore, this site will potentially receive a benefit from these compensation measures by the time Rampion 2 becomes operational.

6.3 Maintenance schedule

6.3.1 Structural and certification inspections will be completed at an appropriate frequency to ensure that the structure is safe for personnel to internally access the tower via the internal stair well. Continued monitoring of these structures will also ensure a safe and effective structure for kittiwake breeding.

7. Monitoring and adaptive management

- 7.1.1 If it is determined by the Secretary of State that an AEol cannot be ruled out, then as part of the Final KIMP an Offshore Ornithology Engagement Group (OOEG) will be created/or joined post consent to inform the delivery of the kittiwake compensation measures and ongoing monitoring and adaptive management measures set out in the DCO. This would be secured through a schedule that will be included in the draft DCO if the derogation case is required.
- 7.1.2 Membership and meeting schedule of the OOEG is yet to be defined but membership is likely to comprise multiple developers and key stakeholders. Once in place, members of the OOEG will finalise schedules for monitoring and implementation.
- 7.1.3 Monitoring will be required for all stages of the proposed artificial nesting program. The details of monitoring proposals will be discussed with the OOEG, with key details to be agreed upon including the frequency, duration, and nature of monitoring methodology, as well as data analysis and reporting requirements. However, this document will present an initial monitoring methodology upon which the final monitoring plan can be decided.

7.2 Monitoring Plan

- 7.2.1 First, pre-implementation monitoring will be undertaken at the DBS ANS to form a robust baseline from which future changes can be measured. This will involve monitoring both the current proposed structure and ensuring that existing colonies with connectivity to the structure have up to date, regular monitoring to determine the impact of a new structure on those colonies.
- 7.2.2 Other locations that will be monitored are the Leonardo Hotel, Saltmeadows Kittiwake Tower, Baltic Arts Centre, Tyne Bridge and Howick cliffs. This is in line with the monitoring carried out by RWE Dogger Bank South in 2023 for the Kittiwakery Tower at Gateshead.
- 7.2.3 When monitoring, the same environmental variables will be recorded on each visit to ensure that clear comparisons can be made to baseline conditions and between visits. Following colonisation, additional data, such as productivity and diet, may be collected to make further comparisons between birds nesting on the artificial structure and natural colonies. A monitoring programme will be discussed and developed with the OOEG, but it is expected that monitoring will be undertaken throughout the operational lifetime of Rampion 2.
- 7.2.4 Once implemented, monitoring will take place to determine the success of these compensatory measures. Its success will be based on its ability to attain an additional 4.66 breeding pairs of kittiwake (at a 1:1 ratio) based on the central impact value of 0.72 adult kittiwake. Therefore, productivity of the site will be monitored, along with natal dispersal and colony interchange with FFC SPA. These factors will be measured against the pre-implementation monitoring that serves as a baseline.

- 7.2.5 Monitoring of the ANS recruitment has started during the kittiwake breeding season. If consent is granted and it is determined by the Secretary of State that an AEoI cannot be ruled out, an intensive monitoring program will be completed by the Applicant, in collaboration with other projects/developers if applicable. The frequency of observations throughout this period will be decided after discussion with the involved stakeholders. It is anticipated that both FFC SPA and the ANS site will need to be monitored after implementation, and their monitoring will need to continue throughout the operation of Rampion 2.
- 7.2.6 Monitoring will be carried out by trained observers, and they will undertake monitoring using the methods outlined in JNCC's Seabird Monitoring Programme (Walsh *et al.*, 1995). The ANS are designed to allow entry for ornithologists to monitor the breeding kittiwakes from close quarters with minimal disturbance. The ANS will be checked for any occupancy prior to entering the structure by binoculars or telescope from a nearby vantage point.
- 7.2.7 Current practice and stakeholders within the OWF industry have found that, using current technologies, it is not possible to quantitatively measure natal dispersal of kittiwake (Ørsted, 2022). Many of the more advanced technologies, including satellite, radio, and archival tags, are not feasible due to their size and weight (Ørsted, 2022). However, other OWF developments have chosen to use qualitative methods, including chick ringing with identifying colours, to help determine the colony of origin of kittiwake chicks when they later choose a nesting site upon maturity (Ørsted, 2022). The benefits of the ANS in regard to colour-ringing birds is that a larger percentage of the colony can be ringed due to the easy access to the nest ledges, resulting in fuller and longer term datasets about where they disperse to.
- 7.2.8 In addition to the monitoring of site productivity, natal dispersal, and colony interchange, this plan may also include monitoring of adult survival rates and diet. This monitoring plan will be reviewed annually (unless otherwise agreed) in conjunction with the OOEG to reassess its accuracy and efficiency in the light of up-to-date survey methods.

7.3 Adaptive management

- 7.3.1 Should post-implementation monitoring reveal that the artificial nesting program is unsuccessful, or less successful than anticipated, an assessment will be undertaken to determine the reasons underlying the lack of success, and to inform the next steps. Notably, the next steps will consist of identifying potential improvements to the implemented measure, based on potential issues discovered during the assessment. The design of the ANS provides several adaptive management options, including adding nesting ledges/boxes, increasing height etc. Should the assessment determine that the measure cannot be improved or extended sufficiently, then alternatives, such as contribution to the MRF (or equivalent), will be considered in consultation with the OOEG. The project will not commit to adaptive measures if the evidence suggests that the reason for lack of success is out of the projects control e.g. climate change or reduction in prey availability.

8. Reporting timeframes

- 8.1.1 Following the breeding season an annual report will be produced and provided to the relevant stakeholders by the end of the year. If applicable, this may be provided in collaboration with other projects/developers. An OOEG/stakeholders meeting will be organised following each years' monitoring to present any findings and will discuss any reporting issues or any adaptive management measures that may be required.
- 8.1.2 The planned timelines for the annual reporting will follow the stages below:
- Monitoring data collected from the season received by the end of August;
 - Findings from the data presented to the OOEG/stakeholders by end of September;
 - Draft report circulated by end of October;
 - Finalised report submitted to relevant stakeholders by start of December;
 - Approval/final comments by January the following year; and
 - Adaptive management begins where required prior to the breeding season.

9. References

- Bogdanova, M.I., Daunt, F., Newell, M., Phillips, R.A., Harris, M.P., and Wanless, S. (2011), '*Seasonal interactions in the black-legged kittiwake, Rissa tridactyla: links between breeding performance and winter distribution*', Proc. R. Soc. B.278: 2412–2418.
- Bradbury, G., Trinder, M., Furness, B., Banks, A.N., Caldow, R.W.G., Hume, D. (2014), '*Mapping Seabird Sensitivity to Offshore Wind Farms*', PLOS ONE, 9: 1-17.
- Bull, J., Wanless, S., Elston, D. A., Daunt, F., Lewis, S. and Harris, M. P. (2004), '*Local-scale variability in the diet of black-legged kittiwakes Rissa tridactyla*', Ardea, 92: 43–52.
- Burnell, D., Perkins, A.J., Newton, S.F., Bolton, M., Tierney, T.D. and Dunn, T.E. (2023). *Seabirds Count: a Census of Breeding Seabirds in Britain and Ireland (2015–2021)*. JNCC; Peterborough
- Chivers, L. S., Lundy, M. G., Colhoun, K., Newton, S. F., Houghton, J. D. and Reid, N. (2012), '*Foraging trip time-activity budgets and reproductive success in the black-legged kittiwake*', Marine Ecology Progress Series, 456: 269-277.
- Christensen-Dalsgaard, S., Langset, M. and Anker-Nilssen, T. (2020), '*Offshore oil rigs—a breeding refuge for Norwegian Black-legged Kittiwakes Rissa tridactyla?*', Seabird, 32: 20-32.
- Coulson, J. (2011), '*The kittiwake*'. T & AD Poyser; Staffordshire.
- Coulson, J. C. (2019), '*Black-legged Kittiwake*', in Gulls (p. 843), (London: Collins New Naturalist).
- del Hoyo, J., Elliott, A. and Sargatal, J. (1996), '*Handbook of the Birds of the World, Volume 3. Hoatzin to Auks*', Lynx Edicions; Barcelona.
- DESNZ. (2023). *Overarching National Policy Statement for Energy (EN-1)*. [Online] Available at: www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1 [Accessed: 28 February 2024]
- FLI Structures, (2023). *Kittiwake Nesting Tower*. [Online] Available at: [REDACTED] [Accessed: 28 February 2024]
- Frederiksen, M., Moe, B., Daunt, F., Phillips, R. A., Barrett, R. T., Bogdanova, M. I., Boulinier, T., Chardine, J. W., Chastel, O., Chivers, L. S. and Christensen-Dalsgaard, S. (2012), '*Multicolony tracking reveals the winter distribution of a pelagic seabird on an ocean basin scale*', Diversity and distributions, 18(6): 530-542.
- Furness, Robert. (2015). *Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS)*. Natural England Commissioned Report. 164.
- Guilford, Tim & Taylor, Graham. (2014). *The sun compass revisited*. Animal Behaviour. 97. 135–143. 10.1016/j.anbehav.2014.09.005.

Harris, M. P., and Wanless, S. (1997), 'Breeding success, diet, and brood neglect in the kittiwake (*Rissa tridactyla*) over an 11-year period', *ICES Journal of Marine Science*, 54(4): 615-623.

JNCC (2021), 'Black-legged kittiwake (*Rissa tridactyla*)', [Online] Available at: <https://jncc.gov.uk/our-work/black-legged-kittiwake-rissa-tridactyla/#annual-abundance-and-productivity-by-geographical-area-england> [Accessed: February 2024].

Ørsted (2021), 'Compensation measures for FFC SPA Offshore Artificial Nesting Ecological Evidence', Planning Inspectorate; Bristol.

Ørsted (2020), 'Appendix 2 Kittiwake Compensation Plan' Document number: EN010080-003246. [Online] Available at: [https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-003246-HOW03-30Sep_Appendix%20%20Kittiwake%20Compensation%20Plan%20\(06543754_A\).pdf](https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-003246-HOW03-30Sep_Appendix%20%20Kittiwake%20Compensation%20Plan%20(06543754_A).pdf) [Accessed: January 2024].

Ørsted (2022), 'Kittiwake Implementation and Monitoring Plan (KIMP),' Final iteration for submission to the Secretary of State of the Department for Business Energy and Industrial Strategy. Ørsted; London.

Padget, O., Bond, S. L., Kavelaars, M. M., van Loon, E., Bolton, M., Fayet, A. L., et al. (2018). *In situ* clock shift reveals that the sun compass contributes to orientation in a pelagic seabird. *Curr. Biol.* 28, 275–279.

MacArthur Green (2021). *Kittiwakes nesting on artificial structures: features of nest sites and nesting success at Lowestoft, Tyne and Dunbar*. Report to Vattenfall.

Rampion Wind Farm (2023): *Habitats Regulations Assessment (Without Prejudice) Derogation Case*. June 2023.

RSPB (2022), 'Hang hammocks for seabirds', [Online] Available at:

[Redacted] [Accessed: February 2024].

RWE (2022), 'Installation of a Kittiwake Tower' Document reference: 004551509-01

Swann, R. L., Harris, M. P., and Aiton, D. G. (2008), 'The diet of European Shag *Phalacrocorax aristotelis*, Black-legged Kittiwake *Rissa tridactyla* and Common Guillemot *Uria aalge* on Canna during the chick-rearing period 1981 – 2007', *Seabird*, 21: 44–54.

Togunov, Ron & Derocher, Andrew & Lunn, Nicholas & Auger-Méthé, Marie. (2021). *Characterising menotactic behaviours in movement data using hidden Markov models*. [Online] Available at: [Redacted] [Accessed: February 2024].

Turner, D. M. (2010), 'Counts and breeding success of Black-legged Kittiwakes *Rissa tridactyla* nesting on man-made structures along the River Tyne, northeast England, 1994-2009', *Seabird*, 23: 111-126.

Turner, D.M. (2018), 'Summary of Black-legged Kittiwake *Rissa tridactyla* breeding data recorded on the River Tyne, northeast England, during 2010–2019.' [Online] Available at: [Redacted] [Accessed: February 2024]

Unwin, B. (1999), '*Birds breed on gas platforms.*' [Online] Available at:

[Accessed: February 2024].

Walsh, P.M., Halley, D.J., Harris, M.P., del Nevo, A., Sim, I.M.W., and Tasker, M.L. (1995), '*Seabird monitoring handbook for Britain and Ireland,*' Peterborough: JNCC, RSPB, ITW, Seabird Group.

10. Glossary of terms and abbreviations

Table 10-1 Glossary of terms and abbreviations

Term	Definition
AEoI	Adverse Effect on Integrity
ANS	Artificial Nesting Structure
DBS	Dogger Bank South
DEFRA	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security & Net Zero
DCO	Development Consent Order
FFC	Flamborough and Filey Coast
HRA	Habitats Regulations Assessment
IROPI	Imperative Reasons of Overriding Public Interest
KIMP	Kittiwake Implementation and Monitoring Plan
MRF	Marine Recovery Fund
NE	Natural England
NSIP	Nationally Significant Infrastructure Project
OOEG	Offshore Ornithology Engagement Group
OWF	Offshore Wind Farm
RIAA	Report to Inform Appropriate Assessment
SMP	Seabird Monitoring Program
SPA	Special Protection Area

