NORTH FALLS

Offshore Wind Farm

Marine and Coastal Access Act Derogation: Without Prejudice Provision of Evidence

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Contents

Tables

Glossary of Acronyms

°C	degree Celsius
AC	Alternating Current
BEIS	Department for Business, Energy & Industrial Strategy
CBRA	Cable Burial Risk Assessment
CCC	Committee on Climate Change
CCRA	Climate Change Risk Assessment
CO_2	Carbon Dioxide
COP	Conference of the Parties
CSIMP	Cable Specification and Installation Monitoring Plan
DCO	Development Consent Order
Defra	Department for Environment, Food and Rural Affairs
EIA	Environmental Impact Assessment
ES	Environmental Statement
ETG	Expert Topic Group
FOCI	Features of Conservation Interest
FTE	Full-Time equivalent
GGOW	Greater Gabbard Offshore Wind Farm
GVA	Gross Value Added
GW	Gigawatt
HDD	Horizontal Directional Drilling
HM	Her Majesty's
HRA	Habitats Regulations Assessment
HVAC	High Voltage Alternating Current
IROPI	Imperative Reasons of Overriding Public Interest
JNCC	Joint Nature Conservation Committee
KKE	Kentish Knock East
km	Kilometre
m	Metre
MCAA	Marine and Coastal Access Act 2009
MCZ	Marine Conservation Zone
MEEB	Measures of Equivalent Environmental Benefit
MMO	Marine Management Organisation
MPA	Marine Protected Area
MW	Megawatt
NASA	National Aeronautics and Space Administration
NFOW	North Falls Offshore Wind Farm Ltd

NOAA	National Oceanographic and Atmospheric Administration
NNR	National Nature Reserve
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Projects
OMoP	Other Means of Proceeding
RWE	RWE Renewables UK Swindon Limited
SAC	Special Area of Conservation
SEANSE	Strategic Environmental Assessment North Sea Energy
SNCB	Statutory Nature Conservation Body
SSER	SSE Renewables Offshore Windfarm Holdings Limited
SSSI	Site of Special Scientific Interest
TCE	The Crown Estate
UK	United Kingdom
UNFCCC	United Nations Framework Convention on Climate Change
WHO	World Health Organization
WMO	World Meteorological Organization

Glossary of Terminology

Array area	The offshore wind farm area, within which the wind turbine generators, array cables, platform interconnector cable, offshore substation platform(s) and/or offshore converter platform will be located.
Horizontal directional drill (HDD)	Trenchless technique to bring the offshore export cables ashore at landfall. The technique will also be the primary trenchless technique used for installation of the onshore export cables at sensitive areas of the onshore cable route.
Landfall	The location where the offshore export cables come ashore at Kirby Brook.
Offshore cable corridor	The corridor of seabed from the array area to the landfall within which the offshore export cables will be located.
Offshore export cables	The cables which bring electricity from the offshore substation platform(s) to the landfall, as well as auxiliary cables.
Onshore substation	A compound containing electrical equipment required to transform and stabilise electricity generated by the Project so that it can be connected to the National Grid.
The Applicant	North Falls Offshore Wind Farm Limited (NFOW).
The Project Or 'North Falls'	North Falls Offshore Wind Farm, including all onshore and offshore infrastructure.

1 Introduction

1.1 Project Background

1. North Falls Offshore Wind Farm (hereafter 'North Falls' or 'the Project') is an extension to the existing Greater Gabbard Offshore Wind Farm (GGOW), in the southern North Sea. When operational, North Falls would have the potential to generate renewable power for approximately 400,000 United Kingdom (UK) homes from up to 57 wind turbines.

2. The Applicant, North Falls Offshore Wind Farm Ltd (NFOW), is a joint venture between SSE Renewables Offshore Windfarm Holdings Limited (SSER) and RWE Renewables UK Swindon Limited (RWE), both of which are highly experienced developers.

1.2 Purpose of this Document

3. This document provides a case of evidence to support Stage 2 (Derogation) of the Marine Conservation Zone (MCZ) Assessment process under the Marine and Coastal Access Act 2009 (MCAA).

4. This document is informed by a Stage 1 assessment of the effects on Kentish Knock East (KKE) MCZ, provided in the MCZ Assessment Report [**Document Reference REP7-019]** which concludes that there is no significant risk that the conservation objectives of the KKE MCZ will be hindered by North Falls, taking into account extensive mitigation commitments made by the Project (Section 1.3) and informed by hydrodynamic and dispersion modelling (summarised in Section 4.4.3).

5. In response to Deadline 7 feedback from Natural England [REP7-087] which lacks clarity on their position regarding whether it can be concluded there is no significant risk of hindering the conservation objectives of the Kentish Knock East MCZ, this document provides the Applicant's without prejudice derogation case in relation to Stage 2 of the MCZ Assessment, including:

   - No other means of proceeding (Section 4);
   - Clear public benefits (Section 5); and
   - In-principle measures of equivalent environmental benefit (MEEB) (Section 6).

6. Sections 2 and 3 provide the legislative context and information on the KKE MCZ relevant interest features, respectively.

1.3 Without prejudice derogation

7. Throughout the pre-application and Examination phase, the Applicant has taken on board the advice of Natural England and made extensive mitigation commitments. These include:

   - Reducing the array area following Section 42 feedback to avoid any overlap with the KKE MCZ ensuring there will be no direct effects on the KKE MCZ;
   - Removing Gravity Base foundations from the design envelope, which provides the following benefits:

    - Reduced footprint of foundations;
    - Reduced footprint and volume of scour protection;
    - Reduced effects on hydrodynamic regime due to reduced cross sectional area of the foundations;
- Foundations will be 50m from the KKE MCZ; and
- Disposal of any dredged sediment or clay will be deposited at least 1km from the KKE MCZ.

8. Furthermore, extensive hydrodynamic and sediment dispersal modelling [REP7-041/042] has been undertaken of the indirect effects on the KKE MCZ and an updated MCZ Assessment [**REP7-019**] provided.

9. The KKE MCZ is designated for subtidal sand, mixed sediment and coarse sediment. The dominant sediment type recorded in the North Falls array area during the site-specific benthic survey was medium to coarse sand and therefore any suspended sediment arising from within the array area and subsequent sediment deposition on the eastern edge of the KKE MCZ would be of comparable sediment to the MCZ features.

10. It should be noted that the features of the KKE MCZ are not features of conservation importance (FOCI). In accordance with the MCZ project Ecological Network Guidance (JNCC, 2010) these were representative examples of broadscale habitats. Therefore, it is important to note that the habitats protected by the KKE MCZ are not threatened, rare or declining habitats in the wider context of the UK. While the subtidal coarse and mixed sediment features of the KKE MCZ are deemed to be in unfavourable condition this is based on habitat mapping of the MCZ from January 2014 prior to designation of the MCZ and a desk based vulnerability assessment by Natural England in the absence of a feature condition assessment.

11. The initial deposition of sediment from construction works in the array area would occur over a small area of the KKE MCZ and would be between 5cm to 60cm. As the sediment arising from within the array area is comparable to that of the designated features of the KKE MCZ and will be mobile, driven by the existing physical processes, the effect will be temporary as the sediment is naturally re-distributed by the prevailing waves and tidal currents. Therefore, the associated communities can be expected to recover. This is supported by monitoring at Greater Gabbard (CMAS, 2014) which shows the amount and distribution of coarse sediments remained similar pre- and post-construction. In addition, there was no material change to the communities.

12. A derogation case (including without prejudice) has never been required for indirect effects on seabed habitats, such as has been requested for North Falls.

13. Thus, the Applicant considers there is substantial evidence and legal precedent to support the position that North Falls will not hinder the conservation objectives of the KKE MCZ and therefore a derogation case should not be required.

2 Legislative And Policy Context

2.1 Legislation

2.1.1 The Marine and Coastal Access Act

14. The Marine and Coastal Access Act 2009 (MCAA) establishes a range of measures to manage the marine environment, including establishing MCZs. Sections 125 and 126 of the MCAA place specific duties on the MMO relating to MCZs and marine license decision making.

15. Where significant risk of hindering the achievement of the MCZ conservation objectives cannot be ruled out, the authority must not grant authorisation unless the following conditions (Section 126(7) of the MCAA) can be met:

"(a) there is no other means of proceeding with the act which would create a substantially lower risk of hindering the achievement of those objectives,

(b) the benefit to the public of proceeding with the act clearly outweighs the risk of damage to the environment that will be created by proceeding with it, and

(c) the person seeking the authorisation will undertake, or make arrangements for the undertaking of, measures of equivalent environmental benefit to the damage which the act will or is likely to have in or on the MCZ."

16. These tests comprise the MCAA derogation case.

2.1.1.1 Marine Conservation Zone Assessment

17. To undertake its marine licensing function, the MMO has introduced a three stage sequential assessment process for considering impacts on MCZs, in order to deliver its duties under Section 126 of the MCAA:

- Screening (for North Falls this is provided in the Marine Conservation Zone MCZ Appendix 1 Screening [APP-238]);
- Stage 1 Assessment (for North Falls this is provided in the Marine Conservation Zone Assessment Report [**REP7-019**]);
- Stage 2 Derogation case (this document, without prejudice of the Applicant's conclusions in the Stage 1 Assessment).

2.2 Policy

18. The National Policy Statements (NPSs) are the principal policy documents with respect to Nationally Significant Energy Infrastructure projects, under the Planning Act 2008. NPS EN-1 (DESNZ, 2023a) and NPS EN-3 (DESNZ, 2023b) outline the requirements for Applicants to provide evidence to support a derogation case at the application stage, where the SNCB has advised that it may not be possible to rule out a risk of hindering the conservation objectives of an MCZ (Table 2.1).

19. The Applicant's compliance with the relevant NPSs is detailed in the National Policy Statements Accordance Table [**Document Reference 9.10, Rev 2**].

Table 2.1 Relevant Policies of the NPSs

Paragraph	Policy
NPS EN-1 Paragraph 4.2.21	*For both derogations, the Secretary of State will consider the particular circumstances of any plan or project, but starting from the position that energy security and decarbonising the power sector to combat climate change:* *• requires a significant number of deliverable locations for CNP Infrastructure and for each location to maximise its capacity. This NPS imposes no limit on the number of CNP infrastructure projects that may be consented. Therefore, the fact that there are other potential plans or projects deliverable in different locations to meet the need for CNP Infrastructure is unlikely to be treated as an alternative solution. Further, the existence of another way of developing the proposed plan or project which results in a significantly lower generation capacity is unlikely to meet the objectives and therefore be treated as an alternative solution; and* *• are capable of amounting to imperative reasons of overriding public interest (IROPI) for HRAs, and, for MCZ assessments, the benefit to the public is capable of outweighing the risk of environmental damage, for CNP Infrastructure*
NPS EN-1 Paragraph 4.2.22	*"… For MCZs, where an applicant has shown there are no other means of proceeding which would create a substantially lower risk, and the benefit to the public outweighs the risk of damage to the environment, the Secretary of State must be satisfied that measures of equivalent environmental benefit will be undertaken".*
NPS EN-1 Paragraph 5.4.9	"*MCZs (Marine Protected Areas in Scotland), introduced under the Marine and Coastal Access Act 2009, are areas that have been designated for the purpose of conserving marine flora or fauna, marine habitats or types of marine habitat or features of geological or geomorphological interest. The protected feature or features and the conservation objectives for the MCZ are stated in the designation order for the MCZ. If a proposal is likely to have significant impacts on an MCZ, an MCZ Assessment should be undertaken as per the requirements under section 126 of the Marine and Coastal Access Act 2009. Government has recently designated the first three Highly Protected Marine Areas in England. These are designated as MCZs but with a higher conservation objective and with a single feature of the whole ecosystem within the site boundaries."*
NPS EN-3 Paragraph 2.8.265	*With increasing deployment of offshore wind farms and offshore transmission, environmental impacts upon SACs SPAs, and Ramsar sites and MCZs (individually and as part of a network) may not be addressed by avoidance, reduction, or mitigation alone, therefore compensatory measures (through derogation for SACs SPAs, Ramsar sites, and MCZs may be required at a plan or project level where adverse effects on site integrity and/or on conservation objectives cannot be ruled out.*
NPS EN-3 Paragraph 2.8.266	*For many receptors, the scale of offshore wind and offshore transmission developments, and potential in-combination effects, means compensation could be required and applicants must refer to the latest Defra compensation guidance when making their assessments.*
NPS EN-3 Paragraph 2.8.267-8	*If, during the pre-application stage, SNCBs indicate that the proposed development is likely adversely to impact a protected site, the applicant should include with their application such information as may reasonably be required to assess potential derogations under the Habitats Regulations or the Marine and Coastal Access Act 2009.* *Where such an indication is given later in the development consent process, the applicant should share this information as soon as reasonably practical.*
NPS EN-3 Paragraph 2.8.270	*Provision of such information will not be taken as an acceptance of adverse impacts, and if applicants dispute the likelihood of adverse effects they can provide this information as part of their application, 'without prejudice' to the Secretary of State's final decision on the impacts of the potential development.*

Paragraph	Policy
NPS EN-3 Paragraph 2.8.274	*Before submitting an application, applicants should seek the views of the SNCB and Defra, as to the suitability, securability and effectiveness of the compensation plan to ensure that the overall coherence of the National Site Network for the impacted SAC/SPA/MCZ feature is protected. Consultation should also take place throughout the pre-application phase with key stakeholders (e.g. via the evidence plan process and use of expert topic groups).*
NPS EN-3 Paragraph 2.8.305	*Where adverse effects on site integrity/conservation objectives are predicted, the Secretary of State should consider the extent to which the effects are temporary or reversible, and the timescales for recovery. The Secretary of State should also consider the extent to which the effects may impede achievement of the MPA target (including any interim target) set under the Environment Act 2021.*
NPS EN-3 Paragraph 2.8.8	*The British Energy Security Strategy30 committed to implementing an Offshore Wind Environmental Improvement Package (OWEIP), which aims to streamline environmental assessments, decrease consenting times, and maintain marine environmental protections. The OWEIP includes measures to:* *• revise Marine Protected Area assessment guidance (including Habitats Regulations and Marine Conservation Zone (MCZ) Assessments) to streamline and simplify the information applicants must supply.* *• revise the Habitats Regulations and MCZ assessment process for offshore wind to facilitate the delivery of compensation measures whilst maintaining valued protection for wildlife.* *• facilitate the delivery of strategic environmental compensation measures to offset environmental effects and reduce delays to projects, including development of a library of compensation measures, through the Collaboration on Offshore Wind Strategic Compensation (COWSC) programme.* *• implement an industry-funded Marine Recovery Fund (MRF), into which developers can choose to contribute to meet their environmental compensation obligations.* *• mmcommon requirement for designing wind farms and offshore transmission infrastructure, providing greater certainty and speeding up the consenting process.* *• develop a strategic approach to environmental monitoring.*

2.3 Guidance

20. The following guidance documents are of relevance to the MCAA Derogation:

- Defra (2024) Consultation on policies to inform updated guidance for Marine Protected Area (MPA) assessments. Draft for consultation
- Defra (2021) Best practice guidance for developing compensatory measures in relation to Marine Protected Areas (MPA). Draft for consultation

21. Guidance of relevance to the MCZ Assessment (Stage 1) is discussed in the MCZ Assessment Report [**Document Reference REP7-019**].

3 Kentish Knock East MCZ And Relevant Interest Features

22. The KKE MCZ is located 12 nautical miles off the coastline in the outer Thames estuary, covering an area of approximately 96km^2.

23. The site is designated for the following protected features:

- Subtidal sand
- Subtidal coarse sediments
- Subtidal mixed sediments

3.1 Conservation objectives

24. The site's conservation objectives apply to the MCZ and the habitat for which the site has been designated.

25. The conservation objective is that for each of the protected features:

- So far as already in favourable condition, remain in such condition; and
- So far as not already in favourable condition, be brought into such condition, and remain in such condition.

26. "Favourable Condition", with respect to a habitat within this MCZ, means that:

- Its extent is stable or increasing; and
- Its structure and functions, its quality, and the composition of its characteristic biological communities are such to ensure that it remains in a condition which is healthy and not deteriorating.

27. The reference to the composition of the characteristic biological communities of a habitat includes a reference to the diversity and abundance of species forming part of, or inhabiting, that habitat. For the purposes of this MCZ, any temporary deterioration in condition is to be disregarded if the habitat is sufficiently healthy and resilient to enable its recovery, and for the purpose of determining whether a protected feature is in favourable condition within the meaning of this designation, any alteration to that feature brought about entirely by natural processes is to be disregarded.

28. Table 3.1 shows the features designated by the KKE MCZ.

Table 3.1 Protected features of the KKE MCZ (source: Defra, 2019a)

Protected feature	Type of feature	Management approach
Subtidal sand	Broadscale marine habitat	Maintain in favourable condition
Subtidal coarse sediment	Broadscale marine habitat	Recover to favourable condition
Subtidal mixed sediments	Broadscale marine habitat	Recover to favourable condition

4 No Other Means of Proceeding

4.1 Introduction

29. In accordance with NPS EN-1, decarbonising the power sector by 2035 requires a significant number of deliverable locations for CNP infrastructure and for each location to maximise its capacity: "*the fact that there are other potential plans or projects deliverable in different locations to meet the need for CNP Infrastructure is unlikely to be treated as an alternative solution*". (DESNZ, 2023a)

30. The development of offshore wind farms in the UK is constrained by the requirement to secure an Agreement for Lease (AfL) from The Crown Estate. This process is undertaken through prescribed leasing rounds in line with Marine Plans and informed by Strategic Environmental Assessment and plan-level HRA. As discussed in Section 1.1, North Falls is an extension to GGOW and was identified during The Crown Estate's 2017 Extensions leasing round. During this process, consultation was undertaken by The Crown Estate which led to the selection of former North Falls array areas. Subsequently, The Crown Estate undertook a plan level HRA which determined the Project would be awarded an AfL.

31. Key criteria set by The Crown Estate's extension process, which influenced the site selection process of the former North Falls array areas, included the fact that wind farm extensions must share a boundary with the existing (parent) wind farm; and that the proposed wind farm to be extended must be constructed and fully operational at the date of the application. GGOW was previously extended from its eastern boundary by Galloper Wind Farm, therefore the starting point for the North Falls site selection was that it had to be an extension to the north, west and/or south of GGOW. Taking into account a range of existing constraints, in particular shipping lanes and aggregates sites (discussed further in ES Chapter 4 Site selection [**Document Reference: APP-028**], an extension to the west of GGOW was selected. Given the constraints of the leasing process and constraints associated with the ability to safely co-exist with existing sea users, there are no alternative locations that meet the Project objectives and satisfy NPS EN-1.

32. Alternative offshore wind farm locations are not considered to be an alternative as they would not meet the Project objectives and are not considered further.

4.2 Approach to Assessing Other Means of Proceeding

33. The Defra (2021) draft compensation guidance states the assessment of Other Means of Proceeding (OMoP) should include:

    "all feasible, less harmful and reasonable options and, the applicant should be asked to justify its reasoning for discounting alternatives. This could include looking at whether the proposal could happen at a different location, using different routes across a site or making changes to scale, method, size or timing. These are not exhaustive, and the responsible authority should consider what is appropriate for the application on a case-by-case basis, including both operational and decommissioning aspects.

Defra's policy position is that ecological criteria, conservation objectives and network status should outweigh economic considerations over the lifetime of the activity. While alternative solutions should be legally and technically feasible, options should not usually be discounted for purely financial reasons.

Alternative solutions or other means of proceeding should be limited to those which would deliver the same overall outcome for the activity whilst creating a substantially lower risk of impact to the MPA."

34. Section 126(8) of the MCAA states *"other means of proceeding with an act includes a reference to proceeding with it —*

(a) in another manner, or

(b) at another location"

35. Established Government policy in NPS EN-1 designated by the Secretary of State also sets limits on alternatives that may be considered in decisions on development consent applications. Whilst this policy applies to development consent decisions rather than specifically to the MCZ Assessment, it lends emphasis to principles established in the DESNZ, 2023a, in particular where it states in paragraph 4.3.23 and 4.3.27 that the Secretary of State

"should be guided in considering alternative proposals by whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security, climate change, and other environmental benefits) in the same timescale as the proposed development; …

Alternative proposals which mean the necessary development could not proceed, for example because the alternative proposals are not commercially viable or alternative proposals for sites would not be physically suitable, can be excluded on the grounds that they are not important and relevant…

alternative proposals which are vague or inchoate can be excluded on the grounds that they are not important and relevant to the Secretary of State's decision".

36. In line with this requirement of the MCAA and the Defra (2021) draft guidance, the methodology adopted herein takes the following steps, following a similar process to HRA derogation:

- Step 1 – summarise the Project need and its objectives in order to allow the assessment (Step 3) to determine whether the OMoP achieve the same overall objective(s)/outcome;
- Step 2 – identify the risk and extent of hindering the conservation objectives of the KKE MCZ in order to allow the assessment (Step 5) to determine whether any OMoP are substantially less damaging to the MCZ.
- Step 3 – produce a long list of potential OMoP, including different location, using different routes across the MCZ, changes to scale/size or using a

different method[1]. These OMoP are then screened in terms of whether they meet the objectives of the Project, to produce a short list of OMoP that meet the Project objectives.

- Step 4 – consider whether any short-listed potential OMoP identified in Step 3 are feasible (financially, legally and technically).
- Step 5 – consider whether any feasible OMoP identified in Step 4 would have a substantially lower risk of hindering the MCZ conservation objectives.

4.3 Step 1: Project Need and Objectives

4.3.1 The Need for the Project

37. NPS EN-1 identifies the urgent need for CNP infrastructure to achieve the UK *"energy objectives, together with the national security, economic, commercial, and net zero benefits*".

38. The Needs Case and Project Benefits Statement for North Falls [**Document Reference: REP2-004**] is grounded on achieving relevant national policies, on the need for renewable energy and on the social and economic benefits that could be generated by the project. The issues discussed are summarised below.

    - Need to reduce greenhouse gas emissions;
        - Climate change;
        - Key policy drivers;
    - Need for energy security;
        - Global imports; and
        - Decommissioning of fossil fuel and nuclear generation.

39. The Project would also produce added benefits (discussed further in Section 5) including:

    - Opportunity to maximise social and economic growth through energy infrastructure investment; and
    - Benefits to the ecosystem through contributing to reducing climate change.

40. North Falls has an indicative operational life of approximately 30 years. During its operation, the Project would provide a significant contribution to the achievement of the national renewable energy targets discussed below and to the UK's contribution to global efforts to reduce the effects of climate change.

[1] The Defra 2021 draft guidance also refers to OMoP including changes to timing, however as this derogation case is referring to a long term effect, timing is not applicable.

4.3.1.1 Energy objectives

41. The key UK targets and objectives, underpinned by policy and legislation, of relevance to North Falls are outlined in Table 4.1. These targets are discussed further in the sections below.

Table 4.1 Energy Objectives

UK Energy Objective	Source	North Falls contribution
Limit global temperature increase to below 2ºC (preferably 1.5ºC).	Conference of the Parties 21 (COP21) to the Framework Convention on Climate Change, in Paris in 2015 (the Paris Agreement)	North Falls would make an important contribution to UK policies and targets through the generation of low carbon, renewable electricity. North Falls is expected to become operational in 2030, in accordance with the Project's National Grid connection offer.
50 GW of offshore wind by 2030	HM Government (2022b) British Energy Security Strategy	
All electricity coming from low carbon sources by 2035	Department for Energy Security and Net Zero (DESNZ, 2021) Net Zero Strategy: Build Back Greener	
Net Zero by 2050	Climate Change Act 2008 (as amended 2019)	

4.3.1.2 Need to reduce greenhouse gas emissions

42. Commitments made by the UK and international governments at COP21 (the Paris Agreement) were to limit global temperature increase to below 2ºC (preferably 1.5ºC). On a global scale, the world is currently not on track to meet the Paris Agreement. The latest IPCC report shows that modelled pathways of the planned Nationally Determined Contribution(s) (NDC)s up to 2030, announced prior to COP26 and considering no further increased ambitions, result in median global warming projections of 2.8°C by 2100 (IPCC, 2023).

43. The same report informs that when considering the policies implemented by 2020 with no further action strengthening, projections indicate a median global warming of 3.2°C by 2100 (IPCC, 2023).

44. Under the 2008 Climate Change Act, the UK Government is required to publish a Climate Change Risk Assessment (CCRA) every five years. The latest CCRA3, identifies sixty-one climate change risks distributed into 5 categories: natural environment and assets; infrastructure, health, communities and the built environment, business and industry and international dimensions. The report assesses the urgency of further action regarding each of the identified risks based on global warming scenarios of 2ºC and 4ºC. (HM Government, 2022a)

45. Independent assessment by a consortium of experts led by the University of Exeter was completed in 2021 to inform the CCRA process (Sustainability West Midlands, 2021). According to this assessment, high magnitude score climate risks identified for England, which require further action to be addressed include:

    - Impacts of climate change on the natural environment, including terrestrial, freshwater, coastal and marine species, forests and agriculture;

- An increase in the range, quantities and consequences of pests, pathogens and invasive species, negatively affecting terrestrial, freshwater and marine priority habitats species, forestry and agriculture;
- More frequent flooding and coastal erosion, causing damage to our infrastructure services, including energy, transport, water and information and communication technologies;
- A reduction in public water supplies due to increasing periods of water scarcity;
- The impact of extreme temperatures, high winds and lightning on the transport network;
- The impact of increasing high temperatures on people's health and wellbeing and changes in household energy demand due to seasonal temperature changes;
- Increased severity and frequency of flooding of homes, communities and businesses;
- The viability of coastal communities and the impact on coastal businesses due to sea level rise, coastal flooding and erosion;
- Disruption to the delivery of health and social care services due to a greater frequency of extreme weather;
- Damage to our cultural heritage assets as a result of temperature, precipitation, groundwater and landscape changes; and
- Impacts internationally that may affect the UK, such as risks to food availability, safety and security, risks to international law and governance from climate change that will affect the UK, international trade routes, public health and the multiplication of risks across systems and geographies.

46. The Climate Change Act 2008 (2050 Target Amendment) Order 2019 amended the UK's carbon emission target, previously set at 80% reduction, to a 100% reduction by 2050 relative to the 1990 baseline, legally committing the UK to reaching 'net zero' by 2050.

47. In the NDC to the United Nations Framework Convention on Climate Change (UNFCCC), submitted in December 2020, the UK committed to reducing economy-wide greenhouse gas emissions by at least 68% by 2030, compared to 1990 levels (BEIS, 2022b).

48. Furthermore, the Climate Change Committee advice report (CCC, 2025b) regarding the UK's seventh Carbon Budget, proposes a target of 87% reduction on 1990 baseline by 2035.

4.3.1.3 Need for energy security

49. Energy security is about ensuring secure, reliable, uninterrupted supplies to consumers, and having a system that can effectively and efficiently respond and adapt to changes. It is made up of three characteristics: flexibility, adequacy and resilience (BEIS, 2017).

50. Reliance on global markets for imported energy leaves the UK vulnerable to spikes in world energy market prices, political pressure, and potentially physical supply disruptions and the knock-on effects of supply challenges in other countries.

51. The British Energy Security Strategy (BEIS, 2022a) provides a target of 50GW of operational offshore wind farms by 2030 and recognises the need to fast track the consenting process, in order to achieve this target and improve the UK's energy security. In addition, the Strategy involves an "*approach to reduce global reliance on Russian fossil fuels whilst pivoting towards clean, affordable energy*" in the light of the invasion of Ukraine and concerns around reliance in Europe on Russian fuel imports, the constraining of which has led to significant global price rises for consumers. The strategy was rapidly deployed, with House of Commons Library research finding in August 2022 (House of Commons, 2022) that:

"In 2021 imports from Russia made up 4% of gas used in the UK, 9% of oil and 27% of coal. In 2021, imports of gas, oil and coal from Russian [sic] to the UK were worth a combined £4.5 billion. According to Eurostat, in 2020, imports from Russia made up 39% of the gas used in the EU, 23% of oil imports and 46% of coal imports. In June 2022, the fourth full month since the invasion, according to UK trade statistics, the UK Imported no oil, gas or coal from Russia. This was the third month in a row with no Russian gas imports, but the first month (since 2000 when this data is available back to) with no gas, oil or coal imports from Russia".

52. In a global market, this reduction in supply from Russia continues the upward pressure on prices for energy in the UK and wider Europe, even when the UK's supplies are more diversified.

53. In 2023 total UK energy production was at a record low level of 101.2 million tonnes of oil equivalent, 8.3 per cent lower than in 2022, and 21 per cent lower than pre-pandemic levels. Production levels for all fuels except bioenergy & waste and wind, solar & hydro are down from 2022, with coal, oil and nuclear output at record lows for this century. UK production is 66% below the peak recorded in 1999. (DESNZ, 2024a).

54. NPS EN-1 (DESNZ, 2023a) states that to ensure the UK's supply of energy remains secure, reliable, affordable, and consistent with meeting the target of net zero by 2050, decarbonisation of the energy system is required. Meeting these objectives necessitates a significant amount of energy infrastructure, both large and small-scale. "*Decarbonisation means we are likely to become more dependent on some forms of energy compared to others. Using electrification to reduce emissions in large parts of transport, heating and industry could lead to more than half of final energy demand being met by electricity in 2050, up from 17 per cent in 2019, representing a doubling in demand for electricity. Low carbon hydrogen is also likely to play an increasingly significant role."* (paragraph 2.3.7, NPS EN-1).

"*Wind and solar are the lowest cost ways of generating electricity, helping reduce costs and providing a clean and secure source of electricity supply (as they are not reliant on fuel for generation). Our analysis shows that a secure,*

reliable, affordable, net zero consistent system in 2050 is likely to be composed predominantly of wind and solar.

As part of delivering this, UK government announced in the British Energy Security Strategy an ambition to deliver up to 50 gigawatts (GW) of offshore wind by 2030, including up to 5GW of floating wind, and the requirement in the Energy White Paper for sustained growth in the capacity of onshore wind and solar in the next decade." (paragraphs 3.3.20 and 3.3.21, NPS EN-1).

55. These represent ambitious targets, with only 14.8GW of offshore wind capacity currently installed in the UK according to the Clean Power 2030 Action Plan (HM Government, 2024) or 17GW according to the National Energy System Operator (2025).

56. Energy security is also critical to achieving the energy targets discussed in Section 4.3.1.1), with NPS EN-1 stating that "*According to the Net Zero Strategy this means that by 2035, all our electricity will need to come from low carbon sources, subject to security of supply, whilst meeting a 40-60 per cent increase in demand"*

57. A review by the Climate Change Committee (CCC) shows that achieving the target of decarbonising the UK power system by 2035 requires a significant increase in the pace of deployment. The 50GW target for offshore wind by 2030 implies annual build rates around 40% higher than emerging data on the 2022 peak (CCC, 2023a).

58. North Falls would make a significant contribution to the achievement of both the national renewable energy targets and to the UK's contribution to global efforts to reduce the effects of climate change. The ambitious 'net zero' target described above, will only be met by the crucial contribution from the offshore wind industry. North Falls would help to reduce the UK's reliance on imported energy and to improve energy security, generating enough clean renewable energy to power over 400,000 typical UK households per year.

4.3.1.4 Need to increase low carbon sources of electricity generation

59. In light of the need to reduce greenhouse gas emissions and increase energy security, offshore wind farms represent an opportunity to increase electricity generation from a low carbon, low cost, renewable source.

60. The 2023 CCC Progress Report reported that 2022 was the UK's warmest recorded year with its first ever 40°C Day, and one of the six warmest years on record globally (CCC, 2023b). Subsequently the 2025 CCC Progress report (CCC, 2025a) stated 2024 was the warmest year on record globally with annual anomalies reaching over 1.5°C above pre-industrial levels for the first time.

61. The latest CCC progress report (CCC, 2025a) highlights that annual installations of offshore wind will need to at least treble to get the UK on track to meet its 2030 emissions targets.

62. As reflected by the CCC (2025), the Clean Power Action Plan published by the UK Government in December 2024 shows a three-fold increase of offshore wind developments is required, as displayed in Table 1 of the Plan, which has been extracted in Table 4.2.

Table 4.2 Offshore Wind Deployment Figures as Displayed in Table 1 of the Clean Power Plan 2030 Action Plan

Current Installed Capacity	NESO 'Further Flex and Renewables' Scenario	NESO 'New Dispatch' Scenario	DENSZ 'Clean Power Capacity Range'
14.8GW	51GW	43GW	43 – 50GW

63. The Clean Power 2030 Action Plan (HM Government, 2024) sets out the approach the Government will take to deliver a power system of at least 95% clean power sources by 2030. A clean power system will be heavily supported by offshore wind, as the UK Government states that "*offshore wind has a particularly important role as the backbone of the clean power system*".

64. NPS EN-1 states that electricity demand may be more than double by 2050 as the transport, heating and industry sectors make the change from fossil fuels to low carbon electricity to support their decarbonisation.

65. This is supported by page 45 in the Powering Up Britain – Energy Security Plan (DESNZ, 2023c) which states:

"As we transition to a more resilient and clean energy system, we anticipate that demand for electricity could double by 2050. Between now and then, the system will need to enable 50 gigawatts of offshore wind by 2030; and the decarbonisation of the power system, subject to security of supply, by 2035."

4.3.1.5 Summary of the Need for the Project

66. There is a clear and urgent need for the development of North Falls to help meet the UK Government targets outlined in Section 4.3.1.1.

67. The Project will provide secure, reliable, affordable renewable energy supply in the UK for over 400,000 homes. North Falls would help the UK meet its Net Zero targets and significantly contribute to the economy by providing substantial investment locally and nationally, as well as employment and new infrastructure during all phases of the Project.

68. The Need for the Project is set out in full in the Needs Case and Project Benefits Statement [**REP2-004**], Addendum to the Needs Case and Project Benefits Statement [**REP4-037**] and ES Chapter 2 Need for the Project [**APP-016**].

4.3.2 North Falls Project Objectives

69. The North Falls project objectives are outlined in Table 4.3.

Table 4.3 Project Objectives

ID	Objective	Basis for the Objective
1	To deliver low carbon electricity from an offshore wind farm to the National Grid in support of the decarbonisation of the UK electricity supply	The UK Government has committed to reducing its greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050. This commitment is made through the Climate Change Act 2008 (2050 Target Amendment) Order 2019 which was brought into force in June 2019 in response to recommendations by the Climate Change Committee (CCC) (CCC, 2019a).

ID	Objective	Basis for the Objective
		The CCC states that 75GW of offshore wind could be required to reach net zero by 2050 (CCC, 2019b). The British Energy Security Strategy (BEIS, 2022a) includes a target of delivering up to 50 gigawatts (GW) of offshore wind by 2030. In addition, NPS EN-3 (DESNZ, 2023b) states: "*Electricity generation from renewable sources is an essential element of the transition to net zero and meeting our statutory targets for the sixth carbon budget (CB6). Our analysis suggests that demand for electricity is likely to increase significantly over the coming years and could more than double by 2050. This could require a fourfold increase in low carbon electricity generation, with most of this likely to come from renewables.* *In the Net Zero Strategy, published in October 2021, government committed to action so that by 2035, all our electricity will come from low carbon sources, subject to security of supply, whilst meeting a 40-60% increase in demand."* Legislation has committed the UK to achieving Net Zero emissions by 2050. North Falls will contribute to meeting UK Government objectives of delivering sustainable development to enable decarbonisation.
2	To export electricity to the UK National Grid to support UK commitments for offshore wind generation and security of supply	Part 2 of NPS EN–1 notes that "*Given the vital role of energy to economic prosperity and social well-being, it is important that our supply of energy remains secure, reliable and affordable.*" Paragraph 2.8.1 of NPS EN-3 states "*As set out in the British Energy Security Strategy, the Government expects that offshore wind (including floating wind) will play a significant role in meeting demand and decarbonising the energy system. The ambition is to deploy up to 50GW of offshore wind capacity (including up to 5GW floating wind) by 2030, with an expectation that there will be a need for substantially more installed offshore capacity beyond this to achieve net zero carbon emissions by 2050)*".
3	To coordinate and optimise generation and export capacity within the constraints of available sites and onshore transmission infrastructure whilst delivering project skills, employment and investment benefits.	The 2017 Extension projects, which includes North Falls, were identified by TCE to provide an intermediate process between Rounds 3 and 4 to help achieve the urgent need for renewable energy and recognising that extensions to existing offshore wind farms are a proven way of efficiently developing more offshore generating capacity (The Crown Estate, undated). An Agreement for Lease (AfL) with TCE was awarded to North Falls in 2020. In addition grid connections have also been secured with a capacity up to 1GW.

4.4 Step 2: Extent of Risk to the KKE MCZ

4.4.1 Overview

70. The Stage 1 MCZ Assessment report [**REP7-019**] concludes there will be no risk of hindering the conservation objectives of the KKE MCZ and therefore this MCAA derogation case is provided without prejudice of that position.

71. A derogation case (including without prejudice) has never been required for indirect effects on seabed habitats such as has been requested for North Falls, therefore there is no precedent for the approach to determine the relevant extent of risk. The only effect of potential relevance relates to suspension of sediments and subsequent deposition, however it should be noted that the sediment types arising in the array area are comparable to those in the KKE MCZ and therefore there is no change to the extent, or structure and function of the MCZ.

4.4.2 Relevant Parameters

72. As discussed in Section 4.2, the MCAA states other means of proceeding should consider:

(a) in another manner, or

(b) at another location

73. The project design parameters ("other manner") that are of potential relevance to the effect outlined in Section 4.4.3, which could be considered in the assessment of OMoP relate to seabed preparation. Relevant components of the Project are:

- Number of turbines;
- Size of turbine foundations and associated sandwave levelling;
- Type of turbine foundations and associated sandwave levelling;
- Length of array cable and associated sandwave levelling; and
- Timing of sandwave levelling in relation to current direction/speed.

4.4.3 Summary of Assessment of Effects

74. As discussed in Section 1.3, it is the Applicant's position that there is no risk of hindering the conservation objectives of the KKE MCZ as a result of the indirect effects of North Falls. Key points from the MCZ Assessment report [**REP7-019**] include:

- The KKE MCZ is designated for subtidal sand, mixed sediment and coarse sediment. The dominant sediment type recorded in the North Falls array area during the site specific benthic survey was medium to coarse sand and therefore any suspended sediment arising within the array area during construction, and subsequent deposition on the eastern edge of the KKE MCZ would be of comparable sediment to the MCZ features;
- There are no FOCI in the KKE MCZ, instead the MCZ is designated for representative examples of broadscale habitats;

- The initial deposition of suspended sediment from seabed preparation/ sandwave levelling in the array area would occur over a relatively small area (10.35km^2) of the KKE MCZ and would be between 5cm to 60cm. Sediment deposition from other aspects of the construction is not predicted to interact with the MCZ (as shown in the Hydrodynamic and sediment dispersal modelling report [**REP7-041/042**]);
- As the sediment arising from within the array area is comparable to that of the designated features of the KKE MCZ and will be mobile, driven by the existing physical processes, the effect will be temporary as the sediment is naturally re-distributed by the prevailing waves and tidal currents.
- Evidence shows the associated communities can be expected to recover.

4.5 Step 3: Long List of OMoP for North Falls

4.5.1 Do Nothing

75. While the draft Defra 2021 compensatory measures guidance advised that the "do nothing" option should be considered, it acknowledges this would rarely be a true alternative means of proceeding:

"It is unlikely in most cases that the 'do nothing' option (i.e. no proposed activity) would be an acceptable alternative as it would not deliver the same overall objective as 'the activity'. However, it is useful to provide a comparison for other alternatives and to act as a baseline against which public benefits can be assessed. Where it is most likely to be an option is where no or limited tangible public benefit can be demonstrated."

76. The do nothing scenario would not enable North Falls to contribute to the range of government legislation and policies which promote the importance of developing offshore wind farms. Of particular note, the target for 50GW of installed capacity of offshore wind by 2030 requires the vast majority of offshore wind farms currently in planning to be consented and viable. There is currently approximately c.30.8GW in the planning stages with grid connection agreements in or before 2030, and c.30GW consented, in construction or built (NESO, 2025).

77. Given the need for the Project, as set out in Section 4.3.1 and expanded in the Section 5 Clear Public Benefits, the alternative of not developing an offshore wind farm would clearly not satisfy any of the project objectives outlined in Section 4.3.2. The do nothing scenario is therefore not considered further.

4.5.2 At Another Location

4.5.2.1 Different location for the Project

78. In accordance with NPS EN-1: "*the fact that there are other potential plans or projects deliverable in different locations to meet the need for CNP Infrastructure is unlikely to be treated as an alternative solution*". (DESNZ, 2023a)

79. The development of offshore wind farms in the UK is constrained by the requirement to secure an AfL from The Crown Estate. This process is undertaken through prescribed leasing rounds in line with Marine Plans and

informed by Strategic Environmental Assessment and plan-level HRA. As discussed in Section 1.1, North Falls is an extension to GGOW and was identified during The Crown Estate's 2017 Extensions leasing round. During this process, consultation was undertaken by The Crown Estate which led to the selection of North Falls.

80. Key criteria set by The Crown Estate's extension process, which influenced the site selection process of the original North Falls array areas, included the fact that wind farm extensions must share a boundary with the existing (parent) wind farm; and that the proposed wind farm to be extended must be constructed and fully operational at the date of the application. GGOW was previously extended from its eastern boundary by Galloper Wind Farm, therefore the starting point for the North Falls site selection was that it had to be an extension to the north, west and/or south of GGOW. Taking into account a range of existing constraints, in particular shipping lanes and aggregates sites (discussed further in ES Chapter 4 Site selection [**Document Reference: APP-028**], an extension to the west of GGOW was selected. Given the constraints of the leasing process and constraints associated with the ability to safely co-exist with existing sea users, there are no alternative locations that meet the Project objectives and satisfy NPS EN-1.

81. Alternative offshore wind farm locations are therefore not considered to be an alternative as they would not meet the Project objectives and are not considered further.

4.5.2.2 Increased distance from the KKE MCZ

82. Noting the constraints considered during site selection and definition of the array area boundary, the distance from the KKE MCZ cannot be increased without further reducing the size of the array area.

83. Following stakeholder feedback, the array area has been significantly reduced during the pre-application stage from 150km^2 to 95km^2. This included removing overlap with the KKE MCZ, as requested by Natural England in their Section 42 feedback.

84. This size of the array area represents a balance between delivering the capacity of North Falls, ensuring commercial viability, and reducing environmental effects. The array area is based on external constraints e.g. shipping and navigation. It has already been reduced from the PEIR array area by 37% in area, a substantial reduction on the originally proposed area. There are also potentially further constraints on the array area which will be informed by geotechnical surveys, UXO surveys and discussions with the Maritime and Coastguard Agency post consent to agree the layout. The reduction in array area and future constraint considerations already result in a significantly reduced size of wind farm and an increased wind turbine generator density (which is expected to be higher than for the average wind farm in the UK) resulting in turbines being more tightly packed together, and therefore less efficient than originally planned. This leads to a reduced energy yield from the wind farm, and hence any further reduction to the array area would result in significantly lower generation capacity and have an impact on the commercial viability of North Falls and a significant impact on its ability to contribute to the legally binding decarbonisation targets, security of supply and policy in support of CNP Infrastructure.

85. A smaller array area/ increased distance from the KKE MCZ is not an alternative solution that would meet the Project objectives and is therefore not considered further.

4.5.3 In Another Manner

86. As discussed in Section 4.4.2, the effect of relevance to the MCZ derogation case is the indirect deposition of suspended sediment arising from within the array area during seabed preparation/sandwave levelling.

87. As shown in Figure 8.12 of the Environmental Statement [APP-053], there are extensive sandwaves in the array area. It is essential that the design envelope enables sandwave levelling to ensure foundations can be installed on a stable surface and to allow cable burial tools to bury the cables to sufficient depths to reduce the risk of cables becoming exposed. Therefore, constructing North Falls without the use of sandwave levelling is not a feasible option.

88. The parameters of relevance to the OMoP for seabed preparation, include:

- Number of turbines;
- Size of turbine foundations and associated sandwave levelling;
- Type of turbine foundations and associated sandwave levelling; and
- Length of array cable and associated sandwave levelling; and
- Timing of sandwave levelling in relation to current direction/speed.

4.5.3.1 Number of turbines

89. Due to the reduction in the array area discussed above, the maximum number of turbines has also reduced significantly during the pre-application process, from 72 to 57 of the smallest turbines[2] in the design envelope (or from 40 to 34 of the largest turbines).

90. Fewer turbines would result in a significantly lower generation capacity and as with a reduction in array area, would have an impact on the commercial viability of North Falls and a significant impact on its ability to contribute to the legally binding decarbonisation targets, security of supply and policy in support of CNP Infrastructure.

91. The alternative of fewer turbines is not considered to be a solution that would meet the Project objectives and is therefore not considered further.

4.5.3.2 Size of turbine foundations and associated sandwave levelling

92. The size of turbine foundations is defined by the forces exerted on it by the turbine and natural phenomenon, caused by the movement of the turbine when turning and when impacted by the wind/waves/sea currents. Therefore, the size of the foundation is defined to be as large as is needed to ensure safety of personnel, both operating in the wind turbines and to prevent it falling

[2] Turbine sizes are discussed further in ES Chapter 5 Project Description [**Document Reference: APP-019**].

down. Therefore, it is not possible to reduce the size of turbine foundations without compromising safety.

4.5.3.3 Type of turbine foundations and associated sandwave levelling

93. Different types of turbine foundation within the design envelope could reduce the requirement for seabed preparation and therefore the feasibility of this alternative solution is discussed further in Section 4.6.

4.5.3.4 Length of array cable and associated sandwave levelling

94. Array cables are needed to transfer power from the turbines to be collected at the substations. The length of the array cable is driven by the number and location of the turbines. Due to the significant previous reduction in the array area described and no further ability to reduce the size of the array area (Section 4.5.2.2) or the number of turbines (Section 4.5.3.1) and meet the Project objects, reducing the length of the array cable is also not an alternative solution that would meet the Project objectives and is therefore not considered further.

4.5.3.5 Timing of sandwave levelling in relation to current direction/speed.

95. Timing of works to align with ebb tides to move sediments away from the KKE MCZ or lower current speeds to reduce the sediment carried into the KKE MCZ could theoretically reduce effects on the KKE MCZ and therefore the feasibility of this alternative solution is discussed further in Section 4.6.

4.6 Step 4: Feasibility of OMoP for North Falls

96. The potential alternative solutions identified during Stage 3 are assessed in this section.

4.6.1 Type of turbine foundations and associated sandwave levelling

97. The design envelope has already been reduced to remove gravity base foundations. The remaining foundation options are piled foundations and suction caisson foundations. This enables detailed design post consent, in accordance with PINS (2025) Advice Note Nine: Rochdale Envelope. The worst case scenario for seabed preparation, including sandwave levelling is associated with suction caissons. Noting, the Outline Site Integrity Plan [REP5-014] includes the use of foundation types such as suction bucket foundations, as a potential option that, subject to confirmation that ground conditions at every proposed location are acceptable, could mitigate in-combination disturbance effects on harbour porpoise of the Southern North Sea, if required, it is not feasible to remove this option from the design envelope at this stage.

4.6.2 Timing of sandwave levelling in relation to current direction/speed.

98. Timing of sandwave levelling to align with ebb tides to move sediments away from the KKE MCZ or lower current speeds to reduce the sediment carried into the KKE MCZ would pose a significant co-ordination risk to the Project, that could result in an increased risk of cable exposures.

99. The seabed in this area is mobile, which means that co-ordinating cable installation is important to burying the cables to the required depth i.e. into the non-mobile part of the seabed beneath the mobile sandwaves. The cable

installation requires seabed preparation (of which sandwave levelling is one part), followed by cable lay and cable burial. Due to the continuous nature of cable laying, the cable lay vessels operate 24hr a day. To impose a timing condition on seabed preparation could result in the seabed preparation works either being done too early (and hence more infill than expected occurring in the area) or too late (and there not being enough time to fully undertake the required work) to ensure the cable lay is at a depth that means the burial tool can reach its required burial depth – i.e. seabed preparation needs to be just in time for the continuous operation of cable lay. If the cable is not buried into the non-mobile part of the seabed, there is an increased risk of cable exposures over time, which could lead to safety issues for fishers, as was expressed by Harwich Haven Fishermens Association in ISH2. Therefore, this is not a feasible option and is not considered further.

4.7 Step 5: Assessment of Effects of OMoP

100. No feasible alternative solutions were identified at Step 4 and therefore Step 5 is not required.

4.8 OMoP Summary

101. The information presented in this document demonstrates that there is no feasible other means of proceeding that would meet the Project objectives and have a substantially lower risk of hindering the conservation objectives of the MCZ.

5 Clear Public Benefits

5.1 Introduction

102. The Need for the Project, outlined in Section 4.3, demonstrates the public benefit of North Falls. The various public benefits are discussed further in this section.

5.2 Approach to Assessing Clear Public Benefit

103. Whilst no guidance exists for assessing public benefit in relation to the MCAA, it is recognised that there are obvious parallels with HRA guidance with respect to assessing IROPI. In accordance with the DESNZ guidance (DESNZ, 2023a and 2023b) which considers MCZs alongside other site designations as part of a *"ecologically coherent network of MPAs [Marine Protected Areas]"* and states that *"the impact of a development within an MPA should be considered in a consistent way*", it is considered appropriate to refer to HRA guidance on IROPI as a proxy for assessing clear public benefit with respect to the MCAA.

104. Section 126(7)(b) of the MCAA requires that the public benefit clearly outweighs the risk of damage to the environment. Section 126 provides consideration of the public benefit in comparison to the potential damage to the KKE MCZ.

5.3 Clear Public Benefits of North Falls

5.3.1 Public Benefit of North Falls

105. The following sections outline the essential public benefits of North Falls.

5.3.1.1 Climate Change Benefits

106. World Health Organization (WHO) (2024) discusses the impacts of climate change on global health risks, stating:

> "*Climate change is impacting human lives and health in a variety of ways. It threatens the essential ingredients of good health – clean air, safe drinking water, nutritious food supply and safe shelter – and has the potential to undermine decades of progress in global health.*
>
> *Between 2030 and 2050, climate change is expected to cause approximately 250 000 additional deaths per year from malnutrition, malaria, diarrhoea and heat stress alone. The direct damage costs to health are estimated to be between US$ 2–4 billion per year by 2030. Areas with weak health infrastructure – mostly in developing countries – will be the least able to cope without assistance to prepare and respond*."

107. The World Meteorological Organisation (WMO) reported that between 2001 and 2010 extreme weather events caused more than 370,000 deaths worldwide (including a large increase in heatwave deaths from 6,000 to 136,000) – 20% higher than the previous decade (House of Commons, 2018).

108. In the UK, floods and droughts have had significant health impacts, including fatalities in recent years. In addition, health impacts as a result of climate change are likely to be more far-reaching than the immediate dangers of flooding. Climate change effects such as flooding have potential to impact on mental health and provide other indirect impacts as a result of disruption to critical supplies of utilities such as electricity and water (Health Protection Agency, 2012).

109. As discussed in Section 4.3.1, the CCC Progress Report highlights that 2022 was the UK's warmest recorded year with its first ever 40°C day (CCC, 2023d). Since records began in 1884, the warmest years in the UK were (in order) 2022, 2023, and 2020, and the ten warmest years have all occurred since 2003 (Met Office, 2024).

110. Globally, 2023 was the hottest year on record. Each month from June to December in 2023 was warmer than the corresponding month in any previous year, and every day exceeded 1°C above the 1850-1900 pre-industrial level which is the first time this has ever occurred (European Centre for Medium-Range Weather Forecasts, 2023).

111. Climate change has been greatly affecting coastal areas in the UK in recent years, including in Essex, where coastal erosion has become a greater problem now than in the past due to a combination of increasing storm frequency (due in part to climate change) and the already sensitive nature of the Essex coast to this erosion, particularly low elevation and a loss of saltmarsh habitats that can provide a buffer.

112. The switch to renewable sources of energy also has air quality benefits and associated effects on human health. A study has demonstrated the huge

beneficial impacts on human health from decarbonisation, stating that "*around 3.5 million or so premature deaths from air pollution worldwide could be prevented annually from phasing out fossil fuels at today's population. If all sources of air pollution from human activities could be eliminated, our estimates show that more than five million premature deaths from air pollution would be prevented annually."* (London School of Hygiene and Tropical Medicine (LSHTM), 2019).

113. Generating and harnessing energy from low carbon, renewable sources, such as offshore wind, is one of the solutions available to substantially reduce carbon emissions. North Falls would make a significant contribution both to the achievement of UK decarbonisation targets and to global commitments to mitigating climate change.

114. In February 2025, the UK set a 7th Carbon Budget, recommending a reduction in UK GHG emissions of 87% by 2042, relative to a 1990 baseline (CCC, 2024a). This is an increase of 10% since the 6th Carbon Budget and further emphasises the imperative of offshore wind farms such as North Falls.

5.3.1.2 Energy security

115. As discussed in Section 4.3.1.3, decarbonisation of the UK energy supply chain and increasing electricity demand, results in a significant deficit in UK electricity supply compared with demand. In the Clean Growth Strategy (BEIS, 2017), the UK Government set out a plan to decarbonise all sectors of the UK economy through the 2020s including innovation in the power sector and renewables.

116. Reliance on global markets for imported energy leaves the UK vulnerable to spikes in world energy market prices, political pressure, potential physical supply disruptions and the knock-on effects of supply challenges in other countries.

117. There is therefore a clear public benefit inherent in the creation of new electricity supply capacity, such as will be provided by the Project.

5.3.1.3 Socio-economic benefit

118. The offshore wind industry presents an opportunity to utilise and further develop the UK's maritime engineering skills, particularly during a time when other industries are in decline (such as North Sea oil), in order to secure supply chain and other employment opportunities in the UK. As offshore wind supply chains are developing in areas of relatively low economic productivity, the benefit to local communities and businesses is very important. The replacement of existing infrastructure with new technologies also represents significant investment in the UK economy.

119. The Clean Growth Strategy (BEIS, 2017) set out how the Government intends to invest in clean growth technology between 2015 and 2021, including in innovation in the power sector (and renewables). Additionally, in March 2018, the UK offshore wind sector committed to a Sector Deal (BEIS, 2022b) which aims to increase offshore wind capacity to 50GW by 2030. The 2030 vision envisages an investment of £48 billion in UK offshore wind infrastructure. The Sector Deal also expects to create 27,000 skilled jobs across the UK by 2030.

120. The Clean Growth Strategy concludes that between 1990 and 2016, the UK reduced its emissions by 42% while the economy grew by 67%. Further analysis has concluded that, by continuing to develop low carbon technologies,

significant economic benefits can be captured. By taking no action, the UK economy could miss out on a potential low carbon economy growth of 11% per year to 2030 (BEIS, 2017).

121. The UK is able to continue growth in the offshore wind sector by maximising domestic energy resources and utilising the vast offshore wind resource to which the UK has access. An assessment in June 2017 of Europe's offshore wind resources (Wind Europe, 2017) found that the UK has the greatest potential for offshore wind out of all assessed EU member states[3] in the Atlantic, North Sea and Baltic Sea areas and at present, has the largest installed capacity in the world. The assessment looked at gross resource potential, technical resource potential and economically attractive resource potential, and found that the UK topped all other countries in all three categories (Wind Europe, 2017).

122. A key commitment within the Green Paper: Building our Industrial Strategy (HM Government, 2017) is to "*lead the world in delivering clean energy technology*" and to support innovation in this area. The aim is for "*the UK to be a global leader in innovation, science and research and our Industrial Strategy will help us to deliver our ambitious CO_2 reduction targets while, creating jobs and opportunities for people across the country*". The energy sector in the UK plays a central role in the economy by boosting investment and providing new jobs and skills.

123. North Fall's location in the East of England is well placed to provide social benefits given the region's offshore wind heritage and the fact that more than 800 supply chain companies are already operating in the region, ready to leverage new opportunities.

124. North Falls could provide opportunities for the UK supply chain, through installation and commissioning, and operation and maintenance. The GGOW 'parent' wind farm has provided a £1.5 billion investment and has created hundreds of jobs during the construction phase as well as 100 long-term recruits to the operations base, of which 95% were from the local area. Additionally, more than 10 local apprentices have graduated from the wind farm's apprentice training scheme as wind turbine and balance-of-plant technicians. GGOW has also provided junior engineering roles and employed ex-fishermen as part of an initiative to find locally skilled people to fill requirements for roles. North Falls will similarly provide contracting opportunities for local companies and career opportunities for local people throughout each phase of its lifecycle.

125. The above employment opportunities not only provide economic benefits, but also social benefits to local communities given that job creation is linked to increases in wellbeing.

[3] EU member states, including the UK at the time of the study.

5.3.2 Consequences for the Ecosystem

126. The Environment Improvement Plan (HM Government, 2023a) recognises the effects of climate change include an increase in pests, pathogens and invasive non-native species; and knock-on impacts on the ecosystems.

127. Global warming places many species at greater risk, with a loss of suitable habitat due to changing conditions and shifts in prey distributions. Species may migrate to areas where conditions remain suitable (e.g. marine species moving further north in the UK to cooler climates), however, there may be insufficient new habitats available or no pathway for migration.

128. The Strategic Environmental Assessment North Sea Energy (SEANSE) project assessed the impact of climate change on key bird species (Rijkswaterstaat Zee & Delta, 2020) and concluded that changes in prey availability due to climate change is the current pressure which appears to have the largest impact on kittiwake and lesser black-backed gull at the wider North Sea level. This is likely to be responsible for a substantially greater effect than impacts resulting from any other activity (including collision risk).

129. Further investment in renewable energy and offshore wind energy generation are imperative in helping to mitigate these effects.

5.3.3 Public Benefit Against Damage to KKE MCZ

130. In accordance with NPS EN-1, Paragraph 4.2.21 (see Table 2.1), with regards to critical national priority projects such as North Falls, the Secretary of State should start from the position that energy security and decarbonising the power sector to combat climate change:

"*are capable of amounting to imperative reasons of overriding public interest (IROPI) for HRAs, and, for MCZ assessments, the benefit to the public is capable of outweighing the risk of environmental damage, for CNP Infrastructure*"

131. In the Secretary of State's decision letter for the Sheringham Shoal and Dudgeon Extension Projects (DESNZ, 2024b), it is stated that "*the benefit to the public of proceeding with the proposed development clearly outweighs the risk of damage to the environment that will be created by proceeding with it*" and it is noted that Sheringham Shoal and Dudgeon Extension Projects required a direct effect on an MCZ, whereas North Falls has no direct effect on an MCZ.

132. The relevant public benefit relating to North Falls must be set against the weight of the conservation interest protected by the MCAA, having regard to the nature and extent of the potential harm identified to the conservation objectives. The effects upon the MCZ are assessed in the MCZ Assessment Report [**REP7-019**] and summarised in Section 4.4.3. There is potential for short term deposition of sediment comparable to that of the designated features of the KKE MCZ, over a small proportion of the MCZ.

133. In weighing up the public interests delivered by North Falls with these conservation interests, account needs to be taken of the fact that the benefits of North Falls also include conservation benefits for the marine habitats concerned, given the impact of climate change discussed in Section 5.3.2. The

North Falls contribution to reducing the effects of climate change will have ecological benefits which outweigh/override the extremely localised and short term effects outlined above. Global warming places many species at risk, with a loss of suitable habitat including marine habitat. Rapid, large changes in global temperatures and changes in rainfall patterns may lead to significant rises in sea temperatures, habitat changes and changes to the status of the MCZ, and in turn the extinction of certain species that cannot adapt rapidly. (BEIS, 2019b).

6 Measures Of Equivalent Environmental Benefit

134. If MEEB are deemed to be required by the Secretary of State, this will be delivered by the Applicant providing a proportionate contribution to the Marine Recovery Fund, in accordance with the Outline Benthic CIMP (Document Reference 9.109, Rev 1).

135. The Outline Benthic CIMP (Document Reference 9.109, Rev 1) demonstrates that there is a feasible MEEB available for potential indirect effects on the KKE MCZ, should the Secretary of State conclude that there is a significant risk of the conservation objectives of the MCZ being hindered.

7 Conclusion

136. The Applicant maintains that derogation under the MCAA 2009 is not required, in accordance with the findings of the Stage 1 KKE MCZ Assessment [**REP7-019**] which concludes that there will be no significant risk of hindering the conservation objectives of the KKE MCZ as a result of North Falls.

137. Should the Secretary of State be minded to disagree with this position, the evidence presented in this document clearly demonstrates that there are no feasible other means of proceeding which would substantially reduce the effects on the conservation objectives of the MCZ (Section 4) which could deliver the project objectives (Section 4.3.2), in accordance with the need for North Falls (Section 4.3.1).

138. In addition, there are clear public benefits to the delivery of North Falls which outweigh the risk of damage to the environment by the Project, as outlined in Section 5.

139. The Outline Benthic Compensation/MEEB Implementation and Monitoring Plan (document reference 9.109, Rev 1), summarised in Section 6 describes the proposed MEEB (if required) which is deliverable post consent and can be secured by the DCO.

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