MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Adverse Effect on Integrity of the Ribble Estuary Special Protection Area - Supporting Statement

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Contents

Tables

Glossary

Term	Meaning
Applicants	Morgan Offshore Wind Limited (Morgan OWL) and Morecambe Offshore Windfarm Ltd (Morecambe OWL).
Biodiversity benefit	An approach to development that leaves biodiversity in a better state than before. Where a development has an impact on biodiversity, developers are encouraged to provide an increase in appropriate natural habitat and ecological features over and above that being affected. For the Transmission Assets, biodiversity benefit will be delivered within identified biodiversity benefit areas within the Onshore Order Limits. Further qualitative benefits to biodiversity are proposed via potential collaboration with stakeholders and local groups, contributing to existing plans and programmes, both within and outside the Order Limits.
Code of Construction Practice	A document detailing the overarching principles of construction, contractor protocols, construction-related environmental management measures, pollution prevention measures, the selection of appropriate construction techniques and monitoring processes.
Development Consent Order	An order made under the Planning Act 2008, as amended, granting development consent.
Environmental Impact Assessment	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
Generation Assets	The generation assets associated with the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm include the offshore wind turbines, inter-array cables, offshore substation platforms and platform link (interconnector) cables to connect offshore substations.
Intertidal area	The area between Mean High Water Springs and Mean Low Water Springs.
Intertidal Infrastructure Area	The temporary and permanent areas between MLWS and MHWS.
Landfall	The area in which the offshore export cables make landfall (come on shore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area at Lytham St. Annes between Mean Low Water Springs and the transition joint bay inclusive of all construction works, including the offshore and onshore cable routes, intertidal working area and landfall compound(s).
Local Authority	A body empowered by law to exercise various statutory functions for a particular area of the United Kingdom. This includes County Councils, District Councils and County Borough Councils.
Main rivers	The term used to describe a watercourse designated as a Main River under the Water Resources Act 1991 and shown on the Main River Map. These are usually larger rivers or streams and are managed by the Environment Agency.

Term	Meaning
Maximum design scenario	The realistic worst case scenario, selected on a topic-specific and impact specific basis, from a range of potential parameters for the Transmission Assets.
Mean High Water Springs	The height of mean high water during spring tides in a year.
Mean Low Water Springs	The height of mean low water during spring tides in a year.
Mitigation measures	This term is used interchangeably with Commitments. The purpose of such measures is to avoid, prevent, reduce or, if possible, offset significant adverse environmental effects.
Morecambe Offshore Windfarm: Generation Assets	The offshore generation assets and associated activities for the Morecambe Offshore Windfarm.
Morecambe Offshore Windfarm: Transmission Assets	The offshore export cables, landfall, and onshore infrastructure required to connect the Morecambe Offshore Windfarm to the National Grid.
Morecambe OWL	Morecambe Offshore Windfarm Limited is owned by Copenhagen Infrastructure Partners' (CIP) fifth flagship fund, Copenhagen Infrastructure V (CI V).
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	The offshore export cables, landfall, and onshore infrastructure for the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm. This includes the offshore export cables, landfall site, onshore export cables, onshore substations, 400 kV grid connection cables and associated grid connection infrastructure such as circuit breaker compounds. Also referred to in this report as the Transmission Assets, for ease of reading.
Morgan Offshore Wind Project: Transmission Assets	The offshore export cables, landfall and onshore infrastructure required to connect the Morgan Offshore Wind Project to the National Grid.
Morgan OWL	Morgan Offshore Wind Limited is a joint venture between JERA Nex bp (JNbp) and Energie Baden-Württemberg AG (EnBW).
National Grid Penwortham substation	The existing National Grid substation at Penwortham, Lancashire.
National Policy Statement(s)	The current national policy statements published by the Department for Energy and Net Zero in 2023 and adopted in 2024.
Onshore export cables	The cables which would bring electricity from the landfall to the onshore substations.
Onshore export cable corridor	The corridor within which the onshore export cables will be located.
Onshore Infrastructure Area	The area within the Transmission Assets Order Limits landward of MHWS. Comprising the offshore export cable corridor from MHWS to the transition joint bay, onshore export cable corridor, onshore substations and 400 kV grid connection cable corridor, and associated temporary and permanent infrastructure including temporary and permanent compound areas and accesses. Those parts of the Transmission Assets Order Limits proposed only for ecological mitigation and/or biodiversity benefit are excluded from this area.
Onshore Order Limits	See Transmission Assets Order Limits: Onshore (below).
Onshore substations	The onshore substations will include a substation for the Morgan Offshore Wind Project: Transmission Assets and a substation for the

Term	Meaning
	Morecambe Offshore Windfarm: Transmission Assets. These will each comprise a compound containing the electrical components for transforming the power supplied from the generation assets to 400 kV and to adjust the power quality and power factor, as required to meet the UK Grid Code for supply to the National Grid.
Transmission Assets Order Limits	The area within which all components of the Transmission Assets will be located, including areas required on a temporary basis during construction and/or decommissioning (such as construction compounds).
Transmission Assets Order Limits: Onshore	The area within which all components of the Transmission Assets landward of Mean High Water Springs will be located, including areas required on a temporary basis during construction and/or decommissioning (such as construction compounds). Also referred to in this report as the Onshore Order Limits, for ease of reading.

Acronyms

Acronym	Meaning
AEoI	Adverse Effect on Integrity
DCO	Development Consent Order
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ES	Environmental Statement
SPA	Special Protection Area

Units

Unit	Description
%	Percentage
km	Kilometres
m	Metres
m^2	Metres squared

1 Adverse Effect on Integrity of the Ribble Estuary Special Protection Area – Supporting Statement

1.1 Introduction

1.1.1.1 This clarification note provides supporting information to assist Natural England confirming that construction activities from the Transmission Assets will not have an Adverse Effect on Integrity (AEoI) on the Ribble Estuary Special Protection Area (SPA), due to the temporary nature of the construction activities and because of the temporary nature of the potential effects.

1.1.1.2 In compiling this note, the Applicants have referenced a report commissioned by Natural England regarding decisions on AEoI by the competent authority in the context of temporary effects on European sites written by Chapman and Tyldesley (2016)[1].

1.1.1.3 Chapman and Tyldesley (2016) concluded that *'an effect which can be regarded as 'transient' or 'strictly temporary', and which is capable of being fully undone, or made good, would be unlikely to represent an adverse effect on the integrity of a European site'.*

1.1.1.4 Chapman and Tyldesley (2016) state that a 'lasting' effect might result in either:

a. the permanent destruction of part of a qualifying habitat; or

b. the 'long term deterioration' of a qualifying feature.

1.2 Thresholds for Adverse Effect on Integrity

1.2.1.1 The Applicants consider below Chapman and Tyldesley's conclusions in relation to the potential effects from the construction activities of the Transmission Assets.

The permanent destruction of part of a qualifying habitat

1.2.1.2 The Applicants confirm that no permanent loss or destruction of qualifying habitats will occur as a result of the Transmission Assets. As set out in the Clarification Note on the Current Position with Natural England (regarding AEoI) and the Fairhaven Saltmarsh Mitigation Area (REP4-109), any effects on intertidal habitats at the landfall are fully reversible, arising only from the temporary disturbance of the sediments in the intertidal area during exit pit works and cable burial. The combined exit pit work and cable burial is expected to take a maximum of approximately 6 weeks per cable with only one cable buried at a time, therefore cable installation will be sequential with habitat recovery staggered. Once construction activities have ceased for each cable

[1] Chapman, C. & Tyldesley, D. (2016) Temporary effects: How the longevity of effects has been considered in respect of plans and projects affecting European sites - a review of authoritative decisions. Natural England Commissioned Reports, Number 206.

installation, intertidal sediments and associated benthic communities are expected to fully recover in less than one year, based on the best available scientific evidence (Dearnie *et al*., 2003). There is evidence that clean sand benthic communities have the most rapid recovery rate following disturbance (Dernie *et al*., 2003). This recovery ensures the habitat is restored and available for qualifying bird species to feed upon.

The 'long term deterioration' of a qualifying feature

1.2.1.3 The Applicants confirm that the works will not result in any long-term deterioration of the qualifying features, namely dunlin, redshank, ringed plover, and sanderling. As outlined in the Clarification Note on the Current Position with Natural England (regarding AEoI) and the Fairhaven Saltmarsh Mitigation Area (REP4-109), birds will rapidly return to the affected areas following temporary disturbance and will resume feeding as benthic invertebrates progressively recolonise the disturbed habitat. The activities associated with the Transmission Assets will not cause any lasting effects to passage species (such as mortality) and, therefore, will not lead to any reduction in the population of qualifying passage features.

1.2.1.4 Chapman and Tyldesley (2016) also consider a number of other factors in determining AEoI including:

- Whether an effect is 'capable of being fully undone' or 'made good'
- Whether the spatial scale of an effect is regarded as 'acceptable' in the short term
- Whether mitigation measures which are an integral part of the project provide sufficient confidence that the affected area(s) will return to a comparable level of ecological functionality.

1.2.1.5 These points are considered below in turn explaning out how an AEoI cannot be concluded from the potential effects of the Transmission Assets' construction works.

- Whether an effect is 'capable of being fully undone' or 'made good'

1.2.1.6 The Applicants confirm that any effects arising from construction activities at the landfall during the passage period will be fully remedied and are entirely reversible within one year. Consequently, the impacts on the habitat and species are considered fully reversible or 'capable of being made good,' given the temporary nature of the disturbance and the habitats' ability to recover quickly, thereby continuing to support foraging and roosting birds.

1.2.1.7 As set out in the Clarification Note on the Current Position with Natural England (regarding AEoI) and the Fairhaven Saltmarsh Mitigation Area (REP4-109), impacts on habitats (and the supporting processes on which they depend) will be fully reversible at the landfall based on the best available scientific evidence of habitat recovery (Dearnie *et al*., 2003). The Applicants further note that dunlin, redshank, grey plover, and sanderling feed on small mobile worms and crustaceans, and that recolonisation of the disturbed sediment through natural physical processes will occur rapidly once works have ceased. Sanderling

mainly feed along the tideline, where they prey on crustaceans and molluscs washed ashore by the surf.

1.2.1.8 With respect to disturbance and displacement from the construction work, and as outlined in the above Clarification Note (REP4-109), some limited disturbance or displacement of qualifying features may occur during the passage period where works take place at the landfall. At a meeting with the Applicants on 16 September 2025, Natural England confirmed they have ruled out an AEoI for the four passage waterbird species. The limited disturbance may temporarily influence the distribution of the relevant species; however, any such effects will be short-lived and fully reversible following completion of the works.

- Whether the spatial scale of an effect is regarded as 'acceptable' in the short term

1.2.1.9 The Applicants confirm that the spatial scale of disturbance, associated displacement effects, and temporary habitat loss resulting from construction activities are considered acceptable in the short term. The Applicants reiterate that only one project (i.e., Morgan or Morecambe) will be working at the landfall at any given time. To minimise impacts, the Applicants have also committed to a seasonal restriction on works between November and March, thereby limiting potential effects to the passage period only.

1.2.1.10 Regarding spatial scale, the area affected by the works—the Order Limits impacted by disturbance and temporary habitat loss— represents less than 1% of the Ribble and Alt Estuaries SPA, as detailed in Table 10 of the Passage Period at Landfall Technical Note (REP4-121). However, the Applicants would highlight that while waders are generally distributed throughout the intertidal area, they predominantly feed close to the tideline on the beach and will therefore be affected linearly along this zone (see rationale provide below for sanderling). Consequently, the overall area of disturbance reported is precautionary and an overestimate of the proportion of wader foraging which could be affected (Table 10 of REP4-121), as the actual impact will be confined to birds that primarily feed along the tideline.

Foraging Tide Line rationale

1.2.1.11 As only one cable will be pulled in, laid and buried at a time at landfall, the area of impact for disturbance is up to 150 m of shoreline for sanderling (50 m corridor + 50 m either side for disturbance). The intertidal survey area from which the data was recorded has approx. 2,968 m of shoreline (as measured in GIS from the MLWS boundary of the Ribble and Alt Estuaries SPA shapefile). If it is assumed that the birds will be fairly evenly distributed along this at any one time when they are engaged in foraging activities, the area of impact for sanderling at any one time is approx. 5.1% of the available shoreline in the survey area or 0.2% of the available shoreline in the SPA (calculated using the shoreline length of 73,598 m as measured in GIS from the MLWS boundary of the Ribble and Alt Estuaries SPA shapefile). The maximum

number of impacted sanderling, compared to population estimates and accounting for the adjusted tide line impact, is shown below.

Table 1-1: Maximum number of sanderling and the percentage of the population affected.

	Maximum number of birds impacted	Ribble and Alt Estuaries SPA citation count	Ribble and Alt Estuaries Ramsar citation count	Recent WeBs estimate
Count	20.7	6,535	7,401	6,474
Percentage	N/A	0.32%	0.28%	0.32%

1.2.1.12 Therefore, the potential scale of the effects and short term nature would not result in an AEoI on the Ribble and Alt Estuaries SPA.

- Whether mitigation measures which are an integral part of the project provide sufficient confidence that the affected area(s) will return to a comparable level of ecological functionality

1.2.1.13 The mitigation measures incorporated into the project provide a high level of confidence that the affected area(s) will recover to a comparable level of ecological functionality. Key measures include the seasonal restriction on construction activities between November and March (CoT110 and CoT129, F1.5.3 Environmental Statement Volume 1, Annex 5.3: Commitments Register - Rev F03 (REP2-010)), which limits disturbance during critical periods for sensitive species. These measures, combined with the use of best practice construction practices and ongoing monitoring (Ecological Clerk of Works (ECoW)), (see J6/F05 Outline Ecological Management Plan) ensure that any impacts are temporary and that the ecological integrity of the site will be fully restored (through natural recovery) following completion of the works.

1.2.1.14 Therefore, due to the temporary nature and scale of potential effects and the mitigation measures committed to by the Applicants, no AEoI on the Ribble and Alt Estuaries SPA is concluded.