

MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

**Annex 9.6 to Applicants response to Hearing Action Points ISH2 48:
Summary of trial trenching approaches in other DCO applications**

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Glossary

Term	Meaning
Applicants	Morgan Offshore Wind Limited (Morgan OWL) and Morecambe Offshore Windfarm Ltd (Morecambe OWL).
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 Ltd (Morecambe OWL), owned by Copenhagen Infrastructure Partners' (CIP) fifth flagship fund, Copenhagen Infrastructure V (CI V), is developing the Morecambe Offshore Windfarm, also located in the east Irish Sea.
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: Generation Assets	The offshore generation assets and associated activities for the Morgan Offshore Wind Project.
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 (Morgan OWL), a joint venture between JERA Nex bp (JNbp) and Energie Baden-Württemberg AG (EnBW), is developing the Morgan Offshore Wind Project. The Morgan Offshore Wind Project is a proposed wind farm in the east Irish Sea.
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 Morecambe Offshore Windfarm: Transmission Assets. These will each comprise a compound containing the electrical components for

Term	Meaning
	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.
Substation	Part of an electrical transmission and distribution system. Substations transform voltage from high to low, or the reverse by means of electrical transformers.
Transmission Assets	See Morgan and Morecambe Offshore Wind Farms: Transmission Assets (above).

Acronyms

Acronym	Meaning
DCO	Development Consent Order

Units

Unit	Description
km	Kilometres

1 Introduction

1.1.1.1 This document is provided in response to Issue Specific Hearing 2 (ISH 2), Action Points ISH2_48 as detailed within (EV7-018) and provided in **Table 1.1**.

Table 1.1: Issue Specific Hearing 2 Action Points

No.	Party	Action
ISH2.48	Applicants	Provide a document detailing the trial trenching approach of the Transmission Assets against that taken by other DCO projects.

2 Approach to trial trenching

2.1.1.1 **Table 2.1** sets out several onshore cable route DCO projects along with their description of onshore works, number of trial trenches completed ahead of consent and the date of their DCO consent.

Table 2.1: Summary of projects and approach to trial trenching

Project name	Description of onshore works	Number of archaeological trial trenches completed ahead of consent	Date of DCO consent
Morgan and Morecambe Offshore Wind Farms: Transmission Assets			
Transmission Assets	Approximately 17 km of onshore export cable corridor (split between two projects) with two onshore substations.	139 trenches completed out of 222 agreed trenches. The fieldwork concluded in August 2024 when it was clear that no further access was likely to be agreed ahead of the return of poorer weather in the autumn. The Applicants intend to resume the programme of trial trenching in spring 2026. The projected programme includes not just the completion of the previously agreed work (i.e., the residual of the 222 trenches from the previous programme) but also additional trenches in areas for which geophysical survey data is now available.	-
Other onshore cable route DCOs			

Project name	Description of onshore works	Number of archaeological trial trenches completed ahead of consent	Date of DCO consent
Hornsea Project Three	Approximately 53 km cable corridor, single convertor/substation site and HVAC booster station site.	0 trenches (all trenching to be undertaken post-consent)	December 2020
East Anglia ONE North and East Anglia TWO	Approximately 9 km shared cable corridor and two substation sites	91 trenches agreed, 67 excavated (full programme to be undertaken post-consent)	March 2022
Hornsea Project Four	Approximately 39 km cable corridor, single substation site	0 trenches (all trenching to be undertaken post-consent)	July 2023
Awel Y Mor	Approximately 12 km cable corridor and single substation site	40 trenches agreed, 0 excavated (all trenching deferred to be undertaken post-consent)	November 2023
Rampion 2	Approximately 39 km cable corridor, single substation extension site	10 trenches (full programme to be undertaken post-consent)	April 2025
Mona	Approximately 12 km cable corridor and single substation site	284 trenches agreed, 75 excavated	July 2025
Pipeline projects			
Viking CCS Pipeline	Approximately 55 km of onshore pipeline	0 trenches undertaken at submission. All archaeology work at submission was desk-based and supplemented through Examination by geophysical and ongoing programme of trial trenching	April 2025

3 Summary

- 3.1.1.1 Based on the summaries outlined in **Table 2.1**, the approach the Transmission Assets has taken to the trial trench campaign is in line with other onshore cable route DCOs.
- 3.1.1.2 None of the projects highlighted completed a full suite of trial trenching before being granted consent with several, e.g. Hornsea Four and Hornsea Three, completing no trial trenching ahead of consent. Rampion 2s cable corridor is significantly longer than that for

Transmission Assets and only 10 trenches were completed compared to Transmission Assets' 139 ahead of consent. East Anglia One North and East Anglia, Awel Y Mor and Mona have cable routes of a similar length to Transmission Assets and completed significantly fewer trenches ahead of consent.

3.1.1.3 With regard to the Viking CCS pipeline, in the Examining Authority's Recommendation report (Wallis et al, 2024), the following was noted.

"the ExA consider that it would be disproportionate for the entire construction corridor to have been surveyed at this stage of the process, and it is inevitable that archaeological works and investigations would be iterative and reactive during both preconstruction and construction phases. So, the lack of knowledge regarding the full extent of archaeological deposits is not a specific concern of the ExA at this stage, and there is acknowledgement across the Applicant's documentation that mitigation would need to apply to unknown archaeological finds"

3.1.1.4 The Applicants therefore consider that the approach to trial trenching undertaken for the Transmission Assets to date is proportionate, aligns with similar DCO projects and enables for robust conclusions of the historic environment assessment (Volume 3, Chapter 5: Historic environment (document reference F3.5) to be reached. Additional trial trenching work undertaken post-consent will be used to inform mitigation measures , detailed design and to de-risk construction.

4 References

Wallis, D, Gorst, K & Jack, L (2024) Viking CCS Carbon Dioxide Pipeline Examining Authority's/ Inspector's Report of Findings and Conclusions and Recommendation to the Secretary of State for Energy Security and Net Zero (online). Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN070008/EN070008-001530-Final%20Viking%20CCS%20Project%20Recommendation%20Report.pdf>. Accessed August 2025.