



SHEPHERD+ WEDDERBURN

DEADLINE 2 SUBMISSION ON BEHALF OF

(1) BARROW OFFSHORE WIND LIMITED (REF: 20049974) (2) BURBO EXTENSION LTD (REF: 20049975) (3) WALNEY EXTENSION LIMITED (REF: 20049977) (4) MORECAMBE WIND LIMITED (REF: 20049973) (5) WALNEY (UK) OFFSHORE WINDFARMS LIMITED (REF: 20049978) (6) ØRSTED BURBO (UK) LIMITED (REF: 20049976) (THE "ØRSTED IPs")

IN CONNECTION WITH THE Application by Morecambe Offshore Wind Limited for an Order Granting Development Consent for the Morecambe Offshore Wind Farm

1. Introduction

- 1.1 This submission is provided in accordance with Deadline 2 of the examination timetable for the application by Morecambe Offshore Windfarm Limited (the “**Applicant**”) for an Order under the Planning Act 2008 (the “**Act**”) granting Development Consent for the Morecambe Offshore Windfarm Generation Assets (the “**Project**”).
- 1.2 We represent six owners of operational offshore windfarms in the East Irish Sea (as set out relevant representations RR-008, RR-014, RR-056, RR-088, RR-089, RR-093), who we refer to together as the “**Ørsted IPs**” for the purposes of this submission
- 1.3 This submission responds to the Crown Estate’s Leasing Round 4 Information Memorandum (the “**TCE Memorandum**”) [REP1-091] and the Frazer-Nash study [REP1-089] submitted by the Applicant at examination deadline 1.
- 1.4 These documents are relied upon by the Applicant as providing support for its position that an assessment of the wake effects of the Project on the Ørsted IPs’ developments is not required.
- 1.5 Alongside this submission, the Ørsted IPs have submitted a report by consultants Wood Thilsted, which assesses the wake effects of the Project. This report has recently been finalised, and is the basis for the figures referred to in the Ørsted IPs’ deadline 1 submission [REP1-103].

2. Response to the TCE Memorandum

- 2.1 The Applicant considers that because the Project complies with the 7.5km buffer distance established by the Crown Estate (“**TCE**”) for the purposes of the round 4 leasing process, no assessment of wake effects is required beyond that distance.
- 2.2 The TCE Memorandum provided by the Applicant does not demonstrate that TCE intended for the 7.5km boundary to be relied upon to address potential wake effects between developments.
- 2.3 In respect of the 7.5km boundary, the TCE Memorandum states that:¹
- Projects may not be located within 7.5 km of an existing offshore wind farm (meaning a wind farm at any stage of development which has been awarded an agreement for lease or lease from The Crown Estate) unless the owner of the existing offshore wind farm has given its written consent.*
- 2.4 There is no explanation of the basis on which the 7.5km separation distance was developed.
- 2.5 While the TCE Memorandum notes that it has undertaken consultation and technical analysis in developing the seabed leasing areas, it states that:²
- To assist Bidders in their choice of sites, we are making our characterisation analysis for each of these four Bidding Areas available to the market. Bidders will need to undertake their own analysis and assessments to determine the best location for their project proposals.*
- 2.6 The TCE Memorandum also acknowledges that consents will be required for the developments, and that decisions will be made in accordance with the NPS-EN3:³
- Applications for DCOs are decided in accordance with National Policy Statements (NPSs), which, after a process of public consultation and parliamentary scrutiny, are formally designated by Government. For offshore wind farms, the most relevant of these are the Overarching National Policy Statement for Energy (EN-1) and the National Policy Statement for Renewable Energy Infrastructure (EN-3).*
- 2.7 In light of above, we consider the TCE Memorandum offers no support for the Applicant’s position that compliance with the buffer distance meets the policy requirements of the NPS-EN3, in respect of wake loss. Rather, the TCE Memorandum indicates this buffer distance provides a generic, minimum separation distance between windfarms.

¹ At p 25.

² At p 16.

³ At p 39.

- 2.8 This is further reinforced by TCE's response to questions of the examining authority in relation to the examination for the Outer Dowsing Offshore Wind Farm (Generating Station) regarding the 7.5km distance between Round 4 projects and the Frazer-Nash report ("**ODOW Response**").⁴ This response is appended to this submission at **Appendix 1**. In the ODOW Response, TCE state that the initial buffer was:

...a separation distance to enable developers to develop, operate and maintain wind farms by allowing for a range of factors including amongst other matters, wake effects, navigation, and safety.

- 2.9 TCE goes on to state that the initial buffer was used "*for the purpose of processing project proposals in the tender only...*" and notes that the location of a wind farm within the leased area is a matter for the developers to decide and design for.
- 2.10 TCE concluded that compliance with the initial boundary does not replace the need for further evaluation in the formulation of a project:

The location of a wind farm within an area of seabed leased from The Crown Estate is for developers to decide and design for, subject to obtaining the necessary consents and The Crown Estate's approval.

- 2.11 TCE also acknowledged that inter-farm wake effects could extend beyond the buffer distances and that factors beyond distance, including prevailing wind direction and wind farm layout, may also be relevant to assessing wake effect.
- 2.12 TCE's ODOW Response indicates that the leasing round buffer distance sets a minimum distance between developments. Development within a leased area must necessarily be refined during project development, depending on the specific features of the site and potential effects of the development. TCE's explanation does not support the approach that the Applicant has taken to wake loss during this examination.

3. Response to Frazer-Nash study

- 3.1 The Applicant relies on this report to support its position that an assessment of the wake effects of the Project is not required.
- 3.2 As outlined in the Orsted IPs deadline 1 submission [REP1-103], it is noted that the study states that, at separation distances "*much larger than 20km*" the ratio between external and internal wake effects become vanishingly small (rather than the isolated effect of external wakes becoming vanishingly small "*by 20km*" as stated by the Applicant).
- 3.3 This study takes some generic, theoretical offshore wind farm pairs and looks at the balance in total production based on different densities and separation buffers, in order to inform TCE's process of optimising the seabed. It cannot be relied on in the consenting process which aims to assess the specific effects on other sea users. It is noted that this study post-dates the TCE's imposition of a 7.5km separation distance and therefore should not be interpreted as contributing to the rationale for this separation distance.
- 3.4 In relation to the Frazer-Nash study, TCE further stated in its ODOW Response that "*The report summarises modelling applied to generic/hypothetical wind farms and does not replace the need for project-specific analysis.*"
- 3.5 TCE's comments in the ODOW Response are unambiguous in their terms and confirm that the Applicant's approach is inappropriate.

Shepherd & Wedderburn LLP

12.12.2024

⁴ Examining Authority's question ExQ1 OG1.2.

Appendix 1 - EN010130-001231 - The Crown Estate - Responses to ExQ1

Please see below The Crown Estate's response to Outer Dowsing Offshore Wind (Generating Station) Examination - Question ExQ1 OG 1.2 of the Examining Authority's written questions and requests for information, issued on 6th November 2024.

1. Can the Crown Estate clarify if the minimum 7.5km distance requirement between Leasing Round 4 projects takes the potential for wake effects into account?

- The buffer/stand-off between wind farms (unless developers consent to closer proximity) is a separation distance to enable developers to develop, operate and maintain wind farms by allowing for a range of factors including amongst other matters, wake effects, navigation, and safety.
- The 2019 Information Memorandum ahead of Offshore Wind Leasing Round 4 set out the requirement that "Projects may not be located within 7.5 km of an existing offshore wind farm (meaning a wind farm at any stage of development which has been awarded an agreement for lease or lease from The Crown Estate) unless the owner of the existing offshore wind farm has given its written consent".
- This 7.5km was used for the purpose of processing project proposals in the tender only, being higher than the 5km buffers that are specified within the seabed lease agreements (introduced in Round 3); this was for the purpose of de-risking the Round 4 tender by providing additional mitigation and assurance to participants through limiting proximity.
- The Crown Estate acknowledges that inter-farm wake effects can extend beyond these buffer distances. TCE also notes that the spatial and temporal variability of wind speed means that it is complex to accurately predict the wake impact on nearby wind farms, which may depend upon factors beyond distance – e.g. prevailing wind direction and wind farm layout.
- The location of a wind farm within an area of seabed leased from The Crown Estate is for developers to decide and design for, subject to obtaining the necessary consents and The Crown Estate's approval.

2. The Crown Estate is invited to comment on the purpose of the Offshore Wind Leasing Programme Array Layout Yield Study and any implications for the project.

- As outlined in the Introduction section of the Offshore Wind Leasing Programme Array Layout Yield Study by Frazer-Nash published on the Marine Data Exchange in November 2023: "The objective of this present study is to provide generic evidence to support TCE's design of future offshore wind leasing programmes from an aerodynamic loss perspective. Specifically, the influence of key PDA (project development area) design parameters on wind farm production are assessed using an updated engineering wake model with more realistic accounting of farm-to-farm wake and farm blockage effects"
- The report summarises modelling applied to generic/hypothetical wind farms and does not replace the need for project-specific analysis.

- The published report included findings on inter-farm wake effects for generic scenarios. As with any technical evidence, this can be beneficial to the sector to inform decision-making and analysis; appropriate selection and application of this or other studies and evidence to specific projects is for developers to determine.
- As this report was completed during 2023 it has no direct link to the buffer zones set out in the 2019 Information Memorandum for Offshore Wind Leasing Round 4.