



SHEPHERD+ WEDDERBURN

DEADLINE 1 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 Windfarm Generation Assets

## 1. Introduction

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- 1.1 This submission is provided in accordance with Deadline 1 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 written representation.
- 1.3 This submission sets out the Ørsted IPs key arguments for why the Applicant is required to carry out a wake loss assessment.
- 1.4 This submission forms part of the Ørsted IPs’ response to the Action Point 8 of the action points arising out of Issue Specific Hearing 1 [EV3-009] (“**ISH1**”), and responds to comments made by the Applicant on the Ørsted IPs relevant representations, in respect of wake loss [PD1-011]. Alongside this document, the Ørsted IPs have also submitted a suite of academic evidence detailing the likelihood of wake effects and an accompanying memorandum.

## 2. Policy and regulatory requirements

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- 2.1 As outlined in the Ørsted IPs’ relevant representations, the Ørsted IPs are concerned the Project will interfere with the wind speed and/or direction at their developments and will therefore adversely affect energy yields. Preliminary results of modelling commissioned by the Ørsted IPs demonstrates that wake effects will be material at their developments.
- 2.2 The Ørsted IPs’ position is that the Applicant must carry out an assessment of this potential effect and take steps to avoid it. The Ørsted IPs consider this is required by the relevant policy and regulatory framework:
  - 2.2.1 primarily, as an effect on an “*other sea user*” under the National Policy Statement for Renewable Energy Infrastructure (**NPS-EN3**); and
  - 2.2.2 in the Environmental Impact Assessment (“**EIA**”) process under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (“**EIA Regulations**”), as relevant to the Applicant’s climate change risk assessment.

### Requirements of the NPS EN3

- 2.3 The NPS-EN3, which is the primary policy for Secretary of State (“**SoS**”) decision-making relating to renewable energy NSIPs (alongside NPS-EN1) requires effects of projects on sea users to be assessed and addressed. In particular, the following provisions are relevant:
  - 2.3.1 Paragraph 2.8.197 requires that, where a potential offshore wind farm is proposed “*close to existing operational infrastructure or has the potential to affect activities for which a licence has been issued by government*” the applicant should assess the potential effects on that development.<sup>1</sup>
  - 2.3.2 Paragraphs 2.8.344-2.8.345, which relate to SoS decision making, direct that where a project potentially affects other offshore infrastructure or activity, applicants should work with the relevant sector to minimise negative impacts,<sup>2</sup> and that the SoS should be satisfied that “*the site selection and site design of a proposed offshore wind farm and offshore transmission has been made with a view to avoiding or minimising disruption or economic loss... to other offshore industries*”.<sup>3</sup>
- 2.4 National Policy Statements are constructed with a clear formula, and the policies noted above should be read together. In order for the SoS to exercise decision-making under 2.8.345, the information required relating to the effects of the Project (as outlined in 2.8.197) must be

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<sup>1</sup> Refer to para 2.8.179

<sup>2</sup> Refer to para 2.8.344.

<sup>3</sup> Refer to para 2.8.345.

provided. If this examination concludes without such information being provided, the SoS will be in a position where it cannot appropriately apply the policies of the NPS-EN3.

*Requirement for an assessment (paragraph 2.8.197)*

- 2.5 It is non-contentious that the Ørsted IPs' developments qualify as "*existing operational infrastructure*".
- 2.6 The Ørsted IPs consider their developments are "*close to*" the Project, as required by paragraph 2.8.197. There is no definition of "close" in the NPS for the purposes of this provision.
- 2.7 Therefore, what is close should be determined with reference to the purpose of this provision – that is, to understand how existing infrastructure will be impacted by a proposed development, such that decision-makers can understand those effects and be in a position to make decisions in accordance with paragraphs 2.8.344-2.8.345.
- 2.8 Therefore, what is considered "close" must be determined by reference to the likelihood of potential effects – there is no other meaningful basis for making this determination.
- 2.9 The Ørsted IPs have submitted a substantial portfolio of academic evidence which demonstrates that material wake effects can occur at farm-to-farm separation distances in excess of the distances between the Project and the Ørsted IPs' developments. In addition, preliminary modelling commissioned by the Ørsted IPs indicates that the Project-alone effects on their developments will be material, ranging between 0.3% (at the least impacted development) to 1.4% (at the most impacted development) Annual Energy Production ("**AEP**"). This preliminary modelling indicates the cumulative effects of the Project along with the Mona and Morgan projects will be between 1.7-5.3% AEP.
- 2.10 As a result, the Ørsted IPs have demonstrated that material effects are likely to occur at their developments as a result of the Project and therefore are required to be assessed.
- 2.11 The Applicant appears to rely solely on the Crown Estate's ("**TCE**") siting criteria for the leasing process (that new offshore wind development must not be within 7.5km of existing development) as defining what should be considered close for the purposes of this provision. We note that this distance was developed for a completely separate process and was not based on an analysis of potential wake effects. This distance was not intended to regulate the understanding and assessment of effects of new developments on existing infrastructure and cannot be interpreted as a fixed buffer distance beyond which adjacent development can no longer be considered 'close'. This is particularly true for wake loss, which is not solely determined by distance.
- 2.12 The Applicant has flagged one study, undertaken by Frazer-Nash consultancy, which states that, at separation distances "*much larger than 20km*" wake effects become vanishingly small. Based on this study, the Applicant considers a wake loss assessment is not required. We first note that the Applicant has misrepresented the findings of this report in stating that wake effects are vanishingly small "*by 20km*"<sup>4</sup> – this finding relates to distances "*much larger*" than 20km. Some of the Ørsted IPs' developments (for example, Walney 4) are less than or close to 20km from the Project. Therefore, even applying the Applicant's (in our submission, incorrect) analysis, there could be a material impact on some of Ørsted IPs' developments.
- 2.13 Regardless, we do not consider it is appropriate to rely on this study to understand the actual likely wake impacts of the Project. That 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 effects on other sea users. It is noted that this study post-dates the TCE's imposition of a 7.5km separation distance and should not be interpreted as contributing to the rationale for this separation distance.
- 2.14 Further, as noted above, the Ørsted IPs have submitted a substantial portfolio of academic evidence which demonstrates that material wake effects can occur at farm-to-farm separation distances greater than the distances between the Project and the Ørsted IPs' developments.

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<sup>4</sup> AtRR-008-04 RR-014-04, RR-056-04, RR-088-04, RR-089-04, RR-093-04 of the Applicant's response to relevant representations [PD1-011].

- 2.15 To date, the Applicant has chosen not to produce any evidence on this matter. Therefore, an assessment of the wake effects is clearly required.

*Secretary of State assessment (paragraphs 2.8.344-2.8.345)*

- 2.16 Having established that, on a proper construction of NPS-EN3, a wake assessment is required and given the Applicant has refused to consider this effect throughout the examination, we consider that the SoS is not currently in a position to be able to undertake the assessment under paragraph 2.8.345.
- 2.17 The level of impact indicated by the preliminary modelling commissioned by the Ørsted IPs is material. However, because the potential for this effect has been dismissed by the Applicant from the outset, it has not been considered during site selection or the design process, and therefore those processes have not been carried out *“with a view to avoiding or minimising disruption or economic loss... to other offshore industries”*.
- 2.18 Additionally, given the Applicant’s dismissal of this issue and refusal to work constructively with the Ørsted IPs, the SoS cannot be satisfied that the Applicant has worked *“with the impacted sector to minimise negative impacts and reduce risks to as low as reasonably practicable”* as required by 2.8.344.
- 2.19 The Ørsted IPs note that they consider there is potential that the level of effect predicted has the potential to impact long term decisions on the future viability of the Ørsted IPs’ developments. The SoS should therefore give *“substantial weight”* to this factor in its decision-making, as directed by paragraph 2.8.347.
- 2.20 Until such an assessment is undertaken, the SoS cannot make its decision in accordance with the relevant paragraphs of the NPS-EN3. Therefore, the SoS cannot currently make its decision in accordance with the NPS-EN3 as required by section 104 of the Planning Act 2008.

*Engagement under the NPS-EN3*

- 2.21 The NPS-EN3 directs applicants to engage with parties who will be impacted by a proposed development, including as follows:
- 2.21.1 2.8.200 directs applicants to *“engage with interested parties in the potentially affected offshore sectors early in the pre-application phase of the proposed offshore wind farm, with an aim to resolve as many issues as possible prior to the submission of an application”*;
- 2.21.2 2.8.203 provides that such engagement *“should be taken to ensure that solutions are sought that allow offshore wind farms and other uses of the sea to co-exist successfully.”*
- 2.21.3 2.8.345 provides that applicants are expected to *“work with the impacted sector to minimise negative impacts and reduce risks to as low as reasonably practicable”*.
- 2.22 While preliminary discussion on this issue has recently occurred, the Applicant’s approach to engagement with the Ørsted IPs has not met the standards established by the provisions above. We would therefore invite the examining authority to ensure that this matter is properly evaluated so that it can be given appropriate consideration in decision-making.
- 2.23 The Ørsted IPs are keen to engage intensively with the Applicant to resolve this issue, including on a process for the assessment of wake effects.

EIA process

- 2.24 Wake loss is also relevant to the Applicant’s EIA, in relation to the climate change benefits of the Project.
- 2.25 Regulation 5(2) of the EIA Regulations sets out the factors for which significant effects should be assessed, including ‘climate’. Effects on climate are further elaborated on in under Schedule 4 (Information for inclusion in Environmental Statements), which relevantly provides that *“the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions)”* should be assessed.
- 2.26 The Applicant has carried out an assessment of the Project’s impacts in respect of climate change in its Environmental Statement (Volume 5 - Chapter 21 - Climate Change) [APP-058]. This assessment includes a net assessment of the GHG emissions arising from the Project. It

includes a finding that in the operational phase, the Project will have a beneficial effect on GHG emissions which would be significant EIA terms. While the Ørsted IPs do not dispute that the Project will result in avoided emissions, they consider that the assessment contains inaccuracies, in that it does not account for the loss of renewable generation at their developments, arising from the Project.

- 2.27 Therefore, its assessment in EIA terms is likely inaccurate. The information presented in the EIA must be accurate in order for the SoS to be able to assess the Project's benefits and adverse effects, when determining the application.

### **3. Practicality of undertaking an assessment**

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- 3.1 The Ørsted IPs also take this opportunity to highlight that wake effects are capable of being modelled. Specialist consultants who work with the offshore wind industry have developed software and models to assist the industry in understanding energy yield and wake effects, and there is a substantial amount of academic research into how wake can be modelled. Opensource models created by respected academic institutes are also available for anyone to use.
- 3.2 While certain assumptions must be made in carrying out such assessments, these can be made on an educated basis to provide a range of robust likely outcomes. Therefore, an assessment of wake effects is possible from a technical perspective, and the Ørsted IPs consider there are no practical barriers to one being undertaken.
- 3.3 The Ørsted IPs maintain that modelling of the wake loss impacts of the Project is an exercise which should be undertaken by the Applicant, and they are best placed to do so due to their access to information regarding site layout and design. The Ørsted IPs are happy to work with the Applicant on any such assessment, including through the provision of any necessary information regarding their developments.

**Shepherd & Wedderburn LLP**

**26.11.2024**