SHEPHERD+WEDDERBURN

RESPONSE TO DEADLINE 3 SUBMISSIONS ON BEHALF OF

(1) BARROW OFFSHORE WIND LIMITED (REF: 20049595) (2) BURBO EXTENSION LTD (REF: 20049590) (3) WALNEY EXTENSION LIMITED (REF: 20048542) (4) MORECAMBE WIND LIMITED (REF: 20049596) (5) WALNEY (UK) OFFSHORE WINDFARMS LIMITED (REF: 20049592) (6) ØRSTED BURBO (UK) LIMITED (REF: 20049589) (THE "ØRSTED IPs")

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

Introduction

1.1 This submission is provided in accordance with Deadline 4 of the examination timetable for the application by Morgan Offshore Wind Farm Limited (the "**Applicant**") for an Order under the Planning Act 2008 (the "**Act**") granting Development Consent for the Morgan Offshore Wind Farm (the **"Project**").

1.2 We represent six owners of operational offshore windfarms in the East Irish Sea (as set out relevant representations RR-005, RR-007, RR-023, RR-032, RR-043, RR-044), who we refer to together as the "**Ørsted IPs**".

1.3 This submission provides comments on the Applicant's response to the first written questions of the examining authority ("**ExQ1**") [REP3-006], provided at examination deadline 3. In particular, the Ørsted IPs respond to the Applicant's responses at:

1.3.1 CE 1.1 regarding projects approaching end of life; and

1.3.2 INF1.3-INF1.7 regarding wake.

2. Response to CE 1.1

2.1 At CE 1.2, the Examining Authority's requested the Applicant provide information regarding developments which they consider are nearing the end of their lifetime, in the context of the Applicant's cumulative effects assessment.

2.2 In its response, the Applicant has incorrectly recorded that Barrow Offshore Wind Farm and Burbo Bank Offshore Windfarm are approaching the end of their lifetimes (in 2030 and 2031, respectively). The Ørsted IPs do not consider any additional consents are required to continue operating these developments beyond 2030/2031. The Ørsted IPs note that these developments have marine licences relating to maintenance which will expire in 2030/2031, however these licences are not required for the ongoing operation of the developments.

2.3 Barrow Offshore Windfarm was discounted from the Applicant's offshore ornithology cumulative effects assessment [APP-023] on the grounds that it will not have any temporal overlap with the Project. This is not correct, and therefore the development should be included in the cumulative effects assessment.

3. Response to INF1.3 - INF1.7

3.1 The Ørsted IPs have provided extensive submissions outlining their key arguments relating to wake loss. We do not propose to repeat those arguments here. However, the Ørsted IPs wish to respond to a small number of points raised by the Applicant in their response to ExQ1.

<u>The Crown Estate's Round 4 leasing requirements</u>

3.2 The Applicant has stated that the Crown Estate ("**TCE**") took account of minimising impacts on other licensed activities in setting the round 4 minimum separation distances. However, the Applicant has not produced any evidence for this proposition.

3.3 We note the 2023 Frazer-Nash study referred to by the Applicant and provided at deadline 3 post-dates the establishment of the round 4 separation distances (and the signing of the agreements for lease) and should not be interpreted as forming the basis for that separation distance. We also reiterate that that study, which takes some generic, theoretical offshore wind farm pairs and looks at the balance in total production based on different densities and separation buffers, cannot be relied on as an assessment of the likely effects of the Project on the Ørsted IPs' developments, in these specific circumstances.

3.4 This is supported by comments made by the Crown Estate ("**TCE**") in its recent submission in response to the Examining Authority's Written Questions ExQ1 OG 1.2 in respect of the Outer Dowsing Offshore Wind Farm (Generating Station). TCE was asked about the 7.5km distance between Round 4 projects and the Frazer-Nash report. TCE acknowledged that the inter-farm wake effects can extend beyond the buffer distances and that other factors beyond distance, including prevailing wind direction and wind farm layout, may also be relevant. TCE went on to state that the location of a wind farm within the leased area is a matter for the developers to decide and design for. In relation to the Frazer-Nash study, TCE stated that "*The report summarises modelling applied to generic/hypothetical wind farms and does not replace the need*

for project-specific analysis." We annex a copy of the whole of TCE's response as **Appendix 1** to this document.

3.5 This does not support the approach that the Applicant has taken to wake loss during this examination.

3.6 Additionally, we note that the industry's understanding of wake effects has developed significantly in the years following the establishment of the TCE boundaries. Therefore, if wake was accounted for in the establishment of the TCE boundaries, those boundaries would no longer be based on sound information, and the effect would need to be assessed regardless.

3.7 Irrespective of the above, the Ørsted IPs maintain their position that any requirements established during the TCE's leasing process does not obviate the requirement for the effects of a development to be assessed in the consenting process. Any generic boundaries established in that process could not have taken into consideration the specific circumstances and likely effects of the Project on the Ørsted IPs' developments. As the Ørsted IPs have stated in a number of submissions, the policy and regulatory framework requires an assessment of these effects to be undertaken, and for the outcome of that assessment to be carefully considered in the decision-making process.

3.8 As explained further below, wake effects are not solely determined by distance – the key to understanding wake loss is the impact of a development on the wind resource. Windfarms in close proximity can have less of an impact on wake than windfarms at greater distances if they are not located in the prevailing wind direction. Separation distances per se are a very poor indicator of effect, and if solely relied on could potentially restrict development unnecessarily, in circumstances where effects between windfarms was very limited. TCE acknowledged in its submission on the Outer Dowsing Offshore Windfarm that wake effects *"may depend upon factors beyond distance – e.g. prevailing wind direction and wind farm layout.*"

Challenges in respect of modelling effect

3.9 The Applicant has commented that wake effects are *"a very complex phenomenon and are difficult to accurately quantify"*. The Ørsted IPs reiterate that wake loss is an effect which, practically speaking, can be accurately and robustly assessed.

3.10 As outlined in detail in the Ørsted IPs' deadline 3 submission [REP3-070], wake assessments are regularly and reliably undertaken by specialist consultants. Wake assessments between wind farms are an integral and routine component of the offshore wind farm development process. The findings are a necessary to inform the development of an offshore wind farm's Business Case. Consultants have worked with the offshore wind industry and developed software and models to assist the industry in understanding energy yield and wake effects.

3.11 We consider the Applicant should be asked to confirm whether they have undertaken an assessment of energy yield and wake effects of the Project and if so, whether specialist consultants were engaged in that exercise.

Lack of precedence

3.12 The Applicant's understanding is that prior to Awel y Mor, wake effects have not been considered within consenting applications for proposed offshore wind developments. This understanding is not correct. The Ørsted IPs are aware that wake effects were openly considered during the consenting process for the Burbo Bank Extension offshore wind farm, the Walney Extension offshore wind farm, and the Hornsea 2 offshore windfarm.

3.13 The Ørsted IPs understand that this is an issue which is regularly dealt with by applicants and incumbent developers - often resolved through negotiation. Other applicants have engaged with impacted sea users on this effect, assessed the effect and either demonstrated the effect is immaterial or provided appropriate mitigation, such that examination of the issue in an examination or the imposition of a DCO requirement has not been necessary.

Mitigating wake effect

3.14 The Applicant has indicated that to mitigate the wake effects of the Project, the distance between the Project and the Ørsted IPs developments requires to be increased by decreasing the Project's array area. The Applicant has stated that to do so would have a "*disproportionately greater effect on the new clean energy generation"* compared to the *"lesser effect any greater distance would have on mitigating wake effects on the existing projects"*.

3.15 First, the Ørsted IPs agree that reducing the array area would likely mitigate the wake effects of the Project. However, a number of other steps could be taken to mitigate this effect, including design and operational changes such as installing a smaller number of larger turbines, reducing capacity, wind sector management or exploring new technologies such as wake steering. However, before such measures can be considered, the Applicant must first assess the impact of its Project on the Ørsted IPs' developments.

3.16 Further, the Ørsted IPs do not consider the Applicant is in a position to state that reducing the Project's array area would be disproportionate, having not undertaken an assessment of the Project's effects on wake and given its continuous refusal to do so. This is particularly true in light of the potential for the Project to impact long-term decisions regarding the lifetime of Ørsted IPs' developments (as noted in REP3-053).

Uncertainty in the offshore wind industry

3.17 The Applicant has stated that, if a requirement was included in the Development Consent Order ("**DCO"**) requiring a wake loss assessment that this would *"create further uncertainty in the offshore wind development industry, leading to significant project risk and ultimately could affect the net-zero strategy of the UK leading to longer term negative impacts on the cost of energy (and security)."*

3.18 The Ørsted IPs reiterate their position that the Applicant should be required to assess and develop mitigation for the Project's wake effect prior to the close of the examination.

3.19 However, we do not agree that a requirement would have the impacts the Applicant alleges. We note that if an applicant wished to avoid any uncertainty created by such a DCO requirement, they could instead choose to follow the requirements of the NPS-EN3, and assess and mitigate the effects of their development ahead of submission to the planning inspectorate.

3.20 Additionally, we consider that if mitigating the effects of the Project would result in "*significant project risk*", this suggests that the potential effects of the Project in terms of wake loss are also likely significant.

3.21 Additionally, the Ørsted IPs consider that a considerable risk exists that, if applicants for offshore wind development are not required to properly assess and mitigate the effects of their development on existing developments, existing and planned developments will be faced with considerable uncertainty regarding the energy yield and viability of their developments. Prospective developments would need to account for the potential for new developments to have a material impact on their energy yield, with no prospect of that being mitigated or compensated for (or even properly assessed). This cost would likely result in the increase in cost of electricity. If wake loss is not assessed, it creates uncertainty for owners of existing developments regarding the long-term viability of their developments.

Shepherd & Wedderburn LLP

10.12.2024

Appendix 1 – The Crown Estate's submission in the Outer Dowsing Offshore Wind Farm (Generating Station) (provided separately)