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MONA OFFSHORE WIND PROJECT

Appendix to ExQ1 Q1.5.1 Scallop Mitigation Zone

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Image of an offshore wind farm

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1 Appendix to EXQ1 Q1.5.1 Scallop Mitigation Zone

1.1 Introduction

1.1.1.1 This document has been prepared in response to Question 1.5.1 of the Examining Authority's first round of Written Questions addressed to the Applicant. The question is as follows:

Applicant's Response to Written Representation [REP2-078]

The Applicant's response to REP1-075.10 [REP2-078] states that it will commit to maintaining a Scallop Mitigation Zone (SMZ) of 57 km2 by including this commitment within an update to Table 1.2 of the Outline FLCP [APP-199] at Deadline 3. As the size is much smaller in area than what the Scottish Fishermen's Federation, the Scottish Whitefish Producers Association Ltd and the West Coast Sea Products expected can the Applicant:

i) summarise the steps it took to evaluate smaller and larger sizes and how a 57 km2 SMZ area size was selected;

ii) clarify if rock protection footprint for cables would have an impact on the size of the 57 km2 SMZ; and

iii) explain what the effects would be on the Proposed Development if it increased the SMZ by 20- 25% in area size.

1.2 Response

1.2.1 Question part i

1.2.1.1 The Applicant highlights that the Outline Fisheries Liaison and Co-existence Plan (J13 F02) has been updated for Deadline 3 to secure a minimum area of 57 km^2 for the SMZ.

1.2.1.2 In responses to questionnaires issued to commercial fisheries stakeholders on 24 March 2022 (Section 1.3.3 of Volume 6, Annex 6.1: Commercial Fisheries Technical Report (APP-097)), West Coast Sea Products (WCSP) Ltd provided detailed information on queen scallop fishing grounds within the Mona Array Area. WCSP categorised the queen scallop grounds into red, pink, yellow, and green zones, with the red zone being defined as the 'Very Important' queen scallop fishing ground as shown in Figure 2.1 below. The Applicant included this information in Figure 1.56 of Volume 6, Annex 6.1: Commercial Fisheries Technical Report (APP-097) where the red, pink and yellow zones were aggregated and labelled as *'considered important queen scallop fishing ground'* with the green zones were labelled as *'rarely fished but considered important queen scallop spawning ground for the stock'*.

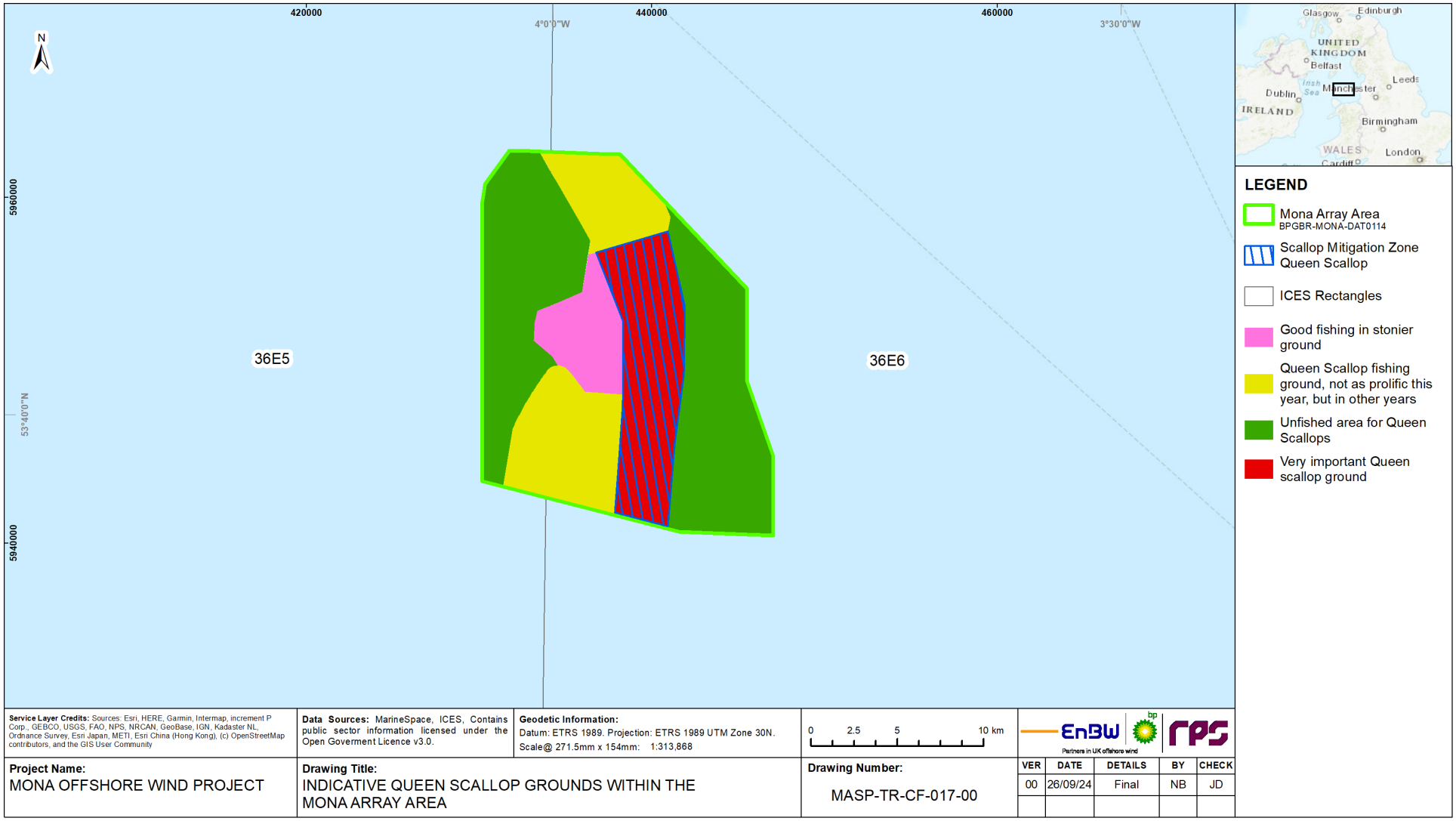

Figure 2.1: Queen scallop grounds fished by Scottish vessels within the Mona Array Area. Grounds are categorised by WCSP into red, pink, yellow, and green zones, with the red zone being defined as the 'Very Important' queen scallop fishing ground.

1.2.1.3 Based on this feedback, the Mona Offshore Wind Project designed the SMZ to cover 100% of the 'Very Important' ground (Figure 2.1), which covers 37% of the wider queen scallop grounds. The term 'core queen scallop ground' was adopted by the Applicant to describe the area covered by the SMZ and to and recognise that it covered the 'Very Important' (or 'core') ground rather than all of the grounds.

1.2.1.4 Significant engagement with stakeholders played a crucial role in developing this solution, ensuring the SMZ effectively addressed their concerns while safeguarding their most important queen scallop fishing ground within the Mona Array Area. The Applicant engaged with fishing stakeholders:

- In Autumn 2022, post-scoping, on requirements to allow access to and continued fishing within Mona Array Area. As set out under section 6.3 in Volume 2, Chapter 6: Commercial fisheries (APP-058), this engagement highlighted a preference for avoidance of infrastructure over queen scallop grounds, sufficient spacing between infrastructure to allow continued access and fishing, orientation of wind turbines against dominant towing directions, burying of cables and minimising the use of cable protection.
- In Winter 2022, further engagement was undertaken specifically with scallop fishing stakeholders on the potential development of a SMZ. Whilst feedback from this engagement was helpful and constructive, it was not feasible to refine initial proposals into formal project changes and commitments and obtain agreement with stakeholders prior to publication of the Preliminary Environmental Information Report (PEIR). Additionally, the Applicant was keen to understand the views of stakeholders across the wider proposal through the statutory consultation on the PEIR, to determine the full suite of changes potentially required to address any concerns raised. Therefore, the assessment presented within the PEIR did not include these potential mitigation measures and consequently concluded a moderate adverse impact (which is significant in EIA terms), at the PEIR stage, for 'loss or restricted access to fishing grounds' for the Scottish west coast scallop receptor group.
- Following the publication of the PEIR and in light of commercial fisheries and wider feedback on the PEIR, the Applicant met with commercial fisheries stakeholders in September 2023 to provide more specific details on the project changes and commitments including the SMZ, which were well received (see Appendix H.21 of the Technical Engagement Plan Appendices - Part 2 (F to M) (APP-043)).

1.2.1.5 Therefore, the Applicant did not evaluate several potential SMZs, but rather developed the SMZ, based on the identified 'Very Important' grounds' as stated above, alongside a suite of project changes confirmed post-PEIR including changes for the benefit for commercial fisheries, shipping and navigation and other stakeholders as set out in Sections 4.11.1 to 4.11.3 of Volume 1, Chapter 4: Site selection and consideration of alternatives (AS-016).

1.2.2 Question part ii

1.2.2.1 At this stage in the development process, the final design, including the transmission and electrical system design of Mona Offshore Wind Project has not yet been completed as it will require inputs from pre-construction site investigation surveys as set out in Section 3.5.2. of Volume 1, Chapter 3: Project Description (APP-050) and selection of key infrastructure such as the wind turbine generator model. Whilst the Applicant has been able to make a commitment to excluding installation of wind turbine

generators and offshore substation platforms within the SMZ, it is important that Mona Offshore Wind Project can be designed with an efficient inter-array and transmission system, which requires the option to place cables and cable protection within the SMZ if required. However, as set out in Table 1.2 of the Outline Fisheries Liaison and Co-existence Plan (J13 F02), the Applicant has committed to minimising cable installation within the SMZ where possible and where cable routing through the SMZ is required, aligning cables north-south over east-west as far as practically possible to reduce the potential for disruption of the dominant north-south orientated towing patterns followed at this location

1.2.2.2 Where cables are required to be routed through the SMZ and a portion of those cables require cable protection there would be a reduction in the total area of the SMZ. However, due to the small footprint of cable protection, it is not expected to affect the purpose or effectiveness of the SMZ for providing continued access the core queen scallop ground. This is because:

- A single cable running from north to south through the centre of the SMZ would be approximately 16 km in length. The maximum width of cable protection would be 10 m (0.01 km) (as set out in Table 3.9, 3.22 and 3.25 of APP-050). Assuming the entire cable needed to be protected (an unrealistic scenario, explained further below), the footprint of the cable protection would equate to 16 km x 0.01 km = 0.16 km2 and a 0.3% reduction in the total area of the SMZ.
- Cables crossing the SMZ in a worst-case east-west orientation in the north, south and middle of the SMZ would have lengths of approximately 4.3, 3.2 and 3.5 km respectively, with an overall length of 11 km and footprint of 0.11 km2 and a 0.3% reduction in the total area of the SMZ (again, assuming an unrealistic requirement for 100% protection of cables). Moreover, doubling the number of cables crossing the SMZ in an east-west orientation would still likely result in a less than 1% reduction in the SMZ.

1.2.2.3 Should cables need to be routed through the SMZ, it is highly unlikely that their entire length would need to be protected. Indeed, the MDS for cable protection in Volume 2, Chapter 6: Commercial fisheries (APP-058) limits cable protection to 10% of the maximum length of inter-array cables and 20% of the maximum length of interconnector cables and export cables (as set out in Table 3.9, 3.22 and 3.25 of APP-050).

1.2.2.4 Whilst the Applicant cannot predict the spatial requirements for cable protection prior to completion of pre-construction site investigation, based on the information above, the Applicant can be confident that the impact of any cable protection footprint on the area of the SMZ would not reduce the purpose or effectiveness of the SMZ for providing continued access to the core queen scallop ground.

1.2.3 Question part iii

1.2.3.1 As set out in part (i) of this response, the Applicant's decision to incorporate the SMZ into the Mona Array Area was undertaken alongside a number of changes made to the array area designed to avoid, reduce and mitigate impacts to other receptors raised through the PEIR and statutory consultation process as set out in Sections 4.11.1 to 4.11.3 of Volume 1, Chapter 4: Site selection and consideration of alternatives (AS-016).

1.2.3.2 The Mona Array Area presented at PEIR was 450 km2. Following application of the post-PEIR project changes, the array area was reduced to approximately 300 km2 with

a commitment to the SMZ that excludes wind turbine generators and offshore substation platforms within it. Through the updated Outline fisheries liaison and co-existence plan (J13 F02) and updated Mitigation and Monitoring Schedule (J10 F03) (both submitted at Deadline 3), the Applicant has committed to a minimum area for the SMZ of 57 km2. Therefore, the total area available for siting wind turbine generators and offshore substation platforms is 243 km2.

1.2.3.3 Retaining spatial flexibility to manage other constraints on wind farm layout that may arise through the final design pre-construction is important. With the commitment to the SMZ, the Mona Offshore Wind Project now has reduced flexibility to the point that the ability to manage spatial constraints post-consent is already restricted. The capacity or power density of a wind farm area is the target capacity of the wind farm at the onshore connection point divided by the area of the wind farm. With a target capacity of approximately 1.5GW and array area of 243 km2, the capacity density of approximately 6.2 MW / km2 for the Mona Offshore Wind Project is very high for an offshore wind farm, which reduces the flexibility available to manage potentially challenging (but currently unknown) constraints through detailed design. To illustrate this point further The Crown Estate limited Round 4 bids to a maximum development area defined by a capacity density of 3 MW / km2 (i.e. 500 km2 for a project with a target capacity of 1.5 GW). However, at the point of entering into the lease, which is usually following final design of the wind farm and final investment decision, the Agreement for Lease (AfL) requires that the developer reduce the development area to a minimum capacity density of 5 MW / km2 (i.e. 300 km2 for a project with a target capacity of 1.5 GW).. To avoid, reduce and mitigate impacts to other receptors, the Applicant has already reduced the size of the Mona Array Area beyond the leasing requirements of The Crown Estate to 243 km2 and a capacity density of approximately 6.2 MW / km2 (so already over the 5MW / km2 density required by The Crown Estate's leasing process) despite not yet undertaking pre-construction site investigation surveys and finalising the design. As a consequence, the Applicant has little opportunity to increase the area of the SMZ without further reducing the remaining spatial flexibility required to manage any new or different constraints.

1.2.3.4 Such constraints would include ground conditions, which profoundly influence foundation type and foundation location-specific requirements. The Mona Array Area also features areas of mobile seabed and sand waves, which are to be avoided where possible as they pose limits on foundation installation and affect the ability of cable burial and scour protection. In addition to the known constraints on the wind turbine layout discussed above, it is possible that the pre-construction site investigation will identify the presence of further archaeological resources beyond the known resources documented in Volume 2, Chapter 9: Marine Archaeology (APP-061). Depending on the nature of these resources and based on the experience gained from the pre-application site investigations, it is likely that a number of them will require implementation of Archaeological Exclusion Zone (AEZ) as set out in the Outline Offshore Written Scheme of Investigation and Protocol for Archaeological Discoveries (REP2-032), which may further constrain the wind turbine layout.

1.2.3.5 Unexploded Ordnance (UXO) may also constrain the wind turbine layout. Due to the ability to clear UXO, as secured through the draft DCO (REP2-004), the influence of potential UXO on the wind turbine layout is lower as clearance attempts are usually successful but until that process is complete there remains a degree of uncertainty which must be accounted for.

1.2.3.6 Finally, the Applicant has made other commitments that reduce the design flexibility for the array layout, for example to maintain a minimum of two 'lines of orientation'

through the wind farm for search and rescue purposes, as set out in the layout development principles under Table 3.7 of Volume 1, Chapter 3: Project Description (APP-050).

1.2.3.7 In summary, the Applicant has sought to avoid, reduce and mitigate impacts to other receptors by several key project changes and a significant reduction in the extent of the Mona Array Area following the PEIR in the pre-application phase. The Applicant has committed to a SMZ over the core scallop grounds based on information provided to the Applicant by stakeholders and has identified a minimum area for the SMZ through updates to the Outline fisheries liaison and co-existence plan (J13 F02) and updated Mitigation and Monitoring Schedule (J10 F03). To further increase the SMZ would further reduce spatial flexibility within the array area and risk Mona Offshore Wind Project not achieving target capacity.

1.2.3.8 NPS EN-1 recognises that the net zero by 2050 target will need a dramatic increase in the volume of new large-scale energy development, which will not be possible without some level of residual impacts (paras 3.1.1 and 3.1.2 of NPS EN-1). For Critical National Priority infrastructure, the starting point is a presumption that the needs case for those projects outweigh the residual effects in all but the most exceptional cases (para 4.1.7 of NPS EN-1). NPS EN-3 encourages developers to maximise the capacity of new large-scale energy development within technological, environmental and other constraints (EN-3 para 2.8.2). The Applicant is therefore committed to building the maximum capacity possible. This will be undertaken within the engineering constraints which are inherent for a project of this type and the environmental constraints which have already necessitated mitigation through a reduction in the developable array area. To further restrict this would not, in the Applicant's opinion, strike the correct balance between the critical national priority to deliver renewable energy and introducing further restrictions to deliver mitigation which goes beyond that which has already been considered as sufficient to reduce the impacts of the development to a non-significant level when it comes to commercial fisheries impacts.