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14 April 2023

Dear Edward Bolger,

SCREENING AND SCOPING OPINION UNDER THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2007 (as amended)

THE PEMBROKESHIRE DEMONSTRATION ZONE (PDZ) PROJECT

I am writing further to your request for a screening and scoping opinion, submitted 17 February 2023, made in accordance with The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) ("The Regulations").

The purpose of the Environmental Impact Assessment (EIA) screening procedure is to determine whether the proposed works require an Environmental Impact Assessment and submission of an Environmental Statement (ES). The purpose of the scoping procedure is to determine what information should be provided in the ES.

In reaching our Screening Opinion we have considered the proposed works against Schedule A1 and A2 of the above regulations; had regard to the information provided in the "SC2301 PC3562-RHD-ZZ-XX-RP-Z-0001_PDZ Scoping Report" (the Scoping Report), submitted 17 February 2023, and considered the requirements of Schedule 3 of the Marine Works Regulations. We have also consulted with the bodies that we consider have an interest in the project by reason of their environmental responsibilities, or local or regional competences, as required by the above regulations, and had regard to their comments.

Screening Opinion

It is our opinion that the works fall within the categories of project listed within Schedule A2, paragraph 13 and 21 of the above regulations, and therefore must be considered in terms of its size, nature and location having regard to the relevant criteria listed in Schedule 1 of the above regulations.

We have carefully considered the views of the consultation bodies alongside the criteria as set out in Schedule 1 of the regulations, and have determined, based on the information provided; that the project has the potential to have a significant effect on the environment and therefore a statutory Environmental Impact Assessment is required.

We have come to this conclusion on the basis of the likely significant impacts of the project, specifically with regard to (describe the items in Schedule 1 of the regulations that would make the project EIA relevant. This is due to the scale of the project and its close proximity to protected sites. The project also has the potential to have an adverse effect on numerous

Annex 1 features, including direct habitat loss and visual/noise disturbance to mobile species.

Scoping Opinion

This letter sets out the additional information that we consider necessary to be included and/or assessed in the ES for this Project.

Please note our scoping opinion is based on the information available to us at this time. The information provided is not a definitive list of the ES / EIA requirements and further information may be required following an application for this project to ensure a full assessment is carried out.

This Screening and Scoping Opinion will be provided to all those bodies that were consulted and will be publicised on our website and on our Public Register.

The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended)

Scoping Opinion (SC301)

Summary of the proposal

The Pembrokshore Demonstration Zone (known hereafter as PDZ) infrastructure project will comprise of the Multi-connection Offshore Substation platform, export cables to landfall, and onshore export cables to a grid connection point. Details are summarised within the three grouped categories:

- Multi-connection Offshore Substation (MOS) Site: The MOS will provide a managed offshore grid connection point for independent renewables projects. The MOS platform aims to be capable of accommodating approximately 400MW in a phased approach.
- Offshore Export Cable: The Project will have one export cable from the MOS platform to landfall. The cable corridor to landfall is expected to be ~ 30 – 40km in length (depending on landfall location).
- Landfall: There are currently six landfall locations under consideration:
  - Freshwater West
  - Bullslaughter Bay
  - New Quay Beach
  - Broadhaven South
  - Greenala Point
  - Freshwater East
- Onshore Export Cable: Onsure cabling is likely include buring the cable if crossing the Pembrokeshire National Park. It is assumed that the grid connection point will be at Pembroke Power Station Grid Supply Point. The preferred option is to connect at the National Grid operated substation located at the Pembroke Power Station. Alternatively a dedicated substation will be built in the vicinity (likely within 2km) of Pembroke Power Station, connecting to the 400kV Transmission Network line that runs from Pembroke Power Station eastwards towards Swansea North.

Location

The PDZ, will be located in an area located approximately 15km offshore from the South Pembrokeshire coastline of Wales. The cable from the Multi-connection Offshore Substation will make landfall in the South-West Wales region, however, the exact landfall location is yet to be agreed.

Consultation Responses Received

In considering the scoping report, the Natural Resources Wales Permitting Service (NRW PS) consulted with various consultation bodies. The consultation bodies that responded are listed below:

- Natural Resources Wales Advisory (NRW A)
- Ministry of Defence (MoD)
- Royal Commission of Ancient Historical Monuments in Wales (RCAHMW)
- Welsh Archaeological Trust (WAT)
- Trinity House (TH)
- Joint Nature Conservation Committee (JNCC)
- The Crown Estate (TCE)

- Natural England (NE)
- Wildlife Trust of South and West Wales (WTSWW)
- National Air Traffic Services (NATS)
- Maritime and Coastguard Agency (MCA)
- Royal Yachting Association (RYA)

0. General comments

0.1 Marine and coastal guidance produced by NRW that may provide useful information to help with your project is available here.

0.2 The ES submitted should demonstrate consideration of the points raised in this scoping opinion. It is recommended that a table is provided in the ES summarising the scoping opinion comments and how they are addressed in the ES.

0.3 The EIA must be undertaken by a competent person and the ES must include a competent expert statement.

0.4 Where possible, other environmental assessments should be coordinated with the EIA process. However, it is important to note that the Habitats Regulations Assessment (HRA) and Water Framework Directive assessment (WFD), and any other assessment, are separate processes to the EIA.

0.5 Throughout the ES robust evidence should be presented so that the potential environmental impacts can be properly understood and evaluated; and appropriate measures identified to avoid, reduce or where necessary compensate for those impacts.

0.6 The ES must include:

- A Non-Technical Summary (NTS).
- A chart or map identifying where the activity will be carried out.
- A description of the likely significant effects of the project, whether direct, indirect, secondary, cumulative, transboundary, short-term, medium-term, long-term, permanent, temporary, positive and negative.
- A description of the methods used to make the assessment of the significant effects and difficulties encountered in compiling the information and uncertainties involved.
- A description of measures to avoid, prevent, reduce or offset identified significant adverse effects and proposed monitoring arrangements; &
- A description of the expected significant adverse effects of the project on the environment resulting from the vulnerability of the project to risks of major accidents or disasters.

0.7 The ES must consider any potential transboundary impacts where appropriate.

0.8 Early engagement with relevant stakeholders is encouraged. You are able to obtain further advice from NRW TE through the NRW Discretionary Advice Service, please see here.

0.9 The UK left the EU on 31 January 2020 – all legal obligations relating to compliance with environmental licences/permits and legislation will continue to apply. NRW on behalf of Welsh Ministers will continue to issue licenses in line with our current practice.

0.10 You must ensure that reference is made to and consideration of compliance with the UK Marine Policy Statement and the now published Welsh National Marine Plan and its associated

policies within the submitted ES, alongside any further regional planning documentation. The published Welsh National Marine Plan can be found here. Implementation guidance for the Welsh National Marine Plan can also be found here.

1. Introduction

1.1 It is noted that within section 1.2.1 of the Scoping Report, Celtic Sea Power is the seabed lease holder of the PDZ, an area located approximately 15km offshore from the South Pembrokeshire coastline of Wales and comprising a 90km^2 area leased from TCE for a period of 45 years. However, please be aware that TCE states that the agreement is solely for the purpose of wave or tidal test and demonstration activities in the Pembrokeshire Demonstration Zone site. I would therefore strongly encourage you to engage with them directly with regards to the leasing terms.

2. Project Description

2.1 It is stated within Section 2.3.4 Marine Export Cables of the Scoping Report that cables must have a minimum separation distance for safe operation, and that the minimum distance between cables will be 50m. However, NRW A request clarity is provided within the ES on the width of the entire cable corridor to be used to facilitate future third-party commercial scale projects. The number of cables that can utilise the same export cable corridor will depend on the chosen cable route and the constraints surrounding it. Given that this is a key project objective, this needs to be factored into deciding the optimum route and landfall site alongside the environmental constraints.

2.2 NRW A have also stated that project development falls within the boundary of the Pembrokeshire Marine Special Area of Conservation (SAC) and questioned why a decision wasn't made to locate the MOS outside of the protected areas. Any potential impacts to the SAC should be mitigated at the project design stage. NRW A wish to understand if there is scope to move the platform outside the SAC boundary. We therefore strongly encourage that you to engage and discuss any potential export cable routes with NRW A to understand the environmental constraints in the area. Some of the potential landfall options proposed are constrained by Annex I features of the Pembrokeshire Marine SAC e.g., Annex I Reef.

2.3 NRW A advise that the ES should consider the maximum number of cable repairs predicted to occur during the operation of the project and establish and assess the parameters likely to result in the maximum adverse effect (worst-case scenario). This includes the potential for cable protection to be required following cable repairs.

3. Policy and legislative Context

3.1 NRW PS is required to take its decision in accordance with the appropriate marine policy documents unless relevant considerations indicate otherwise. The WNMP sets out the Welsh Government's policies for the Welsh marine area in connection with its sustainable development. A WNMP Signposting document can be used to set out how the project has considered each policy of the WNMP.

3.2 In making its decision, NRW PS is required to take all reasonable steps to meet its published well-being objectives, which are designed to maximise NRW's contribution to achieving each of the well-being goals set out in the Well-being of Future Generations (Wales) Act 2015. NRW PS

must have enough information in the ES to ensure it acts in accordance with these principles of sustainable development.

4. Approach to Scoping and EIA

4.1 NRW A have recommend that the Marine Evidence based Sensitivity Assessment (MarESA) MarLIN - The Marine Life Information Network - Marine Evidence based Sensitivity Assessment (MarESA) is used when determining the sensitivity of benthic receptors to different impacts.

4.2 Section 4.6.2 of the Scoping Report states that with respect to the duration of potential impacts, those associated with construction will be considered short term. NRW A advise that this might not necessarily be the case for impacts such as direct habitat loss which occur during construction and will be long-lasting and should be scoped in.

4.3 NRW A welcome that in Section 4.6.5 of the Scoping Report it states you are committed to establishing the scope of cumulative effects assessments on a topic-by-topic basis with the relevant consultees as the EIA progresses.

4.4 In most cases, marine and coastal processes are not in themselves receptors but are, instead, '*pathways*' which have the potential to indirectly impact other environmental receptors such as benthic ecology, fish ecology, etc. NRW PS would like that you, as advised by NRW A, ensure the potential impacts for marine coastal processes are cross-linked to the other receptors where relevant and applicable. Whilst potential changes assessed in the marine and coastal processes chapter may not themselves be significant, it may be the case that they have potential to cause significant impacts to other EIA topic receptors, notably those identified within the water quality and benthic ecology chapters. For example, the creation of sediment plumes (which is considered in the Marine and Coastal Processes assessment) may lead to settling of material onto benthic habitats.

4.5 NE is satisfied that the general principles have been or are going to be addressed and that the English designated sites that could be impacted by this development have been brought in for consideration. The Scoping Report takes all relevant features from these sites to be scoped into the ES.

4.6 NE is required to make available information it holds where requested to do so. National datasets held by NE are available at http://www.naturalengland.org.uk/publications/data/default.aspx.

4.8 NE does not hold local information on local sites, local landscape character, priority habitats and species or protected species. Local environmental data should be obtained from the appropriate local bodies. This may include the local environmental records centre, the local wildlife trust, local geo-conservation group or other recording society.

5. Physical environment

5.1 Marine Coastal Processes

5.1.1 NRW A note that there are six potential landfall sites proposed, and that there will be only one export cable route, which will vary depending on the chosen landfall site. NRW PS request you to engage with NRW A directly as soon as possible on cabling matters, and particularly when making a decision on the optimum cable route and landfall location. NRW A advise that a full constraints assessment is carried out and presented in the EIA which

clearly demonstrates the reasons for the chosen cable corridor and landfall site and exclusion of others.

5.1.2 NRW A advise that you detail what marine surveys will be carried out as part of the route selection and optimisation. If sand wave clearance is required, then consideration must be given to the impacts on the seabed morphology and any designated features such as Annex 1 sand bank systems. If sand wave clearance is a requirement, NRW PS request that an assessment is carried out to determine the recoverability rate of the displaced sand waves and quantify how much sediment will be cleared with details of the proposed disposal site. NRW A strongly advocate that any sediment cleared is maintained within the same localised marine sediment system from where it was removed.

5.1.3 There may also be a requirement for contaminated sediment sampling, especially if there is a dredge and/or disposal element to the project. You will need to request a sediment sample plan from NRW PS and carry out sample analysis in line with the plan. These results will then need to be compared against CEFAS action levels. Further information on this is available here.

5.1.4 NRW A advise that Horizontal Directional Drilling (HDD) is the preferred choice above trenching at landfall.

5.1.5 As stated in section 2 above, NRW A advise that the ES should consider the maximum number of cable repairs predicted to occur during the operation of the project, and establish and assess, the parameters likely to result in the maximum adverse effect (worst-case scenario). This includes the potential for cable protection to be required following cable repairs. Scour development around sub-surface structures (e.g., MOS foundation, cable protection) may also lead to requirement for scour protection which will potentially induce secondary scour. Scour impacts should be included in the assessment of impacts for the MOS foundation and areas where there may be cable protection.

5.1.6 In the absence of understanding future environmental conditions, it is NRW A's position that all options must be considered including complete removal of installed infrastructure. This includes not only the MOS and buried cable, but all cable protection measures employed over the course of the project. Please also refer to the report recently published by Natural England to inform the evidence gap in relation to the feasibility of and options for removing scour and cable protection upon decommissioning of offshore windfarms: Scour and Cable Protection Decommissioning Study - NECR403 (naturalengland.org.uk)

5.1.7 At present, the proposed cable route is unknown and no map has been presented to show the proposed route overlaid on the seabed. Once the cable route to landfall is decided, it is fundamental that the geophysical features of the seabed within the cable corridor, and any designated features or qualifying features either side of the corridor which could be impacted on by the cable laying activities (e.g., Annex 1 habitats, reefs etc) are discriminated. These need to be discriminated to a high resolution showing detailed bathymetry, presence of sand wave fields (showing heights and orientation), presence of sand bank features, reef structures, and the seabed groundtruthed for seabed sediment type. There will be also a requirement to determine fate of Suspended Sediment Concentration (SSC) plumes during cable laying. The depth of sediment coverage will also be fundamental in determining whether cable burial is feasible or not, which would then necessitate the requirement for cable protection.

5.1.8 NRW A consider mobile bedforms and sandbanks to be marine and coastal processes receptors. All efforts should be made to avoid active sand wave/bank features where possible when micro-siting the cable route, particularly if it is an Annex 1 habitat feature of a SAC (e.g., Turbot Sand Bank). If avoidance is not possible, NRW PS request as per NRW A advice that the sediment disturbed remains within the same sedimentary cell/system and not be removed (e.g., local mass excavation preferred over dredging).

5.1.9 Section 5.1.3.8 of the Scoping Report (Seabed Bedload Sediment and Transport) state that tidal currents are the main driving force of sediment transport in the offshore areas. However, NRW A advise that tidal currents are not the only driving force of sediment transport in the offshore areas. The research conducted by King *et al.*, 2019, should be noted. King *et al.*, (2019) investigated the influence of extreme waves in the Western Approaches of the Celtic Sea, concluding that sand transport is heavily influenced by waves, with extreme waves increasing the potential for sand transport by an order of magnitude and being capable of mobilising medium sand below 120m. King et al's research also concluded that extreme waves can strongly influence sand transport direction and are able to induce directional shifts and full reversal.

5.1.10 Any project activity that leads to an impact on the receptor groups listed in Table 5.8 of the Scoping Report must be included in the ES and individually assessed. For example, activities associated with the potential for enhanced concentrations of SSC and subsequent sediment depositing arising from disturbance of the seabed during construction may include, but not be limited to: Cable burial / jointing activities, installation of cable protection, installation of scour protection, MOS foundation piling, drilling mud release from HDD operations, and open-cut trenching at landfall.

5.1.11 NRW A cannot rule out the potential need for further modelling to inform EIA. Evidence should be presented in the ES describing the techniques and any semi-quantitative desk-based approach used to inform the SSC plume extent and subsequent deposition thickness. NRW A request that the maximum spatial extent and Zone of Influence (ZoI) of any local sediment plume (temporarily) experienced, should be estimated as the spring tidal excursion distance. The tidal excursion distance is the approximate distance over which water (or a section of plume with elevated SSC) is advected during one flood or ebb tide. Areas beyond the tidal excursion distance and footprint are unlikely to experience any measurable change in SSC from a sediment plume. The spring tide excursion varies significantly from offshore to inshore and should be the naturally limiting factor when assessing the maximum likely extent of sediment plumes.

5.1.12 The suspended sediment plumes arising from the bentonite clay arisings during HDD should also be scoped into the construction phase.

5.1.13 Any cable repair/remediation events over the operational period will cause SSC plumes and should be scoped in the assessment of impact.

5.1.14 Given that the requirement for cable protection in the nearshore zone and across the intertidal cannot be ruled out at this time. NRW A advise that you include coastal morphology, as the presence of cable protection on the seabed could alter the sediment transport pathways to the coast, particularly as it has been noted that there is a direct sediment transport link between the nearshore sand bank system and the coast at Freshwater West. NRW A further advise that if HDD is not an option, the export cable will be trenched and buried across the intertidal. In the event this cable becomes exposed during the operational phase (due to

storm events for example), cable protection might be needed. Cable protection in the intertidal will directly interrupt the alongshore sediment transport processes and potentially cause erosional impact to the beach downstream which should be assessed in the ES. Wave refraction and diffraction processes caused by the presence of the cable protection in shallow water could also cause energy refocussing towards the coast leading to coastal erosion.

5.1.15 Any changes to the hydrodynamic regime will have a direct impact to the sediment transport processes and should be included and assessed accordingly in the ES.

5.1.16 Secondary scour effects, caused by the presence of obstructions on the seabed which may require scour protection should be assessed in the ES.

5.1.17 NRW A recommend adherence to NRW Guidance Note 41 - with specific reference to Chapter 6 Data Requirements for EIA Baseline Characterisation (Guidance on Best Practice for Marine and Coastal Physical Processes Baseline Survey and Monitoring Requirements to Inform EIA of Major Development Projects; Brooks *et al.*, 2018). You will need to clearly demonstrate that the sourced data is fit for purpose and still valid to characterise present day conditions. Any data used to inform the baseline understanding must have been collected and analysed in accordance with recognised data quality standards. The sourced data will need to provide the appropriate temporal and spatial coverage and resolution. This should adequately describe the present-day conditions within the study area as well as longer-term historical change, both of which are essential to establishing a full conceptual understanding of the natural physical environment baseline of the site and surrounding area. The data sourced should be fit for purpose to sufficiently address the key themes of baseline understanding as described in Brooks *et al.,* 2018.

5.1.18 For any landfall connection at either Freshwater East or Freshwater West, these are likely to be near Castlemartin Corse and Freshwater East main rivers, therefore you may require a Flood Risk Activity Permit (FRAP). In addition, a FRAP would be required if there are any main river crossings with onshore cabling.

5.2 Marine Sediment & Water Quality

5.2.1 Additional Marine Plan policies are relevant to the consideration of Marine Water and Sediment Quality section of the Scoping Report than those that have been provided, for example: ENV_06: Air and water quality. All relevant polices from the Marine Plan need to be identified and the compliance with those explained as per point 0.10 of this Scoping Opinion.

5.2.2 As stated above in section 5.1.13, if HDD is used during construction any discharges of drilling fluid will also need to be assessed.

5.2.3 Although appropriate mitigation has been identified and can be embedded in the project design, accidental spills and pollution should be scoped in to the EIA. The significance of the effect of these events can then be reduced to reflect the mitigation embedded in the project should you submit a draft Code of Construction Practice (CoCP) and Environmental Management Plan (EMP) being submitted in support of your application. This is necessary to ensure that the correct and appropriate Pollution Prevention Guidelines and best practice are being followed. The guidance in the Guidance for Pollution Prevention documents and the use of a Marine Pollution Contingency Plan for spills at sea should be followed.

5.2.4 Until further detail with respect to the development is provided, NRW A disagree that the decommissioning phase can be scoped out at this stage. At present, the particular nature of the landfall, for example, is not known. Therefore, decommissioning should be scoped in the EIA.

5.2.5 Depending on landfall locations, NRW A recommend that any construction works taking place on the foreshore and nearshore should avoid the Bathing Season (15 May to 30 September). This is in order to prevent disturbance to bathers and protect bathers from potential water quality deterioration as a result of higher suspended sediment concentrations. Should a landfall location at a designated Bathing Water be chosen, you should engage with NRW A's Bathing Water Lead to look at options for mitigating risk.

5.2.6 If landfall location is on or near a designated bathing water, the ES should contain a bathing water mitigation plan.

5.2.7 A Construction Environmental Management Plan (CEMP) will be required for work onshore and should be submitted in support of your applciation. The CEMP should include, but not limited to:

- Construction methods: details of materials, how waste generated will be managed.
- General Site Management: details of the construction programme including timetable, details of site clearance; details of site construction drainage, containments areas, appropriately sized buffer zones between storage areas (of spoil, oils, fuels, concrete mixing and washing areas) and any watercourse or surface drain.
- Biodiversity Management: details of tree and hedgerow protection; invasive species management; species and habitats protection, avoidance, and mitigation measures.
- Soil Management: details of topsoil strip, storage, and amelioration for re-use.
- CEMP Masterplan: details of the extent and phasing of development; location of landscape and environmental resources; design proposals and objectives for integration and mitigation measures.
- Control of Nuisances: details of restrictions to be applied during construction including timing, duration, and frequency of works; details of measures to minimise noise and vibration from piling activities, for example acoustic barriers; details of dust control measures; measures to control light spill and the conservation of dark skies.
- Resource Management: details of fuel and chemical storage and containment; details of waste generation and its management; details of water consumption, wastewater, and energy use
- Traffic Management: details of site deliveries, plant on site, wheel wash facilities
- Pollution Prevention: demonstrate how relevant Guidelines for Pollution Prevention and best practice will be implemented, including details of emergency spill procedures and incident response plan.
- Landscape/ecological clerk of works to ensure construction compliance with approved plans and environmental regulations.

5.3 Onshore Geology, Geomorphology and Soils / Onshore Groundwater and Hydrology

5.3.1 Some of the sites proposed for these activities lie within both Secondary A and Principal, aquifer designations. NRW A therefore welcome that groundwater is being considered and scoped into the ES and the WFD assessment. We welcome a full assessment of all potential impact pathways, and that this will be undertaken in line with NRW guidance.

5.3.2 During the construction phase, NRW A welcome that potential impacts on groundwater will be considered and that a detailed desk-based assessment will be undertaken to look at

potential groundwater receptors, in order to help develop the conceptual site model and assessment of risk. We also welcome that additional field-based data will be collected should significant impacts be identified during desk-based assessments.

5.3.3 Should de-watering be required as part of the onshore works, NRW A advise that any impact of this on groundwater levels (and therefore any groundwater dependent terrestrial ecosystems in continuity with the groundwater body) should be adequately assessed to ensure no derogation in the quality and resource of these reserves / features.

5.4 Water Framework Directive

5.4.1 It should be noted that Bathing Water baseline information should be accessed through the Bathing Water explorer. Protected areas can be found on our Protected Area register: Natural Resources Wales / River basin management plans 2021-2027: protected area register.

5.4.2 It is not clear if the cable route passes through the Pembrokeshire South coastal water body – Section 5.5.3 of the Scoping Report suggests that the cable route might pass through it. All options should be screened in until you are confident on which option will be chosen. This also applies to designated Bathing Waters, three of which occur at potential landfall locations. We strongly recommend early engagement with NRW A to discuss potential cable routes through sensitive features. Furthermore, the ZoI must be considered when screening water bodies. If the ZoI reaches into another water body, then this too must be included in the assessment.

5.4.3 As stated before for in Section 5.2 of this Scoping Opinion, decommissioning should be scoped into the EIA and also be included as there may be impacts arising from the development which need to be considered in the WFD assessment. These include onshore works, marine works and intertidal works.

5.4.4 NRW A note that Section 5.5.6 of the Scoping Report discusses detailed assessment for non-temporary effects. It should be noted that detailed assessment should take place for any receptors / elements scoped in via the WFD scoping exercise (see the EA's Clearing the Waters for All guidance and associated scoping template). Please note that in a deviation from EA guidance, NRW A consider impacts on shorter timescales than those listed in the EA's scoping template (i.e., 14 days or a spring neap cycle). This is particularly in relation to bacteria which can have an impact on bathing water classifications (and human health) over much shorter timescales.

6 Biological environment

6.1 Designated Sites

6.1.1 Given the potential implications of the proposals for European Protected Sites, NRW A advise that the application includes sufficient information for the competent authority to consider the proposals under Regulation 63 of the Conservation of Habitats and Species Regulations 2017.

6.1.2 The Wildlife and Countryside Act 1981 (as amended) places a duty on public authorities in exercising their functions, so far as this is likely to affect the flora, fauna, geological or physiographical features of a SSSI, to take reasonable steps consistent with the proper

exercise of their functions to further the conservation and enhancement of those features. Further advice is available here.

6.1.3 Where a European Protected Species is identified and the development proposal will contravene the legal protection they are afforded, a licence should be sought from NRW. The EIA must include consideration of the requirements for a licence and set out how the works will satisfy the three requirements as set out in the Conservation of Habitats and Species Regulations 2017 (as amended).

6.1.4 Where an EPS is present and a development proposal is likely to contravene the legal protection, they are afforded, the development may only proceed under a licence issued by NRW, having satisfied the three requirements set out in the legislation. A licence may only be authorised if:

- It satisfies an appropriate derogation or licencing purposes, which in the case of development is most likely to be preserving public health or safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.
- There is no satisfactory alternative, and.
- The action authorised will not be detrimental to the maintenance of the population of the species concerned at an FCS in its natural range.

6.1.5 The requirements above are also translated into planning policy through Planning Policy Wales (PPW) February 2021, section 6.4.22 and 6.4.23 and Technical Advice Note (TAN) 5, Nature Conservation and Planning (September 2009). The local planning authority will take them into account when considering the EIA where an EPS is present.

6.1.6 For English waters, European site conservation objectives are available at designatedsites.naturalengland.org.uk/SiteSearch.aspx

6.1.7 The ES should include a full assessment of the direct and indirect effects of the development on the features of special interest within these sites and should identify such measures as may be required to avoid, reduce, or mitigate any adverse significant effects.

6.1.8 NE routinely direct the developers to a series of documents providing best practice advice of the use of data and evidence to support offshore wind farm development in English waters: Environmental considerations for offshore wind and cable projects - Home (sharepoint.com). These documents provide advice on the use of data and evidence throughout the lifecycle of offshore wind infrastructure from baseline characterisation surveys to post-consent monitoring.

6.1.9 NE's Impact Risk Zones incorporate internationally designated sites and features and can be used to help identify the potential for the development to impact on a European Site. The dataset and user guidance can be accessed from the Natural England Open Data Geoportal.

6.1.10 The ES should thoroughly assess the potential for the proposal to affect internationally designated sites of nature conservation importance / European sites, including marine sites where relevant. This assessment should be done through a Habitats Regulation Assessment to includes Special Protection Areas (SPA), Special Areas of Conservation (SAC), listed Ramsar sites, candidate SAC and proposed SPA.

6.1.11 Article 6 (3) of the Habitats Directive requires an appropriate assessment where a plan or project is likely to have a significant effect upon a European Site, either individually or in combination with other plans or projects.

6.1.12 NE indicates that for England, the development site is within or may impact on the following European/internationally designated nature conservation site(s): Lundy SAC and Bristol Channel Approaches SAC.

6.1.13 The Lundy SAC surrounds the island, Lundy located between England and Wales. NE informs you that the conservation advice for the Lundy SAC and further details can be found at: Marine site detail (naturalengland.org.uk).

6.1.14 Lundy SAC is 25km away from the Project Area and designated for its population of grey seal (*Halichoerus grypus*) which is currently in favourable condition. The activities from this development that have the potential to exert pressure on this species and should therefore be taken into consideration are: Horizontal Directional Drilling for Cables, laying, burial and protection of power cables, operation and maintenance of power cables and decommissioning of power cables. NE's advice on operations (found on our Designated Sites View site) identifies 6 pressures associated with all four of these cable activities. Grey seals are sensitive to Vibration, Above water noise, Collision BELOW water with static or moving objects not naturally found in the marine environment, Litter, Underwater noise changes and Visual disturbance. All pressures that are associated with cabling activities. These six pressure pathways should be investigated in the EIA. Disturbance caused by human activity affecting seals should restricted in frequency, duration and/or intensity whilst hauled out to rest, moult, breed, or pup/suckle so that they are not significantly disturbed.

6.1.15 The Bristol Channel Approaches SAC spans the Bristol Channel between Cornwall and Wales and overlaps with the Project Area. This site has been identified for the protection of harbour porpoise. Harbour porpoise is a Habitats Directive Annex II species and as a feature of this site, its current conservation objectives are to maintain site integrity by maintaining Favourable Conservation Status (FCS). This site is designated for its importance to harbour porpoise in the winter months (October-March). NRW PS also requests that these sites are also assessed inline with the MMMU approach as detailed in section 6.6.2 below.

6.1.16 The JNCC's conservation advice for this site and further details can be found at: Bristol Channel Approaches MPA | JNCC - Adviser to Government on Nature Conservation

6.1.17 The activities from this development that have the potential to exert pressure on harbour porpoise and that should therefore be taken into consideration are: Anthropogenic underwater noise from shipping, drilling, dredging and pile driving, death or injury by collision of renewable energy installation.

6.1.18 The EIA should include consideration of Marine Conservation Zones (MCZs) where appropriate. Marine Conservation Zones (MCZ) are a Marine Protected Area designated under the Marine and Coastal Access Act 2009. Natural England has MCZ designation and habitat data available. These datasets can be accessed from either MAGIC - Datasets (defra.gov.uk) or the Natural England Open Data Geoportal.

6.1.19 The ES should include a full assessment of the direct and indirect effects of the development on the site and identify appropriate mitigation measures to avoid, minimise or reduce any adverse significant effects. The proposal may affect the following Marine Conservation Zone: North West of Lundy MCZ and Skomer MCZ.

6.1.20 NE's conservation advice for North West of Lundy MCZ and further details can be found at: Marine site detail (naturalengland.org.uk).

6.1.21 North West of Lundy MCZ is an inshore site extending in an arc between 6 and 12 nautical miles, North West of Lundy Island. The MCZ is designated for its large area of subtidal coarse sediment that provides habitat for a variety of infauna species. The activities from this development that have the potential to exert pressure on the subtidal coarse sediment feature and should therefore be taken into consideration are: Horizontal Directional Drilling for Cables, Laying, burial and protection of power cables, Operation and maintenance of power cables and Decommissioning of power cables. Pressures that the designated feature is sensitive to and are relevant to this project include changes in suspended solids and smother and siltation rate changes. The distribution of sediment composition types across the feature should be maintained. Varied sediment type and grain size is required in this feature to ensure structural complexity, an important character in determining the biological communities present.

6.1.22 As detailed in section 6.1.2 of the Scoping Report, the protected sites that could be affected include those with which the Project Area overlaps that could be directly affected by temporary or permanent works for the Project. WTSWW have requested that all future documents provide this spatial information in a visual format (i.e., maps of the project area overlaid with the designated sites that fall within and around it for clarity and transparency).

6.2 Benthic Subtidal and Intertidal Ecology

6.2.1 As stated in section 2 of this Scoping Opinion, NRW A have stated that some of the potential landfall options proposed are constrained by Annex I features of the Pembrokeshire Marine SAC (e.g., Annex I Reef). Therefore, early engagement with NRW A is encouraged.

6.2.2 NRW A have also advised that Data Map Wales should also be used to obtain benthic ecology data: Home | DataMapWales (gov.wales).

6.2.3 NRW A state that the study area and potential ZoI should be determined by the outputs of the Physical Process modelling. Please refer to comments provided in section 5.1 of this Scoping Opinion.

6.2.4 The potential impacts on benthic ecology should be derived from the outputs of the physical processes modelling and should consider any indirect impacts on benthic habitats from changes in physical processes e.g. loss/alteration of benthic communities from changes in sediment transport, hydrodynamic regime, etc. Links between potential impacts to the physical environment and subsequent impacts on benthic habitats must be made in the ES given the close interlinkages between both receptors i.e. impacts on physical processes informs impacts on benthic habitats. It is currently unclear, from reviewing the Scoping Report, how impacts that span across both of these receptors (physical processes and benthic habitats) will be assessed and/or how links will be made between chapters with other receptors e.g., water quality. For specific comments on impacts on physical processes that should be used to inform impacts on benthic impacts please refer to comments provided in section 5.1 of this Scoping Opinion.

6.2.5 Section 6.2.3 of the Scoping Report states that apart from the biogenic reef closer to shore, these habitats have no international, national or regional protection. However, NRW A

indicates that are a number of habitats closer to shore and within the potential cable route corridors are Annex I features of Pembrokeshire Marine SAC and as such have international value and should be acknowledged within the ES.

6.2.6 NRW A advise that the Annex I Estuaries and Annex I Large shallow inlets and bays features of the Pembrokeshire Marine SAC should have been included in Table 6.3 of the Scoping Report as they are present within the study area. Furthermore, there are several habitats and species of conservation importance (Environment (Wales) Act Section 7 and OSPAR threatened and declining habitats and species) that occur within these habitats. Please refer to the Pembrokeshire Marine SAC conservation objectives for further information Contents (cyfoethnaturiol.cymru).

6.2.7 Submerged or partially submerged sea caves is also a feature of the Limestone Coast of South West Wales / Arfordir Calchfaen De Orllewin Cymru SAC and falls within the project area. This should have been included in table 6.3 of the Scoping Report.

6.2.8 NRW A agree that the introduction of hard substratum may increase the diversity of certain species, but it should also be noted that the alteration of a habitat, from a soft sediment to a hard bottom environment, may not always be desirable. This should be assessed accordingly as part of the ES.

6.2.9 The introduction of hard substrate in the form of cables and scour protection may lead to increased heterogeneity and consequently to changes in biological communities, particularly in areas of soft sediment where hard substrate is uncommon. Adjacent habitats may be indirectly affected by infrastructure through additional ongoing scour and change in hydrodynamics in the operation and maintenance phase.

6.2.10 As stated in section 5.2 of this Scoping Opinion, unplanned / accidental release of pollutants should be appropriately assessed and will need to be screened in to the EIA, as well as the HRA.

6.2.11 NRW A advise that the potential for the development infrastructure to act as a stepping-stone for the introduction and/or spread of INNS should be scoped in the EIA.

6.2.12 Section 7 (Environment Wale Act 2016) habitats and species have not been incorporated into the current Scoping Report; hence it is not possible to assess whether these can be scoped out of the EIA without further assessment. For example, NRW A indicates that there is some evidence that Electro-Magnetic Fields (EMF) can affect crustacea behavioural patterns which would potentially include certain species such as crawfish *(Palinurus elephas)* listed as a section 7 species. Therefore, impacts on section 7 species and habitats should be reviewed and assessed (where appropriate) as part of the ES.

6.2.13 NRW A indicates that electricity transmission will cause cables to become heated relative to the ambient environment. These heating effects might impact benthic habitats through causing avoidance behaviours and/or through modifying sediment properties and bacterial communities and potentially impacting benthic habitats (Taormina, 2019) and should be assessed as part of the EIA.

6.2.14 Table 6.4 of the Scoping Report states that all impacts scoped into, and out of, the construction phase will be similarly scoped in the operational phase. NRW A are unclear on whether all of the impacts currently under construction will be scoped in for the operational

phase. NRW A advise that potential impacts derived from the further placement of cable protection during the operation and maintenance phase should also be assessed under operation.

6.2.15 NRW A advise that a full Biosecurity Risk Assessment and INNS Management Plan is completed in relation to all marine operation activities associated with the current proposal. The risk assessment and management plan should include consideration of all activities, vessels, vehicles and equipment used as well as how the risk will be minimised through appropriate mitigation and adherence to best practice guidance and management measures. The risk assessment should include a review of all the available data in relation to the presence of marine INNS where applicable to the current proposal, and the potential risks associated with each species identified.

6.2.16 NRW A welcome the proposal to gather project-specific survey data. We would encourage you to engage with NRW A on the design of these surveys to ensure the characterisation survey is appropriate to inform the EIA. It is advised that you review NRW's guidance on benthic habitat assessments for marine developments Natural Resources Wales / Benthic habitat assessments for marine developments.

6.2.17 Figure A6.2.2 of the Scoping Report shows an area of Annex I Reef (bedrock) that falls within the PDZ area. NRW A does not have a record of Annex I Reef in that area. Furthermore, the JNCC combined map EUNIS level 3 predicts the area is Deep circalittoral sand. It is advised you engage with NRW A on this matter.

6.3 Fish and Shellfish Ecology

6.3.1 NRW A advise that the following reports are also considered relating to impacts to fish:

- Campanella, F. & van der Kooij, J. (2021). Spawning and nursery grounds of forage fish in Welsh and surroundings waters. Cefas Project Report for RSPB, 65 pp.
- Van der Kooij, J., Campanella, F., Rodríguez Climent, S., (2021). Pressures on forage fish in Welsh Waters. Cefas Project Report for RSPB, 35 pp.

6.3.2 While NRW A agrees with the use of the fisheries sensitivity maps by Coull *et al.* 2012, and Ellis *et al.* 1998, the limitations of these maps should be noted, especially around the lack of survey data for coastal waters and water less than 30 m deep, as well as the age of some of the data. NRW A further advise that additional data sources for the Celtic Sea should be consulted, such as the PELTIC surveys conducted by Cefas.

6.3.3 NRW A do not consider the screening distances used to be appropriate, and have advised that site and project specific noise modelling is undertaken to inform the screening distances. Recent evidence (Davies *et al.* 2020b) found that twaite shad from the River Severn undertakes long range migration across the Celtic sea. NRW A therefore recommend that to ensure any fish passing through the Project Area are considered, a regional approach is taken, screening in all sites with noise sensitive fish features.

6.3.4 NRW A advise that for impact pathways such as increases in suspended sediments, the Project Area should be informed by results from the physical processes modelling.

6.3.5 Furthermore, it should be noted that there are Atlantic herring spawning grounds inside the Pembrokeshire Marine SAC, as well as in the coastal areas (Davies *et al.* 2020a). These spawning grounds need to be appropriately captured and considered in the ES.

6.3.6 In addition to reviewing the landings data, relevant survey data held by Cefas should be used to inform the assessment.

6.3.7 For ease of reference, NRW A advise that species are grouped either by protected status, or, by category (diadromous, demersal, pelagic and elasmobranch).

6.3.8 Furthermore, NRW A advise that all Section 7 species (Environment Wale Act 2016) should have been included in Table 6.5 of the Scoping Report, especially those which have been recorded in the study area, such as seatrout, porbeagle, blue shark, bluefin tuna and basking shark. Impacts on section 7 species should be reviewed and assessed (where appropriate) as part of the ES.

6.3.9 In addition, Angelshark (*Squatina squatina*) is listed as a species on the Wildlife and Countryside Act under Schedule 5; is an OSPAR/Section 7 Species, as well as being listed on the Convention on the Conservation of Migratory Species of Wild Animals. Angelshark should have also be included in Table 6.5 of the Scoping Report due to historic and current presence in Welsh waters (Barker *et al.* 2021 in-prep) and the potential for this species to make seasonal inshore-offshore movements, particularly in relation to potential effects of EMF. Therefore, this species should also be scoped in the assessment.

6.3.10 Important populations of allis and twaite shad are also recorded in the River Severn and should therefore be considered the assessment. It should also be noted that twaite shad are a primary, and not a secondary feature of Carmarthen Bay and Estuaries SAC.

6.3.11 Please note that Sea lamprey is also a secondary feature of Afonydd Cleddau SAC and that River lamprey and Atlantic salmon are primary features of the Afon Teifi SAC

6.3.12 For Severn Estuary SAC and Ramsar, NRW A advise that all diadromous fish species that migrate through the Severn Estuary are assessed. These are:

- Atlantic salmon *Salmo salar;*
- Sea trout *Salmo trutta;*
- Sea lamprey *Petromyzon marinus;*
- River lamprey *Lampetra fluviatilis;*
- Twaite shad *Alosa fallax;*
- Allis shad *Alosa alosa*, and
- European eel *Anguilla anguilla*.

6.3.13 Other fish species within the fish assemblage of the Severn Estuary must also be assessed as they are SAC/Ramsar site features or sub-features, contribute to the status of the Fish quality element of the Severn Lower transitional water body and/or are of wider conservation / social / economic / recreational importance.

6.3.14 NRW A agree with the overall potential impacts scoped in and out of the proposed project detailed in section 6.3.4 of the Scoping Report; however, NRW A have offered the following additional advice:

- When assessing the impacts to sandeel and herring habitats, GIS modelling is carried out using the methodology described by Reach et al (2015), Latto et al (2013) and Marine Space Ltd et al (2013a, 2013b).
- For oceanic species, such as Bluefin tuna and Basking shark (a Wildlife and Countryside Act and OSPAR protected species) additional data should be consulted to assess the species-

specific risk of entanglement.

- If project specific marine mammal surveys and Digital Aerial Surveys for birds are proposed these also include observations of large oceanic fish to inform the assessment.
- Any fish encountered during sampling of benthic habitats, e.g., sandeel from grab sampling, or fish encountered in video surveys, are noted and the information used to inform the assessment in the Fish and Shellfish chapter.

6.4 Terrestrial Ecology

6.4.1 The ES should include sufficient information to enable the planning authority to determine the extent of any environmental impacts arising from the proposed scheme on legally protected species, including those which may also comprise notified features of designated sites affected by the proposals.

6.4.2 Any habitat surveys should accord with the NCC Phase 1 survey guidelines (NCC (1990) Handbook for Phase 1 habitat survey. NCC, Peterborough). NRW A advise that Phase 1 surveys are undertaken and completed during the summer to ensure the best chance of identifying the habitats present.

6.4.3 NRW A advise that the site, and where necessary, land adjacent to the site, is subject to an assessment to determine the likelihood of protected species being present and affected by the proposals. Targeted species surveys should be undertaken for all species scoped in which:

- are undertaken by qualified, experienced and where necessary, licensed ecologist(s) and,
- comply with current best practice guidelines. In the event that the surveys deviate from published guidance, or there are good reasons for deviation, full justification for this should be included within the EIA.

6.4.4 NRW A advise that the scope of surveys is discussed and agreed with the LPA ecologist. Surveys for the application should have regard to the following:

- **Bats** - The Castlemartin peninsula supports a diversity of bat species and their roosts, including roosts of Wales's rarest bat species: Lesser and Greater Horseshoe bats. Two Special Areas of Conservation (SACs) notified for bats are present on the peninsula. They, along with their underpinning SSSIs, will need to be considered by the proposals:
    - Limestone Cliffs of South-west Wales SAC – Greater Horseshoe bats
    - Pembrokeshire Bat Sites and Bosheston Lakes SAC – Greater and Lesser Horseshoe bats

  NRW A note that surveys for bats are expected to include bat transect and static monitoring, preliminary roost assessment and bat roost surveys. Bat surveys and mitigation should follow the guidance set out in:
    - *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition)*' by Bat Conservation Trust (2016).
    - '*Bat Mitigation Guidelines'* by English Nature (2004).
    - Schofield, H.W. (2008) *The Lesser Horseshoe Bat Conservation Handbook.* Vincent Wildlife Trust.

- **Dormice** - Dormice have been recorded on the north part of the Castlemartin Peninsula (south of Pembroke Power Station). NRW A welcome and advocate that surveys for dormice are carried out to inform the proposals. Surveys should follow the guidance set out in:
    - *Dormouse* Conservation Handbook (2nd Edition) by English Nature (2006).

- **Otters** - Otter are present around the Castlemartin peninsula and are notified features of the following SACs:
    - Pembrokeshire Bat Sites and Bosheston Lakes SAC.
    - Pembrokeshire Marine SAC.

  NRW A note and welcome that surveys for riparian mammals will be carried out and assume that these will include otter surveys.

6.4.5 NRW A advise comprehensive descriptions of the habitats affected are included to support robust conclusions about their significance for the species.

6.4.6 NRW A advise that the ES considers significance (both alone and in-combination) and where applicable conservation status. In respect of conservation status, it is advised that consideration is given to the current conservation status of the relevant species. The ES must demonstrate that there will be no detriment to maintenance of favourable conservation status (FCS) of the species during construction, operation and where relevant decommissioning phases of the scheme.

6.4.7 The ES should set out how the long-term site security of any mitigation or compensation will be assured, including management and monitoring information and long term financial and management responsibility. Where the potential for significant impacts on protected species is identified, NRW A advocate that a Conservation Plan is prepared for the relevant species and included as an Annex to the ES.

6.4.8 NRW A recommend that you engage with Pembrokeshire's local authority Ecologist on the scope of the work to ensure that regional and local biodiversity issues are adequately considered, particularly those habitats and species listed in the relevant Local Biodiversity Action Plan and are considered important for the conservation of biological diversity in Wales.

6.4.9 NRW A would expect you to contact other relevant people/organisations for biological information/records relevant to the site and its surrounds. These include the relevant Local Records Centre and any local ecological interest groups (e.g., bat groups, mammal groups).

6.4.10 NRW A also advise that the development incorporates robust green infrastructure that will remain unlit to allow protected species to continue to inhabit the site and move through it. It is vital that the design of the development avoids narrow green infrastructure corridors through it and avoids breaks in those corridors.

6.4.11 NRW A advise that, in accordance with the Environment (Wales) Act 2016 and Planning Policy Wales, you demonstrate how you can deliver biodiversity enhancements and thus contribute to promoting ecological resilience.

6.5 Ornithology

6.5.1 Please note that comments on ornithology below are concerning the Welsh designated sites only. NRW A recommend that you consult the relevant country bodies/agencies for advice regarding designated sites outside of Wales (e.g., for Irish or English sites).

6.5.2 NRW A and JNCC do not consider the approach of using a study area of 100 km extending from the Project Area to identify sites that are designated for seabirds is appropriate. This is

because seabird species have foraging ranges far beyond this distance. It is recommended that Thaxter *et al.* (2012) is not used as a source of foraging ranges, as an updated review of foraging ranges was carried out by Woodward *et al.* (2019). It is advised that the published foraging ranges in Woodward *et al.,* (2019) are used to determine connectivity of the Project Area with breeding seabird features of designated sites – specifically using the mean maximum foraging range + one standard deviation (Mean Max + 1SD) as set out in Table 5 of Woodward *et al.* (2019). The exception to this is the foraging range for guillemot and razorbill, for which the Mean Max + 1SD values should be taken from the relevant tables in Appendix 1 of Woodward *et al.,* (2019) that exclude data from Fair Isle where foraging range may have been unusually high as a result of reduced prey availability during the study year. The list of sites considered in Tables 6.1 and 6.2 of the Scoping Report must be reviewed following use of the Woodward *et al.* (2019) foraging ranges. You may wish to discuss this point directly with NRW A.

6.5.3 As noted above, foraging ranges should be based on the updated review of foraging ranges in Woodward *et al.* (2019) rather than those from Thaxter *et al.* (2012). The list of sites included in Tables 6.1 and 6.2 of the Scoping Report and scoped in for further assessment should be reviewed following consideration of advice above to use Mean-Max + 1SD foraging ranges in Woodward *et al.* (2019) to screen sites in.

6.5.4 Noting comments above regarding foraging ranges, consideration should also be given to breeding assemblage qualifying features of designated sites in addition to named features. For example, the seabird assemblage qualifying feature of Skomer, Skokholm and the seas off Pembrokeshire SPA, which includes razorbill, guillemot, kittiwake in addition to the individual qualifying features of puffin, lesser black-backed gull (LBBG), Manx shearwater, and European storm petrel, may also be within foraging range of the Project Area.

6.5.5 NRW A note that the breeding seabird colony is a feature of this Site of Special Scientific Interest (SSSI). The Project Area is located within foraging range of seabirds from the Castlemartin Range SSSI, and therefore the site should also be scoped in for further assessment in Table 6.2 of the Scoping Report for breeding seabirds.

6.5.6 NRW A and JNCC have advised that for sites where manx shearwaters and European storm petrels are features, potential impacts from lighting of surface structures should be considered (e.g., attraction and disorientation of birds).

6.5.7 WTSWW would also welcome further discussion around the potential mitigations in particular the seasonal timing of works (i.e., to avoid manx shearwater fledging periods) and lighting on installation and maintenance vessels and MOS structures. It is well documented that naive juveniles are particularly prone to disorientation and stranding due to light pollution. The configuration of the platform as per industry best practice is not specified at this time but WTSWW welcome additional information on operational and navigation lighting at an early stage. They would also be interested in more detail and options for mitigation strategies that avoid placing permanent infrastructure or having temporary working areas within protected sites.

6.5.8 NRW PS would like you to note that where foraging ranges of features of Skomer, Skokholm and seas off Pembrokeshire overlap with the Project Area the potential for disturbance and/ or displacement of foraging birds on the site during construction and decommissioning, and from presence of the MOS in operation, should also be scoped into the EIA.

6.5.9 NRW A advise that until the newest version of the Welsh Marine Mammal and Bird Atlas (Evans & Waggitt in prep) is available, that for the purposes of the EIA scoping report, we would suggest use of the NERC/Defra funded Marine Ecosystems Research Programme (MERP) (https://www.marine-ecosystems.org.uk/) data for at sea densities and distributions (Waggitt *et al.* 2019). It is noted that the MERP data does not appear to have been considered to inform the baseline in this scoping report. NRW A also suggest that consideration be given to the RSPB hotspot mapping and utilisation distribution mapping data (covers guillemot, razorbill, kittiwake and shag), which can be downloaded via https://opendata-rspb.opendata.arcgis.com/.

6.5.10 NRW A consider that the key species that may be potentially impacted by the proposed project are gannet, Manx shearwater, European storm petrel, LBBG, puffin, guillemot, razorbill, kittiwake, herring gull and great black-backed gull.

6.5.11 In addition to the potential impacts listed in section 6.6.4 to be scoped into the EIA for offshore ornithology in Table 6.16 of the Scoping Report, NRW A advise that the following are also scoped in at this stage:

- Potential impacts from lighting (e.g., attraction, disorientation) during all phases (suggest this is also added to Table 8.2 for designated sites).
- Disturbance/displacement of birds due to vessel movements for maintenance of the MOS and offshore export cable (suggest this is also added to Table 8.2 for offshore ornithology).

6.5.12 Direct impact of noise/disturbance is scoped out during the operational phase, however, JNCC have stated that without any detail at this stage regarding the operation and maintenance vessel activity predicted, that disturbance is scoped in during the operational phase.

6.5.13 NRW A note that there may be potential for attraction of birds to the MOS for roosting and drying out platforms (e.g., cormorants) or nesting (e.g., kittiwakes, herring gull). Although birds using the MOS for nesting/roosting may in future be at greater risk of collision from any future offshore wind projects located in the area within foraging range of the site.

6.5.14 NRW A and JNCC have stated that cumulative impacts should also be scoped in for marine ornithology in Table 6.16 of the Scoping Report. It was also noted that no detail is provided as to likely plans and projects to be included in cumulative/in-combination assessments, but welcome that you are committed to establishing the scope of cumulative effects assessments on a topic-by-topic basis with the relevant consultees as the EIA progresses, as stated in Section 4.6.5 of the Scoping Report.

6.5.15 NRW A advise that for the EIA and HRA, the newest version of the Welsh Marine Mammal and Bird Atlas data (Evans & Waggitt in prep) is used for at sea densities and distributions for informing assessments. You should therefore contact NRW A over the status of this report, and data and timescales for when this may be available for use.

6.5.16 NRW A welcome that coastal ornithology surveys are proposed of the cable landfall areas and that these will cover two years to detect interannual variation.

6.6 Marine Mammals and Marine Reptile Ecology

6.6.1 NRW A note here that you propose limiting the study area for marine mammals and reptiles to 100 km citing reasons such as foraging and migration. However, it is not clear how these

study areas were defined. Evidence for the 100 km radius needs to be presented and justified particularly given that, for instance, grey seal is known to have maximum foraging ranges of 448 km (Carter *et al.,* 2022).

6.6.2 NRW A do not agree with the rationale of using a study area for scoping of SACs, or for screening for the cumulative / in-combination assessment. The Annex II marine mammal SAC features are mobile and wide ranging. NRW A generally consider that the appropriate scale at which to consider offsite impacts for marine mammals is the relevant species-specific Marine Mammal Management Unit (MMMU) as outlined in the position statement (NRW, 2022). NRW A consider SACs within an MMMU to be 'functionally linked' to the surrounding sea because evidence demonstrates a degree of connectivity between SACs and the wider area, and because SACs represent special areas of sea within the MMMU (Chapman & Tyldesley 2016, NRW 2022). For some pathways, a different approach may also be relevant, however this depends on the weight of the evidence supporting that approach and should be considered on a case-by-case basis in consultation with NRW A.

6.6.3 NRW A agrees with the inclusion of harbour porpoise, bottlenose dolphin, short-beaked common dolphin, minke whale, grey seal, and leatherback turtle listed in table 6.7 of the Scoping Report. However, they recommend the inclusion of Risso's dolphin as opposed to humpback whale and fin whale, given the latter two species are vagrants in the area whereas sightings data over the past 30 years and density modelling shows hotspots for Risso's dolphin off the coast of Pembrokeshire and the Irish sea.

6.6.4 NRW A and JNCC acknowledges and agrees with the decision to include worst case scenario impact ranges for Unexploded Ordnance (UXO) clearance in an appendix within the project ES and this should be scoped in the EIA. Please be aware that the SNCB/DEFRA joint statement on UXO clearance, where a preference was indicated for use of low order alternatives to high order detonation as the primary method of clearance, NRW A would also recommend inclusion of a realistic low order scenario.

6.6.5 NRW A have also requested clarity as to whether the Marine Mammal Mitigation Protocol (MMMP) will also cover the effects of disturbance. This should be discussed with them directly.

6.6.6 NRW A recommends scoping in dredging and any other methods of seabed preparation as a source of underwater noise.

6.6.7 NRW A acknowledges and agrees with the decision to follow the Southall *et al.* (2019), and Popper *et al.* (2014) guidelines. However, no details on the intended method for assessing behavioural disturbance have been provided and should be included as part of the ES.

6.6.8 NE may assess noise pressures differently to NRW. NE requires that developments within a 26km radius of the sites designated for harbour porpoise should have a Marine Mammal Monitoring Plan (MMMP) or Site Integrity Plan for Noise. The inclusion of this Plan has been mentioned in the report and should be precautionary enough to demonstrate the requirements for each SNCB.

6.6.9 For assessing noise pressures on harbour porpoise, NE direct developers to Guidance for assessing the significance of noise disturbance against Conservation Objectives of harbour porpoise SACs (England, Wales & Northern Ireland) (jncc.gov.uk).

6.6.10 As Bristol Channel Approaches SAC is less than 26km away from the Project Area, NE requests that a Marine Mitigation Monitoring Plan or Site Integrity Plan for Noise is submitted to support the ES. The guidance for which can be found here: Phase III Best Practice for Data Analysis and Presentation at Examination, Version 1.2, August 2022.pdf (sharepoint.com) (Chapter 6.4).

6.6.11 JNCC agree with the list of data and information sources for marine mammals in section 6.4.1 of the Scoping Report but please note that SCANS IV data should be published in Q3 or Q4 2023. If available at the time of producing the ES, this data should be used as it supersedes SCANS III data.

7 Human environment

7.1 Archaeology and Cultural Heritage

7.1.1 WAT have stated that Archaeology and Cultural Heritage has been appropriately assessed and that the Scoping Report outlines potential impacts on the historic environment (both onshore and offshore) during the construction, operational and decommissioning phases of the scheme; potential mitigation measures; and data collection for the Environmental Assessment.

7.1.2 WAT are satisfied that both the proposed study area and the outlined scope of the ES is sufficient in addressing the potential impact of the scheme on the historic environment. However, in addition they recommend that this assessment should be undertaken in accordance with the standards and guidance of the Chartered Institute for Archaeologists (CIfA).

7.1.3 RCAHMW also agree that Archaeology and Cultural Heritage has been appropriately assessed, however they have stated that Section 7.5.5 - Enhancement of knowledge in relation to Historic Assets (WNMP Policy Soc_5) located during any geotechnical/geophysical survey work can be achieved through the archiving of spatial datasets relating to any located historic assets within the NMRW via the RCAHMW. This need not be the entire survey, simply the area of seabed contained within any subsequent Archaeological Exclusion Zone (AEZs). The same comment can be applied for monitoring survey data collected across any AEZs across the wider lifespan of the scheme.

7.1.4 Scope and detail of archaeological assessments and surveys should also include RCAHMW alongside with Cadw, in their role as statutory consultee and curator for the inshore and offshore zones of the WNMP.

7.2 Shipping and Navigation

7.2.1 The development area carries a moderate amount of traffic with several important commercial shipping routes to/from UK ports, particularly large oil and gas tankers to and from the Milford Haven Port. Attention needs to be paid to routing, so that vessels can continue to make safe passage without large-scale deviations.

7.2.2 There are vessel waiting for berths and loitering around the port limits either on slow speed or with engines stopped. MCA have noted that the project area depicted in images within the scoping report covers the approaches to Milford Haven and are of the assumption that there will not be any developments within the approach area. However, it is important to factor in

all navigationally relevant information into the Navigational Risk Assessment (NRA) and Shipping and Navigation chapter of the ES.

7.2.3 The likely cumulative and in combination effects on shipping routes should be considered which will be an important issue going forward. The proximity to other windfarm developments specifically to the Llyr 1 and 2 projects, Erebus, Valorous and the proposed crown estate Celtic Sea Floating offshore wind search areas should be considered. Cumulative effects of these projects and the proposed development and their in-combination effect on safe navigable sea room should be assessed. Attention must be paid to ensure the established shipping routes within the area can continue safely without unacceptable deviations.

7.2.4 It is noted that an NRA will be submitted in accordance with MGN 654, however MCA have state that this should be accompanied by a detailed MGN 654 Checklist which can be found at: https://www.gov.uk/guidance/offshore-renewable-energy-installations-impact-on-shipping

7.2.5 MCA have advised that a full vessel traffic survey should be undertaken to the standard of MGN 654.The surveys should consist of a minimum of 28 days of seasonal data (two x 14-day surveys) collected from a vessel-based survey using AIS, radar and visual observations to capture all vessels navigating in the study area. MCA would also expect the details of these consultations to be included within the NRA.

7.2.6 MCA have stated that for all OREI developments, subject to the planning process, the traffic survey must be undertaken within 24 months prior to submission of the DCO application. If the EIA Report is not submitted within 24 months an additional 14-day continuation survey data may be required for each subsequent 12-month period. Should there be a break in the continuation surveys, a new full traffic survey may be required, and the time period starts from the completion of the initial 28-day survey period.

7.2.7 The proposed development should not be a risk to surface vessels, including rescue boats, and Search and Rescue (SAR) aircraft operating within the site. Any additional navigation safety and/or Search and Rescue requirements, as per MGN 654 Annex 5, will be agreed at the approval stage.

7.2.8 Attention should be paid to cabling routes and where appropriate burial depth for which a Burial Protection Index study should be completed and subject to the traffic volumes, an anchor penetration study may be necessary. If cable protection measures are required (e.g., rock bags or concrete mattresses), the MCA would be willing to accept a 5% reduction in surrounding depths referenced to Chart Datum. This will be particularly relevant where depths are decreasing towards shore and potential impacts on navigable water increase, such as at the HDD location.

7.2.9 Consideration will need to be given to the implications of the site size and location on SAR resources and Emergency Response Co-operation Plans (ERCoP). The report must recognise the level of radar surveillance, AIS and shore-based VHF radio coverage and give due consideration for appropriate mitigation such as radar, AIS receivers and in-field, Marine Band VHF radio communications aerial(s) (VHF voice with Digital Selective Calling (DSC)) that can cover the entire sites and their surrounding areas. A SAR checklist will also need to be completed in consultation with MCA, as per MGN 654 Annex 5 SAR requirements.

7.2.10 MGN 654 Annex 4 requires that hydrographic surveys should fulfil the requirements of the International Hydrographic Organisation (IHO) Order 1a standard, with the final data supplied as a digital full density data set, and survey report to the MCA Hydrography Manager. Failure to report the survey or conduct it to Order 1a might invalidate the NRA if it was deemed not fit for purpose.

7.3 Coastal and Marine Infrastructure and Other Users / Land Use

7.3.1 The MoD have stated that are not able to fully assess the MOS and the Onshore Cable Routes as the not all location co-ordinates have been provided. However, they have stated that for the MOS, the south-west corner of the PDZ would be preferred. When preferred onshore cable routes are developed, you are strongly encouraged to engage with the MoD directly.

7.3.2 From the information provided and the location co-ordinates supplied, MoD have advised the following:

- The PDZ (Corner Points) – As stated, the proposed works falls within Danger Area D113A (Castlemartin). The works will also take place in blocks that contain highly surveyed routes retained by the MoD to support national defence requirements.
- Project Area Corner Points – Some of the proposed works fall within a Site Outside a Safeguarding Area (including Pembroke Dock) but also falls within Danger Area D115B (Manorbier) and blocks that contain highly surveyed routes retained by the MoD to support national defence requirements.
- Landfall Site Options:
  - Freshwater West - Falls within a Site Outside a Safeguarding Area
  - Bullslaughter Bay – Falls within Danger Area D113B (Castlemartin)
  - New Quay Beach - Falls within Danger Area D113B (Castlemartin)
  - Broadhaven South – Falls within a Site Outside a Safeguarding Area
  - Greenala Point – Falls within a Site Outside a Safeguarding Area
  - Freshwater East – Falls within a Site Outside a Safeguarding Area
  - Pembroke Power Station Grid Supply Point – Falls within a Site Outside a Safeguarding Area
  - Preferred Offshore Cable Route Corner Points (Avoidable Area) – Proposed works fall within Danger Area D113A (Castlemartin), Danger Area D113B (Castlemartin) and Danger Area D115B (Manorbier).

7.3.3 As the project progresses and locations are finalised for both onshore and offshore areas, precise location co-ordinates should be provided to allow the MoD to fully assess, refer to our respective Subject Matter Experts as required and provide the definitive MoD advice.

7.4 Landscape, Seascape and Visual Impacts

7.4.1 It is planned that the number of landfall options will be reduced through an on-going constraints analysis. It is not stated whether or not landscape and visual impacts on the PCNP are to be considered in the constraints analysis. NRW PS strongly recommened you engage with NRW A on landscape and visual impacts on the PCNP.

7.4.2 Scottish Natural Heritage (SNH) guidance recommends a 15 km radius study area for wind turbines of comparable height to the proposed MOS. Therefore 15 km from the periphery of the PDZ is being recommended in the Scoping Report. It is noted that no part of the PDZ is within 15 km from the coast. This implies that there will be no landscape or visual assessment

of the impacts of the MOS on the coastline or any other parts of the NP. This has not been addressed in the Scoping Report. The study area for offshore elements should be increased to encompass the coastline and inland areas of the National Park between Freshwater East and St. Ann's Head.

7.4.3 As the landfall interface structures will be low, a 2 km study area is being proposed for each proposed landfall site. NRW A consider this study area appropriate for the size of proposed development.

7.4.4 The Study Area should include the export cable between the landfall sites and Pembroke Power Station.

7.4.5 NRW A have noted that Scheduled Monuments have been included as baseline information in Section 7.5 Archaeology and Heritage of the Scoping Report, but that Conservation Areas, Heritage Coast, Registered Landscapes of Outstanding Special Historic Interest, and Registered Parks and Gardens have not been included in Section 7.5 of the Report. Although it is considered that these designations are of relevance to landscape character, visual amenity and special qualities, NRW A raised concerns that they are not also included in the Archaeology and Heritage section for assessment of their heritage values.

7.4.6 As all of the Castlemartin peninsula is within the setting of the Pembrokeshire Coastal National Park (PCNP), NRW A consider that the whole export cable route requires assessment in relation to impacts on the landscape character, visual amenity and special qualities of the PCNP at an early stage.

7.4.7 Table 7.14 of the Scoping Report sets out all the potential impacts on the above lists of offshore and onshore receptors for construction, operational and decommissioning stages. Consideration of physical disruption to visitor access to, and enjoyment of the PCNP does not appear to relate to any of the Sections of the Scoping Opinion - Land Uses, Traffic and Transport, and Tourism. Cable routing and transporting of large loads in particular have the potential to restrict road and Public Rights of Way (PRoW) access during construction, plus physical impact on narrow roads and adjacent hedge banks which are important features in the landscape character and should be assessed within the ES.

7.4.8 Table 7.15 of the Scoping Report does not distinguish visual amenity within the PCNP and its setting (non-PCNP) and should be assessed within the ES.

7.4.9 Section 7.8 of the Scoping Report does not address the methodology relating to landscape and visual assessment (although a general Assessment Methodology for all aspects of the ES is described in 4.6) and should be assessed within the ES.

7.4.10 NRW A have advised that the potential mitigations proposed are considered appropriate, however these should be addressed at an early stage during design of the proposals.

7.4.11 The Scoping Report notes that Zone of Theoretical Visibility (ZTV) mapping will refine the study area(s). It does not address how representative viewpoints are to be identified. This needs to be addressed and considered within the ES.

7.4.12 Viewpoints relating to the landfall and onshore proposals are not mentioned in the Scoping Report and should be assessed within the ES. NRW A would welcome discussion in order to agree appropriate viewpoints for the project proposals.

8 Cumulative impacts and in-combination effects

8.1 It will be important for any assessment to consider the potential cumulative effects of this proposal, including all supporting infrastructure, with other similar proposals and a thorough assessment of the 'in combination' effects of the proposed development with any existing developments and current applications. A full consideration of the implications of the whole scheme should be included in the ES. All supporting infrastructure and activities should be included within the assessment.

8.2 The following types of projects should be included in such an assessment (subject to available information):

- existing completed projects
- approved but uncompleted projects
- ongoing activities
- plans or projects for which an application has been made and which are under consideration by the consenting authorities; and
- plans and projects which are reasonably foreseeable, i.e., projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative and in-combination effects.

8.3 Numerous comments relating to cumulative impacts and in-combination effects have been detailed throughout the Scoping Opinion and are included in chapters 4, 6 and 7 above.

8.4 The ES must include an assessment of cumulative and in-combination effects.

8.5 The following data sources may provide useful information on other projects for the assessment of cumulative effects:

- The Nationally Significant Infrastructure Projects register: https://infrastructure.planninginspectorate.gov.uk/projects/register-of-applications/
- The Developments of National Significance Register: http://gov.wales/docs/desh/publications/180312-dns-register-en.pdf
- Planning Policy e.g., Local Development Plans, Transport Plans (National and Local) and National Policy Statements.
- An up-to-date list of marine licensable developments can be found at the following link: http://lle.gov.wales/catalogue/item/MarineLicences

8.6 NE's best practice advice on the environmental considerations and use of data and evidence to support offshore wind and cable projects in English waters contains a tiered system that can be used to inform the level of data available to use within cumulative impact assessments for projects at different stages of development. Found here: Phase III Best Practice for Data Analysis and Presentation at Examination, Version 1.2, August 2022.pdf (sharepoint.com) (Chapter 11.1). This can be used to determine which projects should be included in cumulative assessments.

8.7 It is the developer's responsibility to use an appropriate level of effort to find other plans and projects occurring in the Celtic Sea for this assessment. The MMO public register for Marine Licence applications (Marine case management system - Public register - MCMS (marinemanagement.org.uk)) can be used to look for any plans or proposals going through the MMO.

9 Summary

9.1.1 To ensure all permits/consents/licences relevant to the proposed project are secured. Please view NRWs website here.

Yours sincerely

Joe Thomas

Marine Licensing Team
Natural Resources Wales

Approved by:

Dr. Emmer Litt

Marine Licensing Team Leader

Natural Resources Wales