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Morlais Project

Document MOR/RHDHV/DOC/0074: Outline Landscape Management Plan

Applicant: Menter Môn Morlais Limited

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TABLE OF CONTENTS

GLOSSARY OF ABBREVIATIONS

ECC	Export Cable Corridor
EIA	Environmental Impact Assessment
ES	Environmental Statement
HDD	Horizontal Directional Drilling
IoACC	Isle of Anglesey County Council
LMP	Landscape Management Plan
LPA	Local Planning Authority
MDZ	Morlais Demonstration Zone
ML	Marine Licence
MLWS	Mean Low Water Springs
NRW	Natural Resources Wales
ODA	Onshore Development Area
OLMP	Outline Landscape Management Plan
PDE	Project Design Envelope
SLVIA	Seascape and Landscape Visual Impact Assessment
SoCG	Statement of Common Ground
TWAO	Transport and Works Act Order
TWG	Technical Working Group
WG	Welsh Government

1. INTRODUCTION

1.1. BACKGROUND

1. Menter Môn Morlais Limited ('the Applicant', hereafter referred to as Menter Môn) is seeking a Transport and Works Act Order (TWAO) and Marine Licence (ML) for the Morlais Project (hereafter 'the Project').

2. Menter Môn recognises that the provision of an outline Landscape Management Plan (LMP), as part of the Environmental Statement (ES) submission, adds value to the ES and demonstrates consideration of the links between the findings of the ES, works anticipated to be required to construct and operate the Project and potential consent conditions.

3. This document seeks to set out a framework for an LMP for the Project, and the mitigation proposed to manage seascape and landscape impacts associated with offshore and onshore works.

4. Construction of the Project is anticipated to begin between 2021 for onshore works and 2023 for offshore works.

5. The Project is described in **Chapter 4, Project Description** of the ES. In summary, the Project consists of three distinct areas within which components of the Project will be installed, as follows:

    - The Morlais Development Zone (MDZ), within which arrays of tidal devices and associated infrastructure such as foundations, array hubs, inter array cables, cable protection and other associated infrastructure will be deployed.
    - The Export Cable Corridor (ECC), within which up to nine export cables and associated cable protection will be laid. The ECC also includes the intertidal area, where the export cables will make landfall via either horizontal directional drilling (HDD) or trenching.
    - The Onshore Development Area (ODA) shares the export cable landfall with the ECC, with export cables then passing to a landfall substation, and from there via an onshore cable route to a grid substation and connection to grid.

6. The Project will install tidal devices in phases up to a potential maximum installed capacity of 240 MW.

1.2. ONSHORE PROJECT COMPONENTS

7. Works within the ODA from the landfall (at Mean Low Water Springs (MLWS)) to the connection of transmission infrastructure at the Grid Connection Substation, and at the Switchgear Building, are defined to include:

    - Landfall works, including:
        - Up to nine Horizontal Directional Drilling (HDD) ducts or trenched equivalents
        - Up to nine transition pits or bays
        - Up to nine export cable tails (shared with offshore components);

- Landfall Substation at Ty-Mawr;
- Substation Building at Parc Cybi;
- Onshore cable route joint bays (along onshore cable route between landfall substation and grid connection substation);
- Onshore cable circuits installed between landfall and grid connection substation; and
- Grid Connection Substation at Orthios.

8. The offshore project components will be constructed in a series of stages to achieve final 240 MW installed capacity. The onshore works will reflect this as follows:

- Cable ducts would be installed together regardless of the offshore phasing;
- Cable pull through would be done in phases depending on the commissioning of tidal arrays in the MDZ;
- Landfall and Grid Substations, and the Switchgear Building ground preparation and construction works will be done in one phase; and
- The required electrical infrastructure and plant within the Landfall and Grid Substations, and the Switchgear Building will then be installed as required for each phase of offshore construction.

1.3. OFFSHORE PROJECT COMPONENTS

9. The key components of the offshore works associated with the Project are detailed in **Chapter 4, Project Description** and include:

- Tidal devices deployed in multiple arrays within the MDZ, to a maximum installed capacity of 240 MW;
- Each single array will be comprised of the same type of tidal device (technology type) and located within a discrete berth within the MDZ, with proposed installed capacity per array of 30 MW;
- For deployment of arrays, the MDZ may be spilt into a series of sub-zones, with eight indicative sub-zones are proposed within the MDZ. Water depths and tidal resource vary across the MDZ (average depth across the MDZ is approximately 40 m), and the sub-zones are likely to be located in areas of stronger tidal resource, while offering a range of depth parameters.
- Potential for a number of phases of deployment to the maximum capacity of 240 MW and a first phase of deployment to a maximum of 40 MW;
- Up to a maximum of 620 Tidal Devices within the MDZ;
- Up to 1,648 Tidal Energy Converters (TEC) within the MDZ;
- Up to 740 inter-array cables within the MDZ;
- Up to nine export cables;
- Up to nine export cable tails (shared with onshore components);
- Navigation and environmental monitoring equipment;

- Mooring and foundation structures; and
- Offshore electrical infrastructure, including submerged, floating or surface emergent hubs.

1.4. PURPOSE OF THIS DOCUMENT

10. Chapter 24 of the ES (**Chapter 24, Seascape, Landscape and Visual Impact Assessment**, SLVIA) details the full assessment undertaken and the rationale for mitigation proposed.

11. This Outline Landscape Management Plan (OLMP) forms part of a set of documents that support the TWAO and ML applications submitted by the Applicant to Welsh Government (WG) and Natural Resources Wales (NRW).

12. This OLMP is provided in support of the TWAO and ML applications to demonstrate the linkages between the impact assessment for the Project (in particular the SLVIA as detailed in **Chapter 24** of the ES).

13. A final detailed LMP will be produced prior to construction of the Project, based on the content of this OLMP and post application consent conditions.

14. SLVIA scoping was carried out in October 2018 as part of the formal scoping exercise described in ES **Chapter 6, Consultation**. In addition, considerable consultation took place with IoACC and NRW during the preparation of the SLVIA. This has taken place through three specific technical working group (TWG) meetings that have focussed on the issues associated with the SLVIA, including the scope of the assessment and the project design envelope (PDE).

15. The development of a statement of common ground (SoCG) through the TWG has been used for the discussion and management of key SLVIA issues, with technical experts from IoACC, NRW and the Applicant, supported by landscape architects.

16. It is proposed that the TWG approach is maintained post application and that discussion of the SoCG is used as the main mechanism for agreement of mitigation for any SLVIA impacts the management of which remains to be agreed.

2. EMBEDDED LANDSCAPE MITIGATION

17. The Applicant has made a decision on a number of techniques and engineering designs/modifications during the pre-application phase, in order to reduce and mitigate landscape as far as possible. Embedding mitigation into the project design is a type of primary mitigation and is an inherent aspect of the EIA process.

18. The following embedded mitigation measures are project commitments and are outlined here to ensure that they are captured and that their delivery is secured.

2.1.1. Offshore Project Components Visible from Land

19. No visually prominent devices will be placed in the northern third of the site, sub-zones 1, 2 and 3 (as detailed in the ES, **Chapter 4, Project Description**) to reduce potential landscape and

visual effects in relation to seascape/landscape and visual receptors to the north west of Holyhead Mountain.

20. No visually prominent devices will be placed in northern parts of sub-zones 4 and 8 (as detailed in the ES, **Chapter 4, Project Description**), for the same reasons as the point above.

21. A minimum separation distance of 1 km will be applied from the coastline for visually prominent devices, helping to increase the separation distance between such structures from the coastline.

22. Surface emergent project components will be minimised elsewhere within sub-zones to help ensure the composition of offshore elements is as simple as possible.

23. Further consideration could be given to mitigation at the detailed design stage, such measures could include:

    - The colour of the tidal devices;
    - The navigational lighting that is required; and
    - The layout configurations of tidal devices within arrays e.g. curved rows of devices or irregular placement.

2.1.2. Landfall Substation

24. Selecting a recessive location in the landscape, in a relatively low-lying position and using the landform to help integrate the landfall substation (cutting into the valley side rather than building a platform out).

25. Arrangement of plant and equipment within three buildings, resulting in a collection of buildings that break up the scale of the development and create a form and massing that is comparable with local agricultural buildings.

26. Using colours and materials (including natural materials) that are consistent with the vernacular associated with agricultural buildings and are recessive in the local context.

27. Using the buildings to define the boundaries of the landfall substation, reducing the requirement for security fencing.

28. Using stone walls and stock proof fencing as part of new boundaries.

29. Minimising the use of external lighting in this rural location.

30. Considering limited application of planting to help integrate the landfall substation, acknowledging the limitations associated with this in the open and exposed coastal landscape.

2.1.3. Grid Connection Substation

31. Positioning of the Grid Connection Substation in a location where industrial structures form an established part of the baseline context, and where established vegetation surrounding the site provides effective visual enclosure.

2.1.4. Switchgear Building

32. Positioning of the Switchgear Building within an allocated employment site, adjacent to an existing substation and where surrounding development will be comparable in form, massing and appearance.

2.1.5. Onshore Cable Corridor

33. Use of underground cabling to provide the connections between all Project elements, avoiding the need for overhead cables.

34. Routing the underground cable within the local road corridors to minimise potential disruption to field boundaries.

2.1.6. Across the Onshore Development area

35. Further consideration could be given to mitigation at the detailed design stage, such measures could include:

- Detailed design and materials selection for the substations;
- Planting proposals around the substation sites; and
- Detailed agreements over the types/design of field boundaries to be instated following the construction phase e.g. stone walls, cloddiau (hedge banks) or hedgerows.

3. ADDITIONAL MITIGATION

36. The Project has been designed to undertake the majority of mitigation for SLVIA impacts as embedded mitigation, as detailed above.

37. With the implementation of the embedded mitigation prosed, the additional mitigation required will be limited to the reinstatement of the ground and landscape features within the ODA following construction.