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Morlais Project

Non-Technical Summary and ES Chapter 27 Summary Addendum

Applicant: Menter Môn Morlais Limited

Document Reference: MOR-RHDHV-DOC-0131

Non-Technical Summary

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1. INTRODUCTION

1. Menter Môn Morlais Limited ('the Applicant), is a not for profit social enterprise company developing the Morlais tidal array ('the Project') which will provide a generating capacity of up to 240 MW of tidal energy off the north west coast of Anglesey, within the Morlais Demonstration Zone (MDZ).

2. An application was submitted for the Project in September 2019 for the following consents:
   - A Transport and Works Act Order under the Transport and Works Act 1992; and
   - A Marine Licence under the Marine and Coastal Access Act 2009 (MCAA).

3. Since submission of the application, the Applicant has reviewed stakeholder and public feedback, engaged in ongoing consultation with stakeholders and worked to develop mitigation measures where possible.

4. On the 27th March 2020, Further Environmental Information was submitted by the Applicant in response to the stakeholder feedback which is available on the Planning Inspectorate Website (click link).

5. On the 16th April Natural Resources Wales (NRW) submitted a request to Menter Môn for further information on the project, including:

   "As detailed in our letter of 02 March 2020, it is essential that, where appropriate, changes made to your Environmental Statement (ES) and supporting marine licence application documents are reflected in the Non-Technical Summary (NTS) and the ES summary chapter (Chapter 27). These changes should reflect the recommendations and requirements made by NRW and other consultees, as appropriate."

6. This document provides updates to the NTS and Chapter 27 of the ES following the additional work undertaken on the project.

2. PROJECT DESIGN REFINEMENTS

7. The following sections outline the design development and refinements since the ES was submitted. These changes will be secured through amendments to the draft Transport and Work Act Order and draft deemed planning conditions that will be submitted at an appropriate stage in the determination process.

2.1. OFFSHORE PROJECT DESIGN ENVELOPE REFINEMENTS

2.1.1. Phasing

8. An adaptive management approach is being adopted for the Project, whereby a first phase of devices will be deployed and monitored prior to the deployment of further devices. The scale of the first phase will be subject to review post consent depending on the device type(s) proposed to be deployed.

9. This approach aims to mitigate collision risk for marine mammals and birds by allowing the effects of a small array to be monitored before the full scale project is deployed. The adaptive management approach will be secured through a consent condition, such that no tidal devices may be constructed or repowered until a Detailed Environmental Management and Monitoring Plan (EMMP) is agreed with NRW, supported by an Advisory group of relevant stakeholders. The EMMP is intended to prevent injury of marine mammals and diving birds during the operation of the tidal devices by demonstrating how the potential effects of the project on marine mammals (and marine ornithology) can be mitigated, monitored and managed. An Outline EMMP (document MOR/RHDHV/DOC/0072) was submitted with the application and a revised version was submitted on 3rd July 2020. The EMMP will be further developed post consent as the project develops, based on the latest information, project requirements and details, as well as latest research and guidance.

2.1.2. Lighting and Marking

10. Post application consultation has been undertaken with Trinity House, recognising that marine safety is a paramount consideration. The outcome of the consultation is that the colouring on the tidal devices and offshore operational hubs can be altered and the lighting requirement can be reduced compared with those included in the ES in order to reduce the visual impacts of the project.

11. Colouring can be altered to minimise the use of yellow. Trinity House require yellow marking at both ends of all tidal devices, noting that the length of the tidal devices could be up to circa 70m in length, to ensure navigation safety. For this reason, the Applicant can commit to marking the ends of each of the tidal devices yellow, or a band 5m high on offshore operational hubs. The extent of the yellow marking would depend on the design of the devices and would comprise a 5m band at the ends of each tidal device. The remainder of the devices would be coloured grey rather than yellow to reduce the visual impact.

12. Through consultation with Trinity House it has also been possible to reduce the navigation lighting requirements compared with the Project Design Envelope assumptions applied in the ES. This would mean that navigational and marker buoys and floating or surface emergent tidal devices can use lights that are limited in visibility. On the inshore side of the Marine Development Zone (MDZ) the markers can use lighting which is visible for only 2 nautical miles (nm). The offshore side of the MDZ would have lighting which is visible for 5nm. In addition, the tidal devices themselves only need to have identification lighting with a visibility of 150m, therefore significantly reducing the range of visual impacts at night.

13. Further information is included in the Seascape Landscape and Visual Impact Assessment response submitted on 27th March 2020 (document no. MOR/SLR/DOC/0001), which includes revised photomontages.

2.1.3. Offshore export cable installation

14. As a result of ongoing consultation with NRW, the Applicant has committed to routing cables to avoid the South Stack sand bank feature in order to ensure there will be no impact on its function as part of the coastal processes system. This is discussed further in the Metocean and Physical

Processes ES Supplementary Note (document no. MOR/RHDHV/DOC/0111) submitted on 27th March 2020.

2.1.4. Marine Development Zone subzones

15. As presented in the ES, the MDZ has been provisionally divided into eight subzones within which certain device types can be deployed. The aim has been to identify locations for each device type that will be environmentally acceptable whilst also being technically and financially achievable.

16. Through consultation with shipping stakeholders, further mitigation has been proposed to adjust the western boundary of the area where only submerged tidal devices with a minimum under keel clearance (UKC) of 8m can be deployed, thereby increasing the area available for passage for small vessels and reducing the extent of visually prominent tidal devices and increasing their distance from shore.

17. This change is reflected in the updated Figures 4.1 to 4.5 provided in document no. MOR/RHDHV/DOC/0108 submitted on the 27th March 2020.

2.2. ONSHORE PROJECT DESIGN ENVELOPE REFINEMENTS

2.2.1. Landfall cable installation

18. As presented in the ES, landfall will be located within the bay on the western coast of Holy Island known as Abraham's Bosom. There are two main methods which could be used for cable installation at landfall; Open cut trenching, or Horizontal Directional Drilling (HDD).

19. Since the ES was submitted, significant work has been undertaken by the Applicant to reduce the footprint of works associated with landfall cable trenching and to refine the areas that will be used in order to mitigate effects on the features of the Holy Island Coast Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Special Area of Conservation (SAC).

20. HDD is the preferred option to achieve landfall which would minimise impacts on the designated sites. However, should HDD not be possible at the landfall, a secondary option would incorporate trenching the cables across fields and pinning them down the cliffs. This option was presented in the ES and will only be deployed if the preferred HDD method is not achievable for engineering reasons. After feedback from NRW and RSPB, engineering approaches have been considered in more detail and considerable additional mitigation through design has been proposed. Consideration has been made to refine the design and reduce potential impacts within the designated site and the designated features where possible through the following measures:

- Micrositing: The location of landfall has now been identified to be within a very narrow band of the SAC to minimise the footprint on the designated habitat. At this location, the SAC is limited to the cliff face and does not include the grassland at the top of the cliff. A survey of the cliff habitat has been undertaken to further inform micrositing of the potential route down the cliff.
- Avoidance: The width of the working corridor has been considered and reduced upon sensitive habitats where possible, including a reduction of the working corridor within the SAC itself from 30m with up to 30m working width either side (a total of 90m wide

potential impact width), to 7m with 2m working width either side (a total of 11m wide potential impact width). This is a reduction of 88% on the original project footprint assessed in the ES. All wet and dry heath habitat has also already been avoided in the creation of the original Onshore Development Area presented in the ES.

- Methodology: Previous methodology included the option for slots to be cut into the cliff-face, in which the J-tubes would be inserted. To minimise damage to the SAC, it is now proposed to drill the J-tubes to the cliff using bolt anchors, allowing the J-tubes to sit approximately 400mm away from the face of the cliff.

21. The details of these changes and the revised impacts on terrestrial ecology are provided in document no. MOR/RHDHV/DOC/0110, submitted on 27th March 2020.

2.2.2. Traffic

22. It has been identified by the Applicant that there could be a requirement for additional export of spoil during construction of the landfall substation, resulting in an additional 24 two-way HGV movements per day.

23. Where possible excavated material would be reused at the landfall substation for various earthworks activities and therefore not be exported offsite. This change therefore represents consideration of a worst case scenario.

3. TOPICS CONSIDERED IN THE ENVIRONMENTAL IMPACT ASSESSMENT

3.1. CHAPTER 7: METOCEAN CONDITIONS AND COASTAL PROCESSES

24. As discussed in Section 2.1.3, the Applicant has committed to routing cables to avoid the South Stack sand bank feature in order to ensure there will be no impact on its function as part of the coastal processes system. This is discussed further in the Metocean and Physical Processes ES Supplementary Note (document no. MOR/RHDHV/DOC/0111) submitted on 27th March 2020.

25. In addition, following the submission of the ES numerical modelling has been undertaken by HR Wallingford to provide further evidence to support the assessment. The modelling report was submitted on the 27th March (document reference MOR-HRW-DOC-0001). The modelling results were assessed in relation to the original assessment and the conclusions are presented in a supplementary note, also submitted on 27th March (document reference MOR-RHDHV-DOC-0112). The modelling results support the assessment presented within the ES and as such the conclusions of the ES have not changed, the effects of the project on coastal processes are predicted to be small scale, localised and temporary.

26. As discussed above, there are no changes to the conclusions of the ES, therefore the ES summary remains as presented in ES Chapter 27.

3.2. CHAPTER 8: MARINE WATER AND SEDIMENT QUALITY

27. The refined project design does not alter the conclusions of this ES chapter, therefore there is no change to the information provided in the NTS and Chapter 27.

3.3. CHAPTER 9: BENTHIC AND INTERTIDAL ECOLOGY

28. The refined project design does not alter the conclusions of this ES chapter, therefore there is no change to the information provided in the NTS and Chapter 27.

3.4. CHAPTER 10: FISH AND SHELLFISH ECOLOGY

29. The refined project design does not alter the conclusions of this ES chapter, therefore there is no change to the information provided in the NTS and Chapter 27.

3.5. CHAPTER 11: MARINE ORNITHOLOGY

30. In order to mitigate potential impacts to marine ornithology, further work on the phased approach to installation has been undertaken since the submission of the ES, including updated collision risk modelling to show the impact of a smaller initial phase of deployment on marine bird species. This is presented in supplementary note MOR-RHDHV-DOC-0115 submitted on 27th March 2020. The first phase shall install a number of devices at which no significant impact to species is predicted and is based on the additional collision risk modelling undertaken for marine mammals (discussed below). The results show that the impacts of this initial phase are reduced to have no significant impact to marine bird species and will give the opportunity to monitor and collect data to better inform the potential impact of subsequent phase deployments as discussed in Section 2.1.1.

31. Section 4, provides a summary of the assessment presented in the supplementary note (document MOR-RHDHV-DOC-0115).

3.6. CHAPTER 12: MARINE MAMMALS

3.6.1. Underwater Noise

32. Following the submission of the ES, underwater noise modelling has been undertaken (document MOR/RHDHV/DOC/0116) to further inform the assessment of potential impacts to marine mammals. This assessment is presented in supplementary note MOR-RHDHV-DOC-0117. The findings of the modelling assessment on construction and operational noise sources support the findings of the assessment within the ES with the impacts assessed as negligible/low risk for all species. There were also no changes identified to the assessments in the Habitats Regulations Assessment.

33. As the underwater noise modelling confirmed the findings of the ES, there are no changes to the summary of the underwater noise assessment, and this remains as presented in ES Chapter 27.

3.6.2. Collision risk

34. Additional collision risk modelling for marine mammals was also undertaken and is presented in supplementary note MOR-RHDHV-DOC-0118. As with Marine Ornithology, this presents further assessment of the collision risk associated with a smaller initial deployment phase, determining the deployment which would impact less than 0.7 bottlenose dolphin per year, and updated the modelling for all species to take into account a possible scenario of 620 devices.

The collision risk model concluded that in order to impact less than 0.7 bottlenose dolphin the first phase would have a maximum output of 12MW or comprise a maximum of 28 devices subject to the type of device. The assessment of a 620-device scenario shows that the impact on marine mammals is the same as for the maximum 240MW scenario presented in the ES.

35. Further monitoring and mitigation options for marine mammals were also provided (document MOR-RHDHV-DOC-0119) to inform the ongoing development of the EMMP as discussed in Section 2.1.1.

36. Section 4, provides a summary of the updated collision risk assessment presented in the supplementary note (document MOR-RHDHV-DOC-0118).

3.7. CHAPTER 13: OFFSHORE ARCHAEOLOGY AND CULTURAL HERITAGE

37. The refined project design does not alter the conclusions of this ES chapter, therefore there is no change to the information provided in the NTS and Chapter 27.

3.8. CHAPTER 14: COMMERCIAL FISHERIES

38. The refined project design does not alter the conclusions of this ES chapter, therefore there is no change to the information provided in the NTS and Chapter 27.

3.9. CHAPTER 15: SHIPPING AND NAVIGATION

39. As discussed in Section 2.1.4, the area where only submerged tidal devices with a minimum under keel clearance (UKC) of 8m can be deployed has been revised, thereby increasing the area available for passage for small vessels. This change is reflected in the updated ES Volume II Chapter 4 Figures (Figures 4.1 to 4.5) submitted on 27 March 2020.

3.10. CHAPTER 16: MARINE INFRASTRUCTURE AND OTHER USERS

40. The refined project design does not alter the conclusions of this ES chapter, therefore there is no change to the information provided in the NTS and Chapter 27.

3.11. CHAPTER 17: WATER RESOURCES AND FLOOD RISK

41. The refined project design does not alter the conclusions of this ES chapter, therefore there is no change to the information provided in the NTS and Chapter 27.

3.12. CHAPTER 18: GROUND CONDITIONS AND CONTAMINATION

42. The refined project design does not alter the conclusions of this ES chapter, therefore there is no change to the information provided in the NTS and Chapter 27.

3.13. CHAPTER 19: ONSHORE ECOLOGY

43. Since the submission of the ES further clarification has been provided on the potential construction methodologies for the cable landfall and installation and the potential impacts on terrestrial ecology. This is presented in supplementary note MOR-RHDHV-DOC-0110. The preferred option, HDD, is assessed to have no significant impact on designated terrestrial

habitats during construction, operation or decommissioning activities, however additional mitigation is presented to further protect sensitive habitats. The secondary option of trenching is also assessed and, with mitigation, is concluded to have no significant effect on designated habitats. It is also concluded that an adverse effect on site integrity of the Glannau Ynys Gybi/Holy Island Coast SAC can be ruled out with mitigation. A survey of the cliff habitat within the proposed cable route was undertaken in June 2020 which has informed proposed micrositing of the cable route (if the trenching option is required) in order to minimise impacts on the features of the SAC.

3.14. CHAPTER 20: ONSHORE ARCHAEOLOGY AND CULTURAL HERITAGE

44. The refined project design does not alter the conclusions of this ES chapter, therefore there is no change to the information provided in the NTS and Chapter 27.

3.15. CHAPTER 21: NOISE AND VIBRATION

45. As discussed in Section 2.2.2, an additional 24 two-way HGV movements per day may be required as a worst case scenario. The Noise and Vibration consequences of this were considered in a traffic clarification note (document no. MOR/RHDHV/DOC/0109) which demonstrates that this would result in no changes to the conclusions of the ES.

46. As there are no changes to the conclusions of the ES, the ES summary remains as presented in ES Chapter 27.

3.16. CHAPTER 22: AIR QUALITY

47. As with noise, the air quality consequences of the additional HGV movements were considered in a traffic clarification note (document no. MOR/RHDHV/DOC/0109) which demonstrates that this would result in no changes to the conclusions of the ES.

48. As there are no changes to the conclusions of the ES, the ES summary remains as presented in ES Chapter 27.

3.17. CHAPTER 23: TRAFFIC AND TRANSPORT

49. As discussed in Section 2.2.2, an additional 24 two-way HGV movements per day may be required as a worst case scenario. A traffic clarification note was provided on 27th March 2020 (document no. MOR/RHDHV/DOC/0109) which demonstrates that this would result in no changes to the conclusions of the ES.

50. As there are no changes to the conclusions of the ES, the ES summary remains as presented in ES Chapter 27.

3.18. CHAPTER 24: SEASCAPE, LANDSCAPE AND VISUAL IMPACT

51. As discussed in Section 2.1.2 the Applicant has committed to additional mitigation in order to reduce visual impacts.

52. In light of this mitigation and in response to stakeholder comments, further information is provided in document no. MOR/SLR/DOC/0001, which is supported by revised photomontages.

53. The ES summary remains as presented in ES Chapter 27.

3.19. CHAPTER 25: SOCIO-ECONOMICS, TOURISM AND RECREATION

54. The refined project design does not alter the conclusions of this ES chapter, therefore there is no change to the information provided in the NTS and Chapter 27.

4. SUMMARY

55. The following tables provide addendums to the ES Summary provided in Chapter 27 where applicable.

4.1. MARINE ORNITHOLOGY

Impact	Receptor	Value/ Sensitivity	Magnitude	Significance	Additional Mitigation Measures	Residual Impact
Operational Phase						
Impact 6: Collision risk with tidal devices – Phase 1 (up to 12MW Worst Case, 95% avoidance rate)	Gannet	High/Medium	Negligible	Minor adverse	None	Minor adverse
	Guillemot		Medium	Minor adverse	Monitoring programme enabling use of higher avoidance rate, plus deploy, manage and monitor approach	
	Manx shearwater		Low	Minor adverse	None	
	Puffin					
	Razorbill		High	Minor adverse	Monitoring programme enabling use of higher avoidance rate, plus phased deployment	
	Red-throated diver	Medium/Medium	Low	Minor adverse	None	
	Shag		Negligible			

4.2. MARINE MAMMALS

Potential Impact	Receptor	Value / sensitivity combined	Magnitude	Significance	Additional Mitigation Measures	Residual Impact
Operational Phase						
Impact 8: Collision risk with Phase 1 operational turbines	Bottlenose dolphin	High	Medium	Major adverse	Deploy, manage and monitor approach	Minor adverse
	All other species	Low	Medium	Minor adverse		Minor adverse

4.3. ONSHORE ECOLOGY

Potential Impact	Receptor	Value	Magnitude	Significance	Additional Mitigation Measures	Residual Impact
Construction Phase						
Impact 1: Statutory designated nature conservation designated sites	Glannau Ynys Gybi / Holy Island Coast SSSI/SPA/SAC	High	Negligible	Minor adverse	Micrositing of cable route is secondary landfall option (trenching) is required	Minor adverse