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Morlais Project

Outline Habitat Enhancement Plan

Applicant: Menter Môn Morlais Limited

Document Reference: PB5034-OHEP

Document Title: Outline Habitat Enhancement Plan

Author: Royal HaskoningDHV

Morlais Document No.: MOR-RHDHV-DOC-0169 File No.: MMC578	Status: Live	Version No: D2.0	Date: Jan 2021

Revision History			
Date	**Rev.**	**Summary of Changes**	**Issue Purpose**
15/12/2020	0.1	First draft for review by Menter Môn	For comment
22/12/2020	1.1	Second draft for review by Menter Môn	For comment
23/12/2020	1.2	Third draft for review by Menter Môn	For comment
05/01/2020	1.3	Fourth draft for review by Menter Môn	For comment
06/01/2020	1.4	Fifth draft for review by Menter Môn	For comment
07/01/2020	1.5	Draft for submission to NRW	For comment
20/01/2020	2.0	Revised draft following NRW comments	For approval

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1. INTRODUCTION

1. This Outline Habitat Enhancement Plan provides the outline proposals for onshore habitat enhancement proposed to be delivered as part of the operational phase of the proposed tidal technology demonstration zone 'the Morlais Demonstration Zone' (MDZ) (herein 'the Project'). The proposals have been put forward by the developer of the MDZ, Menter Môn, in order to provide additional mitigation with respect to the small-scale, long-term (40+ years), temporary[1] loss of Annex I vegetated sea cliff habitat anticipated during one of the Project's construction scenarios.

2. It was agreed during the Onshore Ecology Round Table session of the MDZ Public Inquiry (held on 2nd December 2020) that this document would be produced and provided to National Resources Wales (NRW) to provide pre-consent assurance as to the nature of the habitat enhancement proposals which will be brought forward for the Project post-consent. A detailed Habitat Enhancement Plan, providing full details of the habitat enhancement proposed for the Project, and based on the principles set out in this outline plan, will be provided post-consent, when detailed design for the Project has been undertaken.

3. This document should be read in conjunction with the following technical documents submitted to NRW to date:

    - Terrestrial Ecology Assessment Update version 04 (document reference: MOR-RHDHV-DOC-0110, submitted 19th October 2020); and
    - Cliff Habitat Survey Report (document reference: MOR-BSG-DOC-0001, submitted 18th September 2020).

2. BACKGROUND

2.1. THE PROJECT

4. The Project is being developed by Menter Môn, a not for profit social enterprise company. If consented, the Project will have a generating capacity of up to 240 MW of tidal energy.

5. The Project is located within one of several marine energy demonstration zones located around the United Kingdom (UK) coast, which have been leased out by The Crown Estate to enable the siting of such developments on the seabed.

6. Onshore infrastructure is required to connect the MDZ to the National Grid. This includes cable landfall works, a landfall substation, switchgear building and grid connection substation, and associated onshore cabling. At landfall (see **Figure 1**), which is the focus of the proposals outlined in this plan, there are two construction techniques being included within the project envelope. These are:

[1] Without prejudice to the decision of the Competent Authority's HRA, NRW consider the loss of the habitat for a 40 plus year period to be permanent rather than temporary. Please see **Appendix A** for the full summary of NRW's position.

- **Option 1: Horizontal Directional Drilling (HDD)** – Installing cables underneath cliffs using HDD technology. In this option, the transition pits from where the HDD would take place will be set back from the cliffs by 220m. This construction scenario is the preferred option;
- **Option 2: Alternative construction method** – Installing cable over the cliffs using an alternative construction method. The alternative method proposed involves affixing cables to the cliff within a 'split pipe' known as a 'J-Tube'. To minimise damage to the SAC, the J-Tubes are proposed to be fixed to the cliff using bolt anchors, allowing the J-Tubes to sit approximately 400mm away from the face of the cliff. Works are proposed to be undertaken directly on the cliff face using crane mounted at the cliff top, outside the SAC/SSSI, to minimise interaction with the cliff face. Measures will be put in place during construction of the J-Tubes (such as handholds) to ensure maintenance activities (i.e. inspection and re-painting) can occur without further disturbing the cliff during maintenance.

7. If Option 2 is used, the working corridor for installation of the J-Tubes will require an 11m-wide construction footprint on cliff face (as shown on **Figure 1**), with the works affecting up to 510m^2 (0.05ha) of habitat at the cliff face during construction. This figure of 0.05ha has been used as a basis for determining the area of habitat to be enhanced, as set out in **Section 4.1** later in this document.

8. Option 2 has been retained within the Rochdale envelope should HDD not prove achievable for engineering reasons, which cannot be determined until further studies have been undertaken post-consent. This option represents the 'worst case'.

9. It should be noted that no works which comprise the installation or laying of cables externally up the cliff face at landfall (Option 2) can be undertaken until a report has been submitted to Isle of Anglesey County Council (IoACC) explaining why it is not feasible for such cables to be installed instead by horizontal directional drilling. A requirement to this effect is included in the draft Planning Conditions to be agreed with IoACC.

10. The proposed habitat enhancement outlined in this document would be adopted if the 'Option 2' landfall construction method is required.

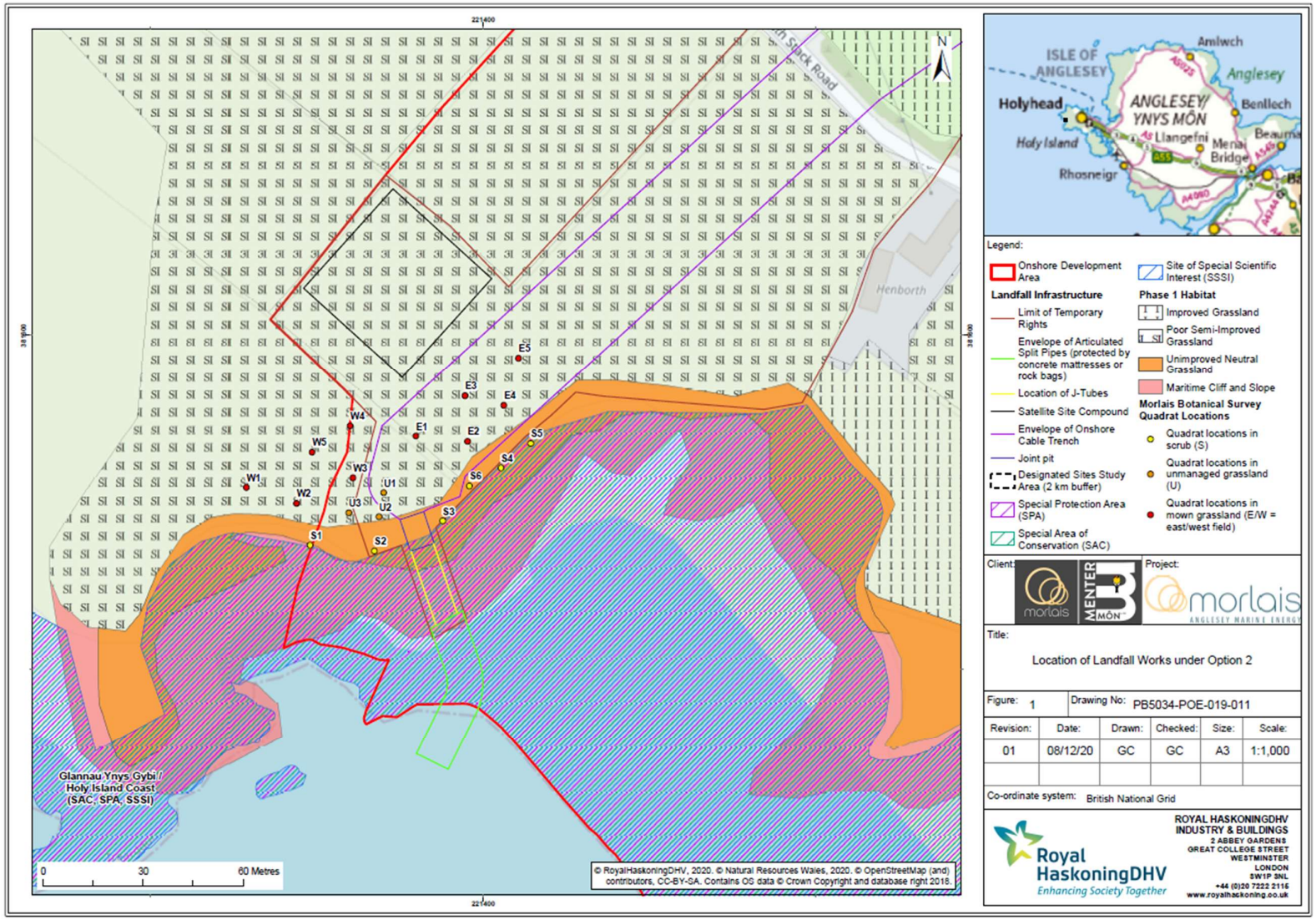

Figure 1 Works footprint at landfall

2.2. THE NEED FOR A HABITAT ENHANCEMENT PLAN

11. Although disagreement remains between Menter Môn and NRW on the nature of impact on the Glannau Ynys Gybi / Holy Island Coast SAC / SSSI, there is agreement that construction of the Project will have an effect on the Annex I habitats of the SAC, should landfall Option 2 be required (for further information, a summary of the parties' positions is presented in **Appendix A**). Therefore, Menter Môn are proposing the Project contributes to an overall improvement of the habitats which support the Glannau Ynys Gybi / Holy Island Coast SAC / SSSI through the commitment to habitat enhancement measures in proximity to the SAC at Abraham's Bosom.

12. The remainder of this document sets out the proposals for habitat enhancement being made by Menter Môn.

2.3. CONSULTATION

13. Consultation with NRW has been undertaken throughout 2019 and 2020 regarding potential effects on the Glannau Ynys Gybi / Holy Island Coast SSSI / SAC arising from the construction and operation of the Project, as well as other concerns raised in relation to the EcIA / HRA.

14. During this consultation, in their response to the Terrestrial Ecology Update (version 02), NRW raised the option for undertaking enhancement of habitat at the cliff top: "*Whilst not a direct replacement, restoration of some areas of improved or semi-improved grassland along the top of the cliff could enhance the coastal ecosystem allowing the development of a more natural transitional zone between vertical cliff and more level grassland/heathland. We would welcome engagement in such discussions.*" (Comment A.57, NRW comments on Terrestrial Ecology Update (version 02), May 2020).

15. Following this consultation, the proposals have been developed through provision of the Terrestrial Ecology Update (version 03) and Terrestrial Ecology Update (version 04), through which Menter Môn has indicated their interest in entering into a net biodiversity benefit initiative with NRW as part of the Project. In their most recent consultation, NRW have suggested a series of principles which they would like to see included within any habitat enhancement proposals (Document reference: CAS-128487-K1Y3, dated 27 November 2020). These principles are set out in **Table 2-1**, as well as details of where, if relevant, they have been addressed within this document.

Table 2-1 Habitat Enhancement principles identified by NRW in *Morlais Demonstration Zone: Transport And Works Act Order Application (TWAO) – Further Environmental Information* (Document reference: CAS-128487-K1Y3, dated 27 November 2020)

Principles identified by NRW	Menter Môn's position
Habitat creation or enhancement should aim to revert either improved grassland to semi-improved or maritime grassland or heath or to revert poor quality semi-improved grassland to heath/maritime grassland.	We agree with this principle, and it is included in the proposals below.
Any habitat creation or enhancement should be located as close as possible to the development.	We agree with this principle, and it is included in the proposals below.

Principles identified by NRW	Menter Môn's position
The extent for habitat creation should be well above a 1:1 ratio to the area lost. Considering that this would not constitute a like-for-like habitat creation we would suggest that at least 0.5 hectare of enhancement or habitat creation is provided.	We agree to this ratio. As outlined in Planning Policy Wales, it is up to the planning authority to determine whether the extent and nature of any land proposed for the purposes of net biodiversity benefit is appropriate. We are happy to therefore accept NRW's steer on this and set aside 0.5ha for enhancement.
The habitat creation/enhancement should comprise a strip of land, small headland or field section adjacent to the current semi-natural cliff top vegetation, at least 10m wide, to act as a buffer to more improved habitats and the cliff top maritime vegetation.	We agree with this principle and the precise area will be defined post consent in consultation with NRW (and other interested stakeholders, where appropriate).
Management to achieve reversion to heath, maritime grassland or neutral grassland may include actions such as mowing and removal of arisings, turf or topsoil stripping, spreading with heather clippings or green hay from a local site and grazing with appropriate livestock under a suitable grazing regime.	We agree with this principle, and it is included in the proposals below, along with some potential additional measures for habitat enhancement.
Habitat creation/enhancement is a long-term commitment and should therefore be secured by land purchase or legally-binding agreements relating to the future conservation management and safeguarding of the habitat.	Land secured for the Project's lifetime will include land rights to undertake and maintain habitat enhancement for that period (i.e. 40+ years).
An outline of habitat restoration proposals should be submitted to NRW for agreement pre-consent. A condition should be secured to any consent for a detailed habitat restoration proposal to be submitted to NRW for agreement post-consent.	The IoACC Draft Planning Conditions will be amended to include reference to ecological enhancement (Condition 6).

16. Full details of the consultation undertaken with NRW in relation to the Project can be found in NRW's Statement of Common Ground – Other topics (Document reference: MDZ/L6).

3. GUIDANCE AND REGULATORY CONTEXT

17. Under Section 6 of the Environment (Wales) Act 2016, all public authorities are subject to a 'biodiversity and resilience of ecosystems' duty, which requires that:

"6 (1) A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions."

18. In exercising this duty, planning authorities must have regard to Section 6.4 of Planning Policy Wales (Edition 10) (PPW 10) (Welsh Government, 2018), which sets out a requirement for proposals brought forward to provide "*net benefit for biodiversity*", through "*the restoration of damaged, modified or potential habitat and the creation of new habitat*". Such net benefit to biodiversity can be achieved, as outlined in PPW 10, through actions such as "*enlarging habitat areas, developing buffers around designated sites or other biodiversity assets or corridors…and the creation of 'stepping stones' which will strengthen the ability of habitats and ecological networks to adapt to change, including climate change*" (p.136, Welsh Government, 2018).

19. This role is clarified by the recent planning circular from the Chief Planner at the Planning Directorate on the matter, which states that: "*A net benefit for biodiversity can be secured through habitat creation and/or long term management arrangements to enhance existing habitats, to improve biodiversity and the resilience of ecosystems. Securing a net benefit for biodiversity is not necessarily onerous; through understanding local context, it is possible to identify new opportunities to enhance biodiversity*." (p.2, Welsh Government, 2019).

20. In the lead up to the inclusion of the principle of biodiversity net gain firstly within the English National Planning Policy Framework (NPPF) (HCLG, 2019), and secondly within the forthcoming Environment Bill in England, the Chartered Institute of Ecology and Environmental Management (CIEEM), Institute of Environmental Management and Assessment (IEMA) and Construction Industry Research and Information Association (CIRIA) published a set of 'good practice principles' for biodiversity net gain in development in 2016 (CIEEM, IEMA and CIRIA, 2016), and CIRIA subsequently published a practical guide for developers in support of these principles in 2019 (CIRIA, 2019). In the absence of any equivalent guidance in the Welsh context, it is proposed that this best practice guidance is used in the development of the principles both found within this Outline Habitat Enhancement Plan, and those subsequently included within the final Habitat Enhancement Plan, submitted post-consent.

4. OUTLINE HABITAT ENHANCEMENT PROPOSALS

4.1. KEY PRINCIPLES

- As a core principle, the enhancement shall seek to increase the extent of maritime grassland and maritime heath, and ensure the eradication of invasive species, in line with the Conservation Objectives of the Glannau Ynys Gybi / Holy Island Coast SAC.
- The enhancement shall seek to return areas of poor semi-improved / improved grassland landward of the cliff to a mosaic of maritime grassland and lowland heath, providing a transitional zone between the habitats of the cliff face and those inland and a buffer strip around the margin of the managed grassland landward of the cliff.
- It is proposed that an area of at least 0.5ha adjacent to the cliff in the area of Abraham's Bosom is set aside for habitat enhancement. The exact proposed location will be developed in consultation with NRW (and other interested stakeholders, where

appropriate), once the updated Botanical Survey has been completed prior to construction.

- All enhancement will be designed with reference to CIEEM, IEMA and CIRIA's Biodiversity Net Gain: Good Practice Principles for development (2016).
- Prior to the development of the detailed Habitat Enhancement Plan, a detailed botanical (NVC) survey (following Rodwell, 2000) of the areas of the proposed enhancement not surveyed in June 2020 will be undertaken at a suitable time of year (June - August).
- The habitat enhancement proposed will be located within land covered by land agreements secured, subject to consent for the Project, by Menter Môn. This is to ensure that the land will be protected from further development for the duration of the Project's lifetime.
- The detailed habitat enhancement proposals will be developed post-consent in consultation with NRW and will be based on the principles outlined in this Outline Habitat Enhancement Plan. **Section 4.5** of this document provides details of what will be included in the detailed Habitat Enhancement Plan produced post-consent.
- Details of monitoring and maintenance requirements to ensure the viability of the habitat will be included in the Habitat Enhancement Plan. These will include a mechanism for remedial action should the enhancement not be successful.

4.2. HABITATS

21. The habitats which will be the chief focus of the enhancement will be the following:

- Maritime grassland (specifically communities with affinity to National Vegetation Classification MC8 – MC11); and
- Maritime heath (specifically communities with affinity to National Vegetation Classification H7).

22. The enhanced habitat will seek to encourage the growth of species identified on the Core Management Plan (CCW, 2008), such as heather *Calluna vulgaris* and spring squill *Scilla verna* (heathland) and buckshorn plantain *Plantago coronopus*, kidney vetch *Anthyllis vulneraria*, red fescue *Festuca rubra*, Yorkshire fog *Holcus lanatus*, wild carrot *Daucus carota*, and sheep's sorrel *Rumex acetosella*, with thrift *Armeria maritima* and common mouse-ear *Cerastium diffusum*. The inclusion of Western gorse *Ulex gallii,* to provide greater variety to the habitat composition will also be considered.

4.3. METHODS

23. The precise methods used to deliver the habitat enhancement will be agreed within the Habitat Enhancement Plan post-consent. Some examples of the type of methods which are likely to be used include:

- Removing low growing scrub species to return scrub to heathland;
- Turf-stripping or other activity to reduce nutrient level of grassland, followed by spreading of heather clippings to encourage heathland establishment;

- Turf-stripping and reseeding of grassland areas with green hay from a local site or a maritime grassland mix, followed by grazing with appropriate livestock under a suitable grazing regime.

24. Preparatory activities required prior to these methods are likely to include:

- Provision of a detailed botanical (NVC) survey of the areas of the proposed enhancement not surveyed in June 2020 will be undertaken (as outlined in **Section 4.1**); and
- Seed collection of native species of local provenance (if required for grassland).

4.4. MAINTENANCE AND MONITORING

25. Maintenance and monitoring is required to ensure that the habitat enhancement undertaken is effective.

26. Details of monitoring and maintenance requirements to ensure the viability of the habitat will be included in the Habitat Enhancement Plan, once the precise methods and habitat distributions proposed have been identified. These will include a mechanism for remedial action should the enhancement not be successful.

4.5. DETAILS TO BE ESTABLISHED IN HABITAT ENHANCEMENT PLAN POST-CONSENT

27. This Outline Habitat Enhancement Plan has stated that final details of the proposed habitat enhancements will be set out within the Habitat Enhancement Plan, produced post-consent. For clarity, the details which will be included in the plan are summarised below:

- Findings of updated habitat survey;
- Principles to be adhered to during habitat enhancement;
- Precise location of the 0.5ha enhancement area;
- Zonation of habitats proposed within the enhancement area, including:

  a layout plan showing the extent of the zones identified for enhancement of different habitat types, and the predicted extent of maritime influence across the enhancement area, and

  a habitat inventory detailing the species composition for each habitat type shown on the plan;
- Methods to be used for habitat creation;
- Maintenance and monitoring details, including key indicators by which success will be measured and by which remedial action will be triggered;
- Roles and responsibilities for habitat creation, including the allocation of undertakers of post-enhancement management, monitoring and grazing; and
- Details of how the Habitat Enhancement Plan interacts within the Invasive Non-native Species Management Plan, secured through Planning Condition 3 of the draft Planning Conditions, which will be the primary document setting out how invasive species are eradicated during construction.

4.6. TIMINGS

28. The timings for the measures outlined above will be determined post-consent, once the construction programme is confirmed. However, the following indicative timings can be provided at this stage:

- **Updated Habitat Survey** – undertaken in the appropriate season post-consent (June – August);
- **Development of Habitat Enhancement Plan** – undertaken following the completion of the Updated Habitat Survey;
- **Construction** – construction works for the Project will be undertaken once Habitat Enhancement Plan has been finalised and IoACC Condition 6 discharged;
- **Implementation of habitat enhancement** – once construction works at the cliff top are complete, enhancement works will commence. Each enhancement activity will be undertaken within the appropriate season, for example heather cutting and spreading will be undertaken in October to ensure that the heather seed is at peak ripeness.

5. SUMMARY

29. This Outline Habitat Enhancement Plan has set out the principles which will be adhered to during habitat enhancement for the Morlais Project. In summary, the following key principles are proposed:

- As a core principle, the enhancement shall seek to increase the extent of maritime grassland and maritime heath, and ensure the eradication of invasive species, in line with the Conservation Objectives of the Glannau Ynys Gybi / Holy Island Coast SAC;
- The enhancement shall seek to return areas of poor semi-improved / improved grassland landward of the cliff to a mosaic of maritime grassland and lowland heath, providing a transitional zone between the habitats of the cliff face and those inland and a buffer strip around the margin of the managed grassland landward of the cliff;
- An area of 0.5ha adjacent to the cliff in the area of Abraham's Bosom is proposed to be allocated for enhancement;
- All enhancement will be designed with reference to CIEEM, IEMA and CIRIA's Biodiversity Net Gain: Good Practice Principles for development (2016);
- Prior to the development of the Habitat Enhancement Plan, a detailed botanical (NVC) survey of the areas of the proposed enhancement not surveyed in June 2020 will be undertaken at a suitable time of year (June - August);
- The habitat enhancement proposed will be located within land covered by land agreements secured, subject to consent for the Project, by Menter Môn. This is to ensure that the land will be protected from further development for the duration of the Project's operation;
- The detailed habitat enhancement proposals will be developed post-consent in consultation with NRW and will be based on the principles outlined in this Outline Habitat Enhancement Plan;

- Details of monitoring and maintenance requirements to ensure the viability of the habitat will be included in the Habitat Enhancement Plan. These will include a mechanism for remedial action should the enhancement not be successful.

30. The contents list for the Habitat Enhancement Plan is also provided in **Section 4.5**.

6. REFERENCES

Chartered Institute of Ecology and Environmental Management (CIEEM), Institute of Environmental Management and Assessment (IEMA) and Construction Industry Research and Information Association (CIRIA) (2016) Biodiversity Net Gain: Good Practice Principles for Development.

Construction Industry Research and Information Association (CIRIA) (2019) Biodiversity Net Gain. Good Practice Principles for Development: A Practical Guide.

Countryside Council for Wales (CCW) (2008) Core Management Plan Including Conservation Objectives for Glannau Ynys Gybi SAC & Glannau Ynys Gybi SPA (Incorporating: Glannau Ynys Gybi Holy Island Coast SSSI, Tre Wilmot SSSI Glannau Rhoscolyn SSSI). Version 1.0, April 2008 (edited 2013).

Environment (Wales) Act 2016.

Ministry of Housing, Communities and Local Government (HCLG) (2019) National Planning Policy Framework (NPPF).

Welsh Government (2018) Planning Policy Wales. Edition 10 ('PPW 10').

Welsh Government (2019) Securing Biodiversity Enhancements. Letter to Heads of Planning, 23 October 2019.

Rodwell J. S. et al. (2000) British Plant Communities: Volume 5: Maritime communities and vegetation of open habitats. Cambridge University Press.

APPENDIX A: ENVIRONMENTAL ASSESSMENT

31. The Project was subject to an Ecological Impact Assessment (EcIA) (as presented in Chapter 19 of the Project's Environmental Statement (ES) (document reference: MOR/RHDHV/DOC/0037)), and information to support a Habitats Regulations Assessment (HRA) was prepared (as presented in document reference: MOR/RHDHV/DOC/0067) prior to the submission of an application for consent for the Project under the Transport and Works Act Order 1992 (herein 'TWAO application') in 2019.

32. Following submission of the ES and HRA, NRW, the Royal Society for the Protection of Birds (RSPB), IoACC and North Wales Wildlife Trust (NWWT) provided a response to the findings of the EcIA and HRA in November 2019, raising a number of concerns with the scheme. A key concern raised by NRW is the potential impact upon Annex I Vegetated sea cliffs of the Atlantic and Baltic Coasts, a qualifying habitat of the Glannau Ynys Gybi / Holy Island Coast SSSI/SAC, if Option 2 is required to facilitate installation of the cable at landfall.

33. Following the provision of this additional information, the EcIA and Information to Support Habitats Regulations Assessment have been updated in order to reassess the impacts in light of the changes proposed. The findings of these updated assessments are reported in the Terrestrial Ecology Update (version 04) (document reference: MMC189 MOR-RHDHV-DOC-0110 (4), issued on 19 October 2020). Following the updates presented in this assessment, Menter Môn and NRW have reached agreement that habitat within the SAC will be affected during the construction of the Project, however the parties disagree on the nature of the effect. The respective positions are summarised below:

Summary of Menter Mon's Position

34. Menter Môn concluded in the Terrestrial Ecology Update (version 04) that, following the implementation of mitigation, no significant impacts (in EIA terms) and no AEOI of the Glannau Ynys Gybi / Holy Island Coast SAC were predicted to arise from the construction, operation and decommissioning of the Project, either alone or in combination with other projects. This is due to the effects upon vegetated sea cliff habitats being sufficiently small in scale, and the ecological characteristics of the habitat such that a habitat loss of this kind is not anticipated to affect the overall functioning of the wider habitat.

35. Although it is Menter Môn's position that no AEOI will occur upon Annex I Vegetated sea cliffs of the Atlantic and Baltic Coasts, Menter Môn does note that a small-scale area of vegetated sea cliff habitat (as a worst case, approximately 510m^2) will be lost in both the short and long term. In light of this, in order to ensure that the Project has a net positive effect on biodiversity, Menter Môn are seeking to enter into a habitat enhancement agreement with NRW to ensure that the Project improves the coastal habitats within the area of its operation.

Summary of NRW's Position

36. NRW acknowledges that the potential for loss of the Annex I habitat from the SAC associated with the worst-case scenario has been reduced to a small percentage of the vegetated sea cliff habitat as a whole. However, this still represents a loss of Annex I habitat which is the primary reason for designation of this site. NRW considers this to be a significant loss when considered as a proportion of the crevice-and-ledge and maritime therophyte vegetation element of the Annex I habitat represented on the site. NRW consider the loss of the habitat for a 40 plus year period to be permanent rather than temporary. The mosaic of vegetation and bare rock on the cliff face, at the

location identified for potential cabling, is an example of good quality Annex I Vegetated sea cliff habitat of high conservation value and includes two species which are listed in the notified assemblage of the Holy Island Coast SSSI: golden samphire *Inula crithmoides* and rock sea-lavender *Limonium binervosum*. The advice above is without prejudice to the decision of the Competent Authority when undertaking their HRA.

37. The crevice and ledge vegetation which will be permanently lost from the site cannot be feasibly recreated elsewhere. However, the Annex I Vegetated sea cliffs feature also comprises cliff to maritime grassland and maritime heath. Therefore, enhancement of cliff top vegetation to restore these habitats would be acceptable. Given the likelihood that this would not be like-for-like replacement, a greater area than that to be lost should be allocated for enhancement.