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## Morlais Project

# Cliff habitat design refinement note

Applicant: Menter Môn Morlais Limited

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## PROPOSED MICROSITING OF CABLE CORRIDOR ON DESIGNATED VEGETATED SEA CLIFF HABITAT

### 1. PROJECT DESCRIPTION

2. The preferred cable installation option for the Morlais Project is to use Horizontal Directional Drilling at landfall which avoids crossing sites designated for nature conservation. Should this not be possible, the secondary option is to trench the cables and pin to the cliff at landfall, which involves crossing the Holy Island Coast Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI), designated for its vegetated sea cliff habitat, a non-priority habitat listed in Annex 1 of the Habitats Directive. The cable corridor will be 7.15m wide, with a working corridor of 2m either side, giving an overall construction corridor of 11.15m wide down the height of the cliff face. Details of construction, maintenance and decommissioning activities are provided in the updated Terrestrial Ecology assessment (document reference MOR-RHDHV-DOC-0110) and, prior to any construction in the cable corridor within the SAC and SSSI, a detailed Construction Method Statement for these works will be approved by IoACC, in consultation with NRW, pursuant to Planning Condition 3. This Construction Method Statement will detail the proposals to be employed on site to verify whether HDD is implementable or whether trenching the cables and pinning to the cliff is the only viable option. In the event of the need to trench the cables, a Planning Condition is proposed that will secure the location and extent of the cable corridor on the cliff face.

### 2. NVC SURVEY

3. A National Vegetation Classification (NVC) botanical survey has been undertaken (BSG, 2020<sup>1</sup>) on the vegetated sea cliffs using drone and rope-access to ascertain the presence and distribution of rare or notable vegetation species and Annex 1 habitat communities under the 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts designation.
4. NRW requested the presence or absence of four rare species be established. None of these were found to be present. Two species identified on the cliff listed within the notified assemblage of the SSSI were recorded in thin exposed soil and rock exposures.
5. The survey results also identified the following communities which are all listed on the Annex 1 designation:
  - MC1 *Crithmum maritimum-Spergularia rupicola* maritime rock-crevice community;
  - MC1b *Inula crithmoides* sub-community;

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<sup>1</sup> BSG Ecology (2020) Morlais – Botanical Survey of cliff vegetation

- MC5 *Armeria maritima-Cerastium diffusum ssp. diffusum maritime* therophyte community; and
  - MC8 *Festuca rubra-Armeria maritima maritime* grassland community.
6. MC1 and MC1b were recorded on thinner and eroding soils and include the SSSI listed species. MC5 and MC8 was recorded on denser and more established vegetation. The top of the cliff was recorded as W22 *Prunus spinosa-Rubus fruticosus* community – a scrub habitat which is not listed on the Annex 1 designation. The base of the cliff was found to be bare rock. The distribution of the recorded communities is shown on the Figure below, extracted from the survey report (BSG, 2020).

### 3. PRE-SURVEY CALCULATIONS

7. The pre-survey calculations considered within the updated assessment of designated areas affected within the SAC/SSSI (document reference MOR-RHDHV-DOC-0110) are outlined in Table 1:
8. Table 1 Pre-survey calculations of areas of designated habitat affected within the SAC

Impact type	Activity	Area (m <sup>2</sup> )
Long term (life of project+ recovery) loss (m <sup>2</sup> ) for cable footprint	Corridor of J-tubes 7.15m wide (7.35m at the collars) and c.45m along the cliff incline, including 50-100 thread bar rock anchors (including 36.5m <sup>2</sup> for concrete mattress protectors at the toe of the cliff)	330
Temporary loss (period of construction + recovery) (m <sup>2</sup> )	Two working corridors for installation where scuffing of the cliff face may occur, each 2m wide each side of the 7.15m wide J-Tube corridor and c.45m along the cliff incline	180
Total area of SAC impacted (m <sup>2</sup> )		510 Of which, this is approximately (based on initial Phase 1 Habitat Survey results, prior to the NVC survey): Neutral grassland– 162m <sup>2</sup> Cliff/Maritime – 341m <sup>2</sup> Intertidal habitat – 7m <sup>2</sup>
Total footprint of Vegetated sea cliffs of the Atlantic (and Baltic) Coasts recorded within the SAC (m <sup>2</sup> )		1,105,900

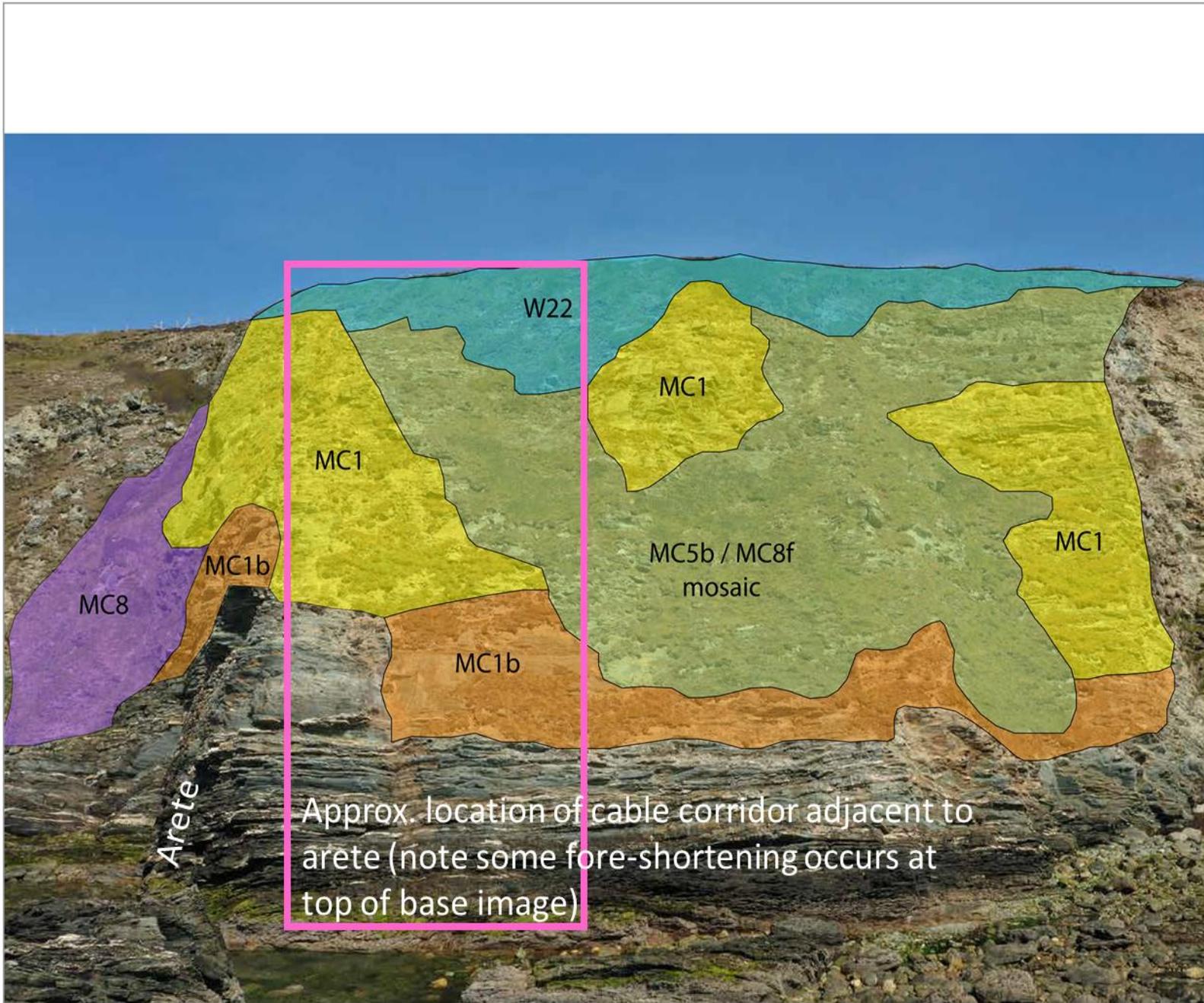
Impact type	Activity	Area (m <sup>2</sup> )
% of Vegetated sea cliffs of the Atlantic (and Baltic) Coasts feature (i.e. life of project plus recovery of vegetation) affected in the cable footprint		0.029%
% of Vegetated sea cliffs of the Atlantic (and Baltic) Coasts feature affected in working corridor		0.016%
<b>Total % of Vegetated sea cliffs of the Atlantic (and Baltic) Coasts effected</b>		<b>0.046%</b>

9. The amended methodology to pin the cables to the cliff (see Section 5.2.1 of the updated assessment, document reference MOR-RHDHV-DOC-0110 for details) rather than create slots for J-tubes to be inserted into (as was described within the original Environmental Statement), is designed to minimise the impacts to the cliff face and associated vegetation and has reduced the footprint from up to 31,700m<sup>2</sup> of cliff previously assessed in the Environmental Statement. The footprint of temporary habitat disturbance on the cliff due to scuffing during installation will be up to 2m either side of the J-tube corridor. In addition, there may be differential shading different to the surrounding unaffected cliff, but the cliff faces a sunny south-west aspect and this is not anticipated to extend beyond the 2m working buffer either side of the cables. The worst-case assessment assumes habitat loss would occur in the entire corridor during installation however, because the J-tubes would be installed carefully by hand, there are likely to be large areas of vegetation or roots which may persist and grow, therefore being retained within the working corridor. It is expected that the scuffing does not strip the entire temporary working corridor of vegetation and therefore the realistic scenario is likely to be less than the conservative worst-case scenario presented.
10. The j-tubes will be designed such that the structures are able to support maintenance activities without touching the cliff and therefore the habitat within the 2m working corridor is expected to recover following construction and not be further impacted by maintenance activities, which are likely to be required every 5-10 years.
11. It is therefore considered that approximately 330m<sup>2</sup> of the cliff feature affected within the SAC/SSSI would be subject to a long term impact upon the cliffs. This impact would be reversable upon decommissioning, however this is likely to be in excess of 40 years. The working corridors (180m<sup>2</sup>) would be temporarily disturbed through scuffing during the installation period, but recovery of the vegetation will then occur. It is worth noting that the sea cliffs along the Holy Island coast do occasionally collapse, which may interfere with the vegetation established upon it, however the condition of the cliffs, or their friability is currently unknown within the Onshore Development Area. The thread bar anchors would be installed deep enough to contribute to the stabilising of the cliffs behind the J-tubes.

#### 4. POST SURVEY MICROSITING

12. The NVC survey has provided greater clarity on the vegetation upon the cliff and how much Annex 1 habitat would be located within the 510m<sup>2</sup> cliff corridor.
13. As much of the central band of cliff is considered to be Annex 1 habitat of broadly uniform distribution and value, measures are proposed to microsite the construction corridor to further minimise the footprint within these habitats. The western side of the central face broadly aretes to a west facing cliff face. At this location an area of bare rock extends further up the cliff. It is proposed to take advantage of the area of bare rock and place the construction corridor up the westernmost part of the central face (adjacent to the arete) to minimise the area of Annex 1 habitats affected (this area is approximately shown by a pink line on the Figure below).
14. By increasing the amount of the corridor located within areas of bare rock, and taking account of the band of bare rock at the base of the cliff and the scrub habitat across the top section of the cliff, the amount of Annex 1 habitat which would now be located within the construction corridor is considered to be greatly reduced (approximately half) of what was previously assessed to be present in the pre-survey worst case scenario and as assessed in the Environmental Statement. The majority of Annex 1 habitat affected under this route would be MC1/MC1b, with some MC5b/MC8f mosaic community also directly impacted. Full recovery of this habitat to its current species diversity levels will be slow due to the diversity of plants present and the stressful environmental conditions the habitat lives on (high wind, rain, salt spray, thin soils etc).
15. Actual areas of habitat have not been calculated and annotations shown on the Figure below are indicative, given the photograph includes multiple faces of the cliff and foreshortening of perspective occurs at the top of the cliff. However, the total amount of designated sea cliff Annex 1 habitat within the proposed cable corridor is estimated to be in the region of 165m<sup>2</sup> (approximately 0.015% of the designated feature within the SAC) with approximately 90m<sup>2</sup> of Annex 1 habitat within the two proposed 2 metre wide installation corridors (combined approximately 0.008% of the designated feature within the SAC). Some direct disturbance is anticipated to occur on the vegetation within the installation corridors during construction through scuffing, but this is likely to be intermittent across the corridors. 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 touching the cliff to allow the recovery of the habitat within the working corridor without further disturbing it for maintenance. As discussed above, taking a precautionary approach, this would be a long term impact upon the cliffs, however the survey results and micrositing proposed would mean only approximately half the corridors currently support Annex 1 habitat (the previous assessment assumed, in the absence of survey, the worst case was for the full corridor to contain Annex 1 habitat).

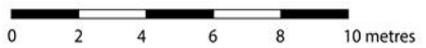
16. Consequently, the impact of the removal of this small area of habitat is not anticipated to have an adverse effect on the ecological function of the sea cliffs in the wider SAC area or cause significant severance.
17. It is noted that areas of bare rock are also present to the east of the survey area which does not contain Annex 1 habitats, however this area been previously considered as a potential route and is unstable and not suitable from an engineering perspective to construct within.
18. It is Menter Môn's position that this very small level of impact, albeit long term but temporary, to a non-priority habitat is negligible so as to regarded as *de minimis* and not an adverse effect on the integrity of the SAC.



- LEGEND**
- MC8 (*Festuca rubra* - *Armeria maritima* maritime grassland)
  - MC1 (*Crithmum maritimum* - *Spergularia rupicola* maritime rock-crevice community)
  - MC1b (*Inula crithmoides* sub-community)
  - MC5b (*Armeria maritima* - *Cerastium diffusum* ssp. *diffusum* maritime therophyte community *Anthyllis vulneraria* sub-community) / MC8f (*Festuca rubra* - *Armeria maritima* maritime grassland *Anthyllis vulneraria* sub-community) mosaic
  - W22 (*Prunus spinosa* - *Rubus fruticosus* sub-community)

Approx. location of cable corridor adjacent to arete (note some fore-shortening occurs at top of base image)

Arete



The scale bar is indicative. The cliff height is foreshortened in the image.

**BSG** | ecology

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PROJECT TITLE  
Morlais Botanical Survey

DRAWING TITLE  
Figure 5: NVC communities

DATE: 15.06.2020 CHECKED: GM SCALE: INDICATIVE  
DRAWN: EB APPROVED: GM VERSION: 1.0

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