



THE PLANNING ACT 2008

THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE) RULES
2010

Morgan and Morecambe Offshore Wind Farm: Transmission Assets

Appendix G6 to Natural England's Deadline 6 Submission
Natural England's comments on Onshore Ecology

For:

The construction and operation of the Morgan and Morecambe Transmission Assets
located approximately 0 - 37 km off the Northwest English Coast in the Irish Sea.

Planning Inspectorate Reference EN020028

22 October 2025

Morgan and Morecambe Transmission Assets G6 – Comments on Onshore Ecology and Nature Conservation

In formulating these comments, the following documents have been considered:

- [REP5-069] Outline Ecological Management Plan
- [REP5-117] Outline Landfall Construction Method Statement
- [REP5-102] Outline Hydrogeological Risk Assessment of Lytham St Annes Dunes SSSI
- [REP5-039] F3.3.3 Environmental Statement Volume 3, Annex 3.3: Phase 1 habitat, national vegetation classification and hedgerow survey technical report

1.1. Additional Risks and Issues

Whilst reviewing the documents submitted by the Applicant at Deadline 5, Natural England have added three new comments into the R&I Log, RI_G49, RI_G50 and RI_G51. These points are included in the R&I Log at Deadline 6 (Appendix K6) and summarised below.

RI_G49 – Landward extent of Lytham St Annes Dunes SSSI

The NVC survey map (Figure 1.3) of Lytham St Annes Dunes SSSI (Appendix D) [REP5-039] shows a blue dashed line with the approximated dune extent. This extends beyond the Lytham St Annes Dunes SSSI boundary (and into the Ribble Estuary SSSI boundary) and supports transitional embryonic dune habitat along with SD4 *Elymus farctus* ssp. *boreali-atlanticus* foredune community, SD5 *Leymus arenarius* mobile dune community and SD6 *Ammophila arenaria* mobile dune community. We advise the Applicant to confirm the distance of dune growth in meters from the edge of Lytham St Annes Dunes SSSI to confirm the extent of the frontal dunes and if this has the potential to be impacted by construction works at landfall.

The beach working area as defined in the Outline Landfall Construction Method Statement [REP5-117] notes that “*The trenchless technique exit pit locations for the offshore export cables will be at approximately MHWS with a minimum distance of 100m from the western boundary of Lytham St Annes Dunes SSSI (CoT44)*” (para 1.7.1.2). As shown in Figure 1.3 Indicative Beach Working Areas for Trenchless Installation Works, the dunes have expanded beyond the SSSI boundary and are probably within approximately 50m of the working area. It is important to note that whilst the Applicant will be working 100m from Lytham St Annes Dunes SSSI, the works will still be undertaken within the Ribble Estuary SSSI. Although not specifically designated for dunes, they are mentioned with regards to littoral sediment and bird assemblage. As the construction is occurring near to the Priority Habitat Inventory (PHI) dune habitat (which is also considered as an irreplaceable habitat with regards to Biodiversity Net

Gain), the Applicant should include detail on how the dunes will be protected during the works e.g. from access by construction workers. This should be included in the Landfall Construction Method Statement.

RI G50 – Presence of rare dune habitat

The St Annes Old Links Golf Course BHS NVC Survey report (Appendix E) [REP5-039] flags the presence of the rare dune habitat – dune heath (H11c) and decalcified form of SD12. A small area of dune heath (referable to the Annex I habitat type H2150) is present within the Order of Limits and depending on the cable alignment may be drilled under. The report notes (para 5.2.15.3) that dune heath “.....are also exceptionally sensitive; any disturbance of surface sands carries significant risk of intermixing calcareous lower sand and decalcified upper horizons, near-permanently destroying the habitat”. The report also notes that it can take over 300-400 years to develop as calcium rich sand is leached over time. While no above ground works are expected within St Annes Old Links Golf Course BHS we advise that the location of this rare habitat should be noted and avoided in the final design stages and for example when undertaking additional ground investigations. We advise to address this issue commitments should be included within a named plan to avoid impacts to this rare dune habitat.

RI G51 – Fencing on saltmarsh habitat

We welcome the measures to reduce recreational pressures to bird features at Fairhaven saltmarsh which may include the use of soft fencing as outlined by the Applicant in [REP5-069]. This is a beneficial measure for the bird features of the Ribble and Alt Estuaries SPA. Saltmarsh is a feature of the Ribble SSSI and is a habitat that supports features of the Ribble and Alt Estuaries SPA. There is potential for the soft fencing, if not appropriately installed and maintained, to impact the saltmarsh.

Prior to installation we advise the Applicant should provide Natural England with a method statement giving details of how the fencing will be installed, the final alignment with access routes, machinery and materials (including details of any treated timber) to be used. The OEMP [REP5-069] notes that fencing will remain in situ until the construction is completed. The Applicant should update the OEMP to confirm whether the intention is to leave the fencing in place after construction or remove it. If it is to be removed details of the removal process need to be captured. If the fencing will be left in-situ details of who will be responsible for its repair and maintenance should be included. Therefore, we advise to address this issue commitments need to be included within name plans to ensure that a method statement for installation is agreed in consultation with Natural England prior to construction.

1.2. Comments regarding RI_G1

We welcome the Applicant's submission [REP5-039] which includes the results of the National Vegetation Survey (NVC) of both Lytham St Annes Dunes SSSI/LNR (Appendix D) and St Annes Old Links Golf Course BHS (Appendix E). We also welcome the updates to [REP5-102] which captures the results of the NVC survey.

Natural England appreciates that the NVC surveys have been undertaken and follow standard methods (with quadrat sampling and the use of MAVIS to support vegetation community interpretation). Additionally, we confirm that the surveys have been completed at an appropriate time of year, and by a suitably qualified botanist (FISC level 6). Therefore, data requirement concerns in regards to improving certainty around ES conclusions and informing consent, raised by Natural England for dune vegetation and habitats, are now considered sufficiently resolved.

1.2.1 Survey results

The surveys focus on confirming the previous 2016/ 2024 surveys and provide further clarity around the presence of Ground Water Dependant Terrestrial Ecosystems (GWDTE) i.e., dune slack vegetation.

We note that in Lytham St Annes Dunes SSSI three dune slack communities were recorded - SD16, SD16/17, SD17 which are all likely to exhibit high groundwater dependency, along with the wetland community S28 (which has a low dependency). At St Annes Old Links Golf Course BHS the areas of wetland/ dune slack have been modified, but the survey shows it still supports small areas of SD15 which have high groundwater dependency. We highlight that although this habitat is only found in small areas within the golf course it is a rare UK habitat type and is not found elsewhere within the dune system. In addition, a number of notable plant species were recorded that are associated with these dune slack / wetland communities. The report provides a detailed summary of each NVC community along with corresponding Annex I habitat i.e. H2190 and identifies those habitats that constitute GWDTE with their groundwater dependency score (as per the UK TAG).

The NVC surveys supports the hydrogeological survey findings that there is a shallow water table (within one metre of the surface) at least to the east and middle of the site. However, uncertainty remains as to how far this shallow water table extends to the west, and whether the site has potentially perched groundwater conditions (para's 6.1.1.2 and 6.1.1.4).

1.2.2 Implications from the findings and next steps

[REP5-102] includes Next Steps (section 5) which generally align with the approach that Natural England would like to see undertaken. We have provided advice and commentary regarding this below:

- Natural England understands data has been requested from St Annes Old Links Golf Course regarding water abstraction and that this information will be added to the detailed Hydrological Risk Assessment (para 5.1.1.2). We also understand that the boreholes used previously by the golf course have been decommissioned and replaced with a new shallower horizontal groundwater abstraction system (para 2.2.1.7). We advise that this data is important in understanding how GWDTE might be affected both during construction and operation phases and would provide details of the position of the water table to the west of the site which is currently not covered in detail. In addition, it would be useful to include information on any potential changes that might occur in the future due to the change from a presumably deep borehole to a shallower horizontal groundwater. We advise that this should be included in a final update version of this document as part of the pre-construction discharge process and included as part of the Hydrological Risk Assessment.
- [REP5-102 para 5.1.1.3] notes that “*Depending on the required depth of burial of the export cables, further ground information may be required to establish site specific groundwater conditions below the Lytham St Annes SSSI/LNR/BHS site including monitoring to establish a suitable hydrogeological conditions baseline to include contamination testing*”. Natural England notes that the emphasis of this monitoring appears to be focused on contamination testing which we welcomed. However, we still advise that ongoing monitoring of the position of the water table with a piezometer and borehole (dipwell) is required (depending on cable depth). This should be undertaken prior to cable installation/construction to provide local baseline conditions and inform mitigation measures, during construction and then post-construction i.e., during operation. This will allow ground-water data modelling to be undertaken capturing information on potential fluctuations associated with cabling, which could have a negative impact on GWDTE, that may arise as part of the proposals over the lifetime of the project.
- The ‘Next Steps’ Section and commitment logs should also include detail on the frequency of the monitoring and data collection. We advise that a baseline data set should be collected over a year prior to the cable installation, then at a comparable

time during construction year/s and then collected over the first year following installation to understand how cables are influencing the ground water. Once the monitoring is established it should be continued on a yearly/ bi-annual basis. We advise that there should also be a commitment to implement adaptive management measures should the monitoring identify significant changes to the ground water table and GWDTE.

In addition, Natural England should be informed if these additional ground investigations (as noted in para 5.1.1.3) are within the SSSI/or adjacent BHS and the applicant should provide details of these additional surveys in terms of methods and borehole depth to be agreed by the LPA in consultation with the relevant SNCB. The results of any further surveys should be captured in the final Hydrogeological Risk Assessment again submitted to the LPA in consultation with the relevant SNCB. We provide the following further advice:

- The Applicant should ensure they utilise the data presented in the final Hydrogeological Risk Assessment to inform site specific crossing design when cabling under Lytham St Annes Dunes SSSI/ St Annes Old Links Golf Course BHS.
- As noted previously Natural England's key concern is around the cable burial depth and impacts on GWDTE. We understand that the proposed burial depth is still to be confirmed and will not be available until the detailed design stage. If the cable is buried in the saturated sand i.e. around 10m deep, the cable could influence horizontal groundwater flow within these permeable strata and therefore potentially impact these habitats. In this instance Natural England would like to see hydrological monitoring established within the dune system with a borehole and piezometer secured in a commitment or named plan (as previously advised). However, if the cable is buried within the deeper glacial clays (at around 30m) our concerns would be alleviated. We therefore advise that if possible, the Applicant should provide clarity on whether a 30m cable burial depth into underlying glacial clay is possible as part of the consenting process to inform our advice to the ExA on possible mitigation measures.

1.3. Comments regarding RI_G4

We welcome the additional detail included in the Outline Landfall Construction Method Statement [REP5-117] at Deadline 5 which includes *Appendix A Outline trenchless crossing mitigation plan*. Table 1 provides a review of the risks associated with trenching including consideration of the failure of the Direct Pipe Technique (Micro-Tunnel Boring Machine (MTBM)). We welcome the mitigation measures which include undertaking detailed ground investigations, topographical surveys to confirm expected ground conditions and continuous

monitoring during drilling. The mitigation measures also include the inclusion of spare bore holes. It is unclear what the purpose of any additional boreholes would be, whether this relates to GI boreholes or cable drilling boreholes. We have raised concerns in RI_G9 on the required distance between the cables which the Applicant will only provide detail on at the final design stage. Considering the distance between cables and the potential for additional boreholes raises concerns over space within the Order Limits to successfully deliver the outlined construction, clarification is sought and should be included in an updated Outline Landfall Construction Method Statement on the purpose of the spare bore holes.

1.4. Comments regarding RI_G10

As noted in [REP5-102] para 3.4.3.7, the effects of potential cable heating are presently unquantified due to the requirement for detailed design input to cable spacing configuration, burial depths and temperature profiles. However, it is noted in para 3.4.3.13 that given “*a minimum cable burial depth of 10m below ground level and likely position within the saturated zone of the sand deposits, horizontal groundwater flow within these permeable strata will also act to dissipate heating effects around the cables and further limit vertical migration of heat*”. In addition, it is understood that the cables will be suitably spaced out to minimise the mutual heating effect which is captured in Table 3-3.

Whilst, Natural England accepts the detail currently provided, we advise that the Applicant should provide further detail during the consenting phase on the combined effects of summer drought (which are likely to become worse with climate change), water abstraction and the long-term reduction in groundwater levels due to presence of cable ducting to ensure that measures can be put in place to manage further environmental risks. We advise if this is not addressed as part of the consenting phase then it will be required prior to construction.

1.5. Comments regarding RI_G28

Please also consider Natural England's comments for RI_G1.

Table 3.2 in [REP5-102] provides the outcome of the risk assessment of the Transition Joint Bay (TJB) working area and Beach working area. It identifies a Low Risk on the Biological Heritage Site caused by a short-term reduction of groundwater levels due to temporary dewatering of TJB excavation, but state there is no risk on the SSSI/ LNR. This risk level is dependent on securing the secondary mitigation options outlined in the table including placement of offshore export cables within low permeability glacial clays to avoid water tables

where present. Until the cable depth is known Natural England still has concerns regarding whether the mitigation is satisfactory to reduce the risk.

Similarly, Table 3-3 provides the outcome of risk assessment of the installation of the export cable via trenchless techniques and the presence of the export cable during operation. Three key risks on the SSSI/LNR/BHS are identified:

- Short term reduction in groundwater levels during drilling – low risk;
- Long term reduction in groundwater levels due to presence of cable ducting - low risk; and
- Impact on groundwater temperature through operational cable heating (noting comments around drought and combined effects of water abstraction in RI_G10) – low risk

For these risks to be considered 'low', secondary mitigation options including placement of offshore export cable within low permeability glacial clays to avoid water tables would need to be secured. Without this commitment, and without further design detail Natural England still has concerns regarding risk to these sites.