MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Outline Dust Management Plan

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Glossary

Term	Meaning
400 kV grid connection cables	Cables that will connect the proposed onshore substations to the existing National Grid Penwortham substation.
400 kV grid connection cable corridor	The corridor within which the 400 kV grid connection cables will be located.
Annoyance (dust)	Loss of amenity due to dust deposition or visible dust plumes, often related to people making complaints, but not necessarily sufficient to be a legal nuisance, as defined by the Institute of Air Quality Management.
Code of Construction Practice	A document detailing the overarching principles of construction, contractor protocols, construction-related environmental management measures, pollution prevention measures, the selection of appropriate construction techniques and monitoring processes.
Construction	Any activity involved with the provision of a new structure (or structures), its modification or refurbishment.
Development Consent Order	An order made under the Planning Act 2008, as amended, granting development consent.
Dust	Solid particles suspended in air or settled out onto a surface after having been suspended in air, as defined by the Institute of Air Quality Management.
Earthworks	Covers the processes of soil-stripping, ground-levelling, excavation, and landscaping, as defined by the Institute of Air Quality Management.
Effect	The term used to express the consequence of an impact. The significance of effect is determined by correlating magnitude of the impact with the importance, or sensitivity, of the receptor or resource in accordance with defined significance criteria.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
Impact	Change that is caused by an action/proposed development, e.g., land clearing (action) during construction which results in habitat loss (impact).
Landfall	The area in which the offshore export cables make landfall (come on shore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area at Lytham St. Annes between Mean Low Water Springs and the transition joint bay inclusive of all construction works, including the offshore and onshore cable routes, intertidal working area and landfall compound(s).
Local Authority	A body empowered by law to exercise various statutory functions for a particular area of the United Kingdom. This includes County Councils, District Councils and County Borough Councils.
Morecambe OWL	Morecambe Offshore Windfarm Limited is a joint venture between Zero-E Offshore Wind S.L.U. (Spain) (a Cobra group company) (Cobra) and Flotation Energy Ltd.

Term	Meaning
Morgan and Morecambe Offshore Wind Farms: Transmission Assets	The offshore and onshore infrastructure connecting the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm to the national grid. This includes the offshore export cables, landfall site, onshore export cables, onshore substations, 400 kV grid connection cables and associated grid connection infrastructure such as circuit breaker compounds. Also referred to in this report as the Transmission Assets, for ease of reading.
Morgan OWL	Morgan Offshore Wind Limited is a joint venture between bp Alternative Energy investments Ltd. and Energie Baden-Württemberg AG (EnBW).
Onshore export cables	The cables which would bring electricity from the landfall to the onshore substations.
Onshore export cable corridor	The corridor within which the onshore export cables will be located.
Onshore substations	The onshore substations will include a substation for the Morgan Offshore Wind Project: Transmission Assets and a substation for the Morecambe Offshore Windfarm: Transmission Assets. These will each comprise a compound containing the electrical components for transforming the power supplied from the generation assets to 400 kV and to adjust the power quality and power factor, as required to meet the UK Grid Code for supply to the National Grid.
Substation	Part of an electrical transmission and distribution system. Substations transform voltage from high to low, or the reverse by means of electrical transformers.
Trackout	The transport of dust and dirt from the construction/demolition site onto the public road network, where it may be deposited and then re-suspended by vehicles using the network, as defined by the Institute of Air Quality Management.
Transmission Assets	See Morgan and Morecambe Offshore Wind Farms: Transmission Assets (above).

Acronyms

Acronym	Meaning
CoCP	Code of Construction Practice
DCO	Development Consent Order
ES	Environmental Statement
IAQM	Institute of Air Quality Management
PM_{10}	Particulate matter with diameters of 10 micrometres or smaller

Units

Unit	Description
m	Metre
mph	Miles per hour
kV	Kilovolt

1 Outline Dust Management Plan

1.1 Background

1.1.1 Introduction

1.1.1.1 This document forms the Outline Dust Management Plan prepared for the Morgan and Morecambe Offshore Wind Farms: Transmission Assets (referred to hereafter as 'the Transmission Assets').

1.1.2 Implementation

1.1.2.1 This Outline Dust Management Plan forms an appendix to the Outline Code of Construction Practice (CoCP) (document reference J1). Following the granting of consent for the Transmission Assets, detailed Dust Management Plans will be prepared as a part of the detailed Code of Construction Practice(s) on behalf of Morgan OWL and/or Morecambe OWL, prior to commencement of the relevant stage of works and will follow the principles established in this Outline Dust Management Plan. The detailed Dust Management Plan(s) will require approval by the relevant planning authority following consultation with relevant stakeholders. The Applicants and all appointed contractors will be responsible for the implementation of the detailed Dust Management Plan(s).

1.1.2.2 The Applicants have committed to implementation of detailed Dust Management Plan(s) via the following commitment, CoT33 (see Volume 1, Annex 5.3: Commitments Register, document reference F1.5.3), and is secured by inclusion of Requirement 8 of the draft Development Consent Order (DCO) (document reference C1) Schedules 2A & 2B. Below sets out the requirement wording for Project A (Project B's requirement mirror those of Project A for this requirement and are, therefore, not repeated):

8.—(1) No stage of the Project A onshore works or Project A intertidal works may commence until for that stage a code of construction practice has been submitted to and approved by the relevant planning authority following consultation as appropriate with Lancashire County Council, Natural England, the Environment Agency and, in relation to the Project A intertidal works or, if applicable to the Project A offshore works, the MMO.

(2) Each code of construction practice must accord with the outline code of construction practice and include, as appropriate to the relevant stage-…

(b) dust management plan (in accordance with the outline dust management plan);…

(3) The code of construction practice approved in relation to the relevant stage of the Project A onshore works must be followed in relation to that stage of the Project A onshore works.

1.1.2.3 The Transmission Assets may adopt a staged approach to the approval of DCO requirements. This will enable requirements to be approved in part or in whole, prior to the commencement of the relevant stage of works in accordance with whether staged approach is to be taken to the delivery of the each of the offshore wind farms.

1.1.2.4 For onshore and intertidal works (landward of Mean Low Water Springs), this approach will be governed by the inclusion of Requirement 3 within the draft DCO, which requires notification to be submitted to the relevant planning authority/authorities detailing whether Project A or Project B relevant works will be constructed in a single stage; or in two or more stages to be approved prior to the commencement of the authorised development.

1.2 Construction activities

1.2.1.1 The following types of activities during construction of the Transmission Assets could result in fugitive dust emissions:

- earthworks;
- handling and disposal of spoil;
- wind-blown particulate material from stockpiles;
- handling of loose construction materials; and
- movement of vehicles, both on and off site (trackout).

1.2.1.2 The level and distribution of construction dust emissions will vary according to factors such as the type of dust, duration and location of dust-generating activity, weather conditions and the effectiveness of dust suppression methods.

1.3 Sensitive receptors where impacts could occur

1.3.1.1 The locations of sensitive receptors where impacts could occur are identified in Volume 3, Chapter 9: Air quality of the ES (document reference: F3.9) and includes all receptors within 250 m of the construction activities. For ecological receptors, the sensitive receptors are designated ecological sites within 50 m of the construction activities.

1.4 Routine mitigation measures

1.4.1.1 The mitigation measures outlined in this document are based on the highly recommended measures for sites with high dust risk as detailed in the Institute of Air Quality Management (IAQM) guidance on the assessment of dust from demolition and construction (IAQM 2024).

1.4.1.2 Site-specific mitigation measures are divided into the following general measures applicable to all sites, measures specific to earthworks (**section 1.4.9**), construction (**section 1.4.8**) and the movement of dust and dirt from a construction site onto the public road network (referred to as trackout) (**section 1.4.10**).

1.4.2 Preparing and maintaining the site

1.4.2.1 The following site preparation and maintenance measures will be adhered to throughout the construction phase.

- Plan site layout so that machinery and dust causing activities are located away from receptors, where practicable.
- Remove materials that have a potential to produce dust from site as soon as practicable, unless being re-used on site. If they are being re-used on-site, cover as described below.
- If necessary and practicable, stockpiles may be covered, seeded or fenced to prevent wind whipping during dry periods.

1.4.3 Site management

1.4.3.1 The following site management measures will be adhered to throughout the construction phase.

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner and record the measures taken.
- Make the complaints log available to the relevant local authorities when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation.

1.4.4 Monitoring

1.4.4.1 The following monitoring measures will be adhered to throughout the construction phase.

- Undertake periodic on-site inspections.
- Carry out regular site inspections to monitor compliance with the detailed Dust Management.

1.4.5 Operations (construction phase)

1.4.5.1 The following operations measures will be adhered to throughout the construction phase.

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction.
- Provision of an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where practicable and appropriate.
- Use of covered skips where appropriate and practicable.

- Minimise drop heights from loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

1.4.6 Waste management

1.4.6.1 The following waste management measure will be adhered to throughout the construction phase.

- No bonfires or burning of waste material.

1.4.7 Operating vehicle/machinery and sustainable travel

1.4.7.1 The following measures will be adopted regarding operating machinery and travel.

- If practicable, ensure all vehicles switch off engines when stationary.
- Impose and signpost a maximum-speed-limit of 15 miles per hour (mph) on surfaced and 10 mph on un-surfaced haul roads and work areas. If long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate.
- Implement a travel plan that supports and encourages sustainable travel (also refer to the Outline Construction Traffic Management Plan (document reference J5)).

1.4.8 Measures specific to construction

1.4.8.1 Measures that will be implemented that are specific to construction are the following.

- Avoid scabbling (roughening of concrete surfaces), if possible.
- Where practicable, ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
- For smaller supplies of fine powder materials, ensure bags are sealed after use and stored appropriately to prevent dust.

1.4.9 Measures specific to earthworks

1.4.9.1 Measures that will be implemented that are specific to earthworks are the following.

- Where appropriate, re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.

1.4.10 Measures specific to trackout

1.4.10.1 Measures that will be implemented that are specific to trackout are the following.

- Where appropriate, use water-assisted dust sweeper(s) on the access and local residential roads, to remove, as necessary, any material tracked out of the site. Any measures related to final measures would be provided in the detailed Construction Traffic Management Plans.
- Avoid dry sweeping of large areas.
- Implement a wheel washing system at the onshore substations (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever practicable and the site size and layout permits.

1.5 Additional mitigation/control measures

1.5.1.1 Trigger levels have been defined to reduce nuisance dust effects at the nearest receptors during high-risk conditions. Nuisance relates to unacceptable effects of dust emissions.

1.5.1.2 The trigger levels established for the site include any of the following occurring, singly or in combination.

- Winds that are or are forecast to be above a moderate breeze (Beaufort scale 4 – described as conditions under which dust and loose paper are raised, small branches begin to move) on days when there has been no rainfall for the last three days or more.
- A dust complaint is received.
- A failure in equipment or control is identified or an abnormal/unintentional situation occurs, e.g., a spillage.

1.5.1.3 The additional controls to be employed if a trigger level is exceeded are set out below.

- If and where necessary, an increase frequency of use of the road sweeper, both on-site and on local roads.
- If and where necessary, use of additional dust suppression measures such as dampening of specific surfaces.

- If practicable, relocation of activities so that the distance between the source of emissions and the receptors is increased.

1.6 Procedures to check the dust controls/mitigation are effective

1.6.1 Monitoring

1.6.1.1 The results of any inspections which may take place will be recorded. The prevailing weather conditions and the activities undertaken at the time of the inspection will also be recorded in the site log.

1.6.1.2 If any of the trigger levels in **section 1.5** are exceeded and additional measures are employed, the frequency of the visual site boundary inspection will increase. If after two days, the results of such monitoring indicate that the additional control measures are not effective, the measures will be reviewed, and where possible additional measures will be identified.

1.6.1.3 An example indicative dust inspection sheet has been provided in **Table 1.1**.

Table 1.1: Indicative dust inspection sheet

Dust inspections sheet			Date		
Time of test					
Location of test e.g. street name etc					
Weather conditions (dry, rain, fog, snow etc):					
Temperature (very warm, warm, mild, cold or degrees if known)					
Wind strength (none, light, steady, strong, gusting) Use Beaufort scale if known					
Wind direction (e.g. from NE)					
Duration (of test)					
Constant or intermittent in this period or persistence					
Receptor sensitivity (see below)					
Is the source evident?					
Any other comments or observations					

1.6.2 Monitoring dust complaints

1.6.2.1 Complaints received during the construction process will be recorded in accordance with the Code of Construction Practice. Complaints can be an indicator and can provide a useful form of monitoring. However, it is important to bear in mind that complaints are only a symptom of annoyance or nuisance; there are various reasons why complaint records are not an exact indicator of dust annoyance or nuisance itself.

Receipt of a complaint

1.6.2.2 If any complaint is made by a member of the public about any matter associated with the construction works area, the complaint details will be logged. Once logged the complaint will be investigated to identify the source of the nuisance dust, so that any nuisance can be reduced or stopped.

1.7 References

IAQM (2024) Guidance on the assessment of dust from demolition and construction. Available at: h[redacted]/. Accessed: April 2024.