Partners in UK offshore wind

MONA OFFSHORE WIND PROJECT

Outline Artificial Light Emissions Plan

F03

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Image of an offshore wind farm

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Prepared for:

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Contents

Acronyms

Acronym	Description
BS	British Standard
CoCP	Code of Construction Practice
DCO	Development Consent Order
EIA	Environmental Impact Assessment
HSE	Health and Safety Executive
MLWS	Mean Low Water Springs

1 OUTLINE ARTIFICAL LIGHT EMISSIONS PLAN

1.1 Overview

1.1.1.1 This Outline Artificial Light Emissions Plan is provided as an appendix to the Outline Code of Construction Practice (CoCP) (Document Reference J26). It sets out the key management measures that will be implemented during the construction phase of the Mona Offshore Wind Project.

1.1.1.2 The Outline Artificial Emissions Plan seeks to manage potential impacts that occur from the construction of the onshore and intertidal elements of the Mona Offshore Wind Project. These elements occur landward of Mean Low Water Springs (MLWS) and comprise:

- Landfall
- Onshore Cable Corridor
- Onshore Substation
- 400kV Grid Connection Cable Corridor.

1.1.1.3 In addition to these elements, the Outline Artificial Light Emissions Plan also considers the temporary construction compounds, storage areas, accesses and mitigation areas required to support the construction of the Mona Offshore Wind Project.

1.1.1.4 The relevant planning authority for the landfall and the western section of the Onshore Cable Corridor (i.e. west of Bodelwyddan) is Conwy County Borough Council; the relevant planning authority for the eastern section of the Onshore Cable Corridor, the Onshore Substation and the 400kV Grid Connection Cable Corridor is Denbighshire County Council.

1.2 Purpose of the Outline Artificial Light Emissions Plan

1.2.1.1 The draft Development Consent Order (DCO) (Document Reference C1) includes a requirement for the preparation of a final CoCP. The final CoCP will be supported by a series of management plans including an Artificial Light Emissions Plan (as part of the final CoCP), which must be submitted to and approved by the relevant planning authority prior to the commencement of onshore works.

1.2.1.2 The purpose of this Outline Artificial Light Emissions Plan is to set out the key construction lighting measures that will be required during construction of the onshore and intertidal elements of the Mona Offshore Wind Project. Operational lighting will be in accordance with the requirement in the DCO.

1.2.1.3 This is an outline document based on the design set out in Volume 1, Chapter 3: Project Description of the Environmental Statement and includes measures that have been identified as part of the EIA process.

1.2.1.4 The Outline Artificial Light Emissions Plan should be read in conjunction with the Outline CoCP (Document Reference J26) and its supporting appendices.

1.3 Scope of the Outline Artificial Light Emissions Plan

1.3.1.1 The scope of this Outline Artificial Light Emissions Plan applies to the onshore site preparation works and construction activities of the Mona Offshore Wind Project

located landward of MLWS. The Plan does not apply to activities associated with offshore works (i.e. seaward of MLWS).

1.3.1.2 Onshore site preparation works will be undertaken prior to the commencement of construction. These works will be undertaken in line with this Outline Artificial Light Emissions Plan as certified through the DCO.

1.3.1.3 The final Artificial Light Emissions Plan will be in accordance with the principles established in the Outline Artificial Light Emissions Plan and will be agreed with the relevant authority prior to commencing construction of the relevant stage of the onshore and intertidal works (above MLWS). For the purpose of this Plan, the term 'construction' includes all related engineering, construction and restoration activities as authorised by the DCO within the Order Limits.

1.4 Roles and Responsibilities

1.4.1 Overview

1.4.1.1 The key roles and associated responsibilities with regard to this Outline Artificial Light Emissions Plan are set out below. The Construction (Design and Management) Regulations 2015 also identify the legal duties, responsibilities and obligations of all the major roles within the construction team.

1.4.1.2 The responsibilities of each role will be refined as necessary in the final Artificial Light Emissions Plan.

1.4.2 Applicant

1.4.2.1 The Applicant will be responsible for the following:

- Ensuring that the Artificial Light Emissions Plan is implemented effectively
- Giving necessary direction to contractors (for example, setting contractual obligations)
- Reviewing, revising and refining the Artificial Light Emissions Plan (where necessary) in conjunction with the Principal Contractor.

1.4.3 Principal Contractor

1.4.3.1 The Principal Contractor will be appointed by the Applicant and has the overall responsibility for:

- Updating and delivering the final Artificial Light Emissions Plan on behalf of the Applicant
- Ensuring all procedures in the Artificial Light Emissions Plan are followed
- Ensuring all contractors are suitably qualified and experienced in implementing the measures within the Artificial Light Emissions Plan
- Maintaining records relevant to the Artificial Light Emissions Plan.

1.4.4 Contractors/Sub contractors

1.4.4.1 Contractors and sub-contractors will be required to understand their responsibilities and implement the measures within the Artificial Light Emissions Plan (e.g. task-based lighting will be switched off after use and at the end of the working shift).

1.5 Construction Lighting Requirements

1.5.1 Locations

1.5.1.1 The majority of construction activities for the Mona Offshore Wind Project will be undertaken under natural light conditions where reasonably practicable. However, where there is insufficient natural light for construction to continue safely and effectively, or where night-time working is required, construction lighting will be required.

1.5.1.2 The key locations where construction lighting is likely to be required are:

- Temporary construction compounds – security lighting, circulation areas, access tracks from the public highway to the compounds
- Onshore Cable Corridor, Onshore Substation and 400kV Grid Connection Cable Corridor – daytime works during the winter months
- Transition Joint Bays and complex trenchless technique locations where extended hours are required
- Perimeter of temporary construction compounds, emergency routes and footpath crossing points.

1.5.2 Design principles

1.5.2.1 The design of lighting required to support the construction of the Mona Offshore Wind Project will be in accordance with the following regulations, standards and guidance documents:

- Institution of Lighting Professionals. (2021). Guidance Note 1 for the reduction of obtrusive light 2021.
- Building Construction (2020) Building Construction Handbook 12th edition
- Health and Safety Executive (HSE) (2015) Managing health and safety in construction HSE L153
- Ministry of Housing, Communities & Local Government (2014). Light pollution. [online] GOV.UK.
- British Standard BS EN 12464-2:2014 Light and lighting. Lighting of workplaces. Outdoor workplaces
- Society of Light and Lighting (2012) Code of Lighting
- HSE (2006) Health and safety in construction 3rd edition HSG150.

1.5.2.2 Lighting will be designed and positioned to:

- Provide the necessary levels for safe working
- Minimise light spillage or pollution
- Minimise disturbance to adjoining residents or occupiers.
- Avoid impacts on retained ecological habitats.

1.5.2.3 Appropriate task lighting will be used to direct light towards the working areas during the night-time or during low light conditions. Task lighting would be positioned at low levels on towers around the specific construction areas and directed to most frequently

used areas of work to provide the necessary levels for safe working and avoid causing glare or annoyance to sensitive receptors.

1.5.2.4 Surface mounted lighting arrangements may provide lighting for perimeter fencing, walkways and circulation areas at compounds. Luminaires will direct the lighting downward (and avoid tilting) and limit the lighting to within the intended area.

1.5.2.5 Lighting placed close to sensitive ecological and human receptors will take into account the following:

- Light intensity will be in accordance with CDM requirements
- Light spills towards any retained linear features will be reduced to a minimum (using cowls as necessary).

1.5.2.6 Where practicable, power to temporary lighting will be taken from mains supplies rather than from portable generators. Where portable generators are used, industry best practice will be followed to minimise noise and pollution from generators (in accordance with the Construction Noise and Vibration Management Plan, as part of the CoCP).

1.5.2.7 Details of the location, height, design and luminance of floodlighting and task lighting to be used during the construction of the Mona Offshore Wind Project will be set out in the final Artificial Light Emissions Plan.

1.6 Monitoring

1.6.1.1 The Principle Contractor(s) will be responsible for undertaking a programme of adaptive monitoring. This will involve undertaking regular inspections of artificial light sources and ensuring the appropriate mitigation measures are put in place depending on the conditions experienced at the time on potential ecological and human receptors. If during the inspections, non-conformity with any control or mitigation measure is identified, it will be recorded and appropriate remedial action will be undertaken and implemented where necessary (e.g. re-directing the lighting or re-positioning of the shielding).

1.6.1.2 The Communication Liaison Officer will respond to enquiries regarding lighting during the construction process from relevant stakeholders and parties. Further information on communication is provided in the Communications Plan (Document reference J26.4). The Communication Plan (Document reference J26.4) is part of the CoCP, which is secured as a requirement in the draft DCO.

1.7 References

Institution of Lighting Professionals. (2021). Guidance Note 1 for the reduction of obtrusive light 2021. Available at: https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/

Building Construction (2020) Building Construction Handbook 12th edition

Health and Safety Executive (HSE) (2015) Managing health and safety in construction HSE L153

Ministry of Housing, Communities & Local Government (2014). Light pollution. [online] GOV.UK. Available at: https://www.gov.uk/guidance/light-pollution

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