

MONA OFFSHORE WIND PROJECT

Outline Code of Construction Practice

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Image of an offshore wind farm

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Glossary

Term	Meaning
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 Traffic Management Plan	A document detailing the construction traffic routes for heavy goods vehicles and personnel travel, protocols for delivery of Abnormal Indivisible Loads to site, measures for road cleaning and sustainable site travel measures
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
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.
Ordinary watercourses	A river, stream, ditch, cut, sluice, dyke or non-public sewer that is not a designated Main river, and for which the local authority has flood risk management responsibilities and powers.
Protected species	A species of animal or plant which it is forbidden by law to harm or destroy.
Surface water runoff	Surface water runoff is flow of water that occurs when excess stormwater, meltwater, or other sources of water flows over a surface.
Tidal (Coastal) flooding	Tidal flooding is caused by extreme tidal conditions including high tides and storm surges, overtopping local flood defences or coastal features
Toolbox talks	A short presentation to the workforce on a single topic (e.g., health and safety, best practice).
Water quality	The physical, chemical and biological characteristics of water.

Acronyms

Acronym	Description
ALO	Agricultural Liaison Officer
BCT	Bat Conservation Trust
BS	British Standard
CCBC	Conwy County Borough Council
CEZ	Construction Exclusion Zone
CL:AIRE	Contaminated Land: Applications in Real Environments
CLO	Community Liaison Officer
CoCP	Code of Construction Practice
CTMP	Construction Traffic Management Plan
DCC	Denbighshire County Council

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Acronym	Description
DCO	Development Consent Order
ECoW	Ecological Clerk of Works
EHO	Environmental Health Officer
EMS	Environmental Management System
GCN	Great crested Newt
HDPE	High density polyethylene
HGV	Heavy Goods Vehicle
IAQM	Institute of Air Quality Management
ILP	Institute of Lighting Professionals
LEMP	Landscape and Ecology Management Plan
MLWS	Mean Low Water Springs
MMP	Materials Management Plan
NRW	Natural Resources Wales
PRoW	Public Right of Way
RAMS	Reasonable Avoidance Measures
SWRMP	Site Waste and Resource Management Plan
TCC	Temporary construction compounds
WSI	Written Scheme of Investigation

Units

Unit	Description
%	Percentage
cm	Centimetre
ha	Hectares
kV	Kilovolt
m	Metres
mm	Millimetres

1 Outline Code of Construction Practice

1.1 Introduction

1.1.1.1 This document forms the Outline Code of Construction Practice (CoCP) that supports the Development Consent Order (DCO) application for the Mona Offshore Wind Project.

1.1.1.2 The Outline CoCP presents the framework and outline of measures to manage potential environmental 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:

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

1.1.1.3 In addition to these elements, the Outline CoCP 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 (CCBC); 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 (DCC).

1.2 Purpose of the Outline CoCP

1.2.1.1 The draft Development Consent Order (DCO) (Document Reference: C1 F04) includes a requirement for the preparation of a final CoCP. The final CoCP will be supported by a series of management plans as listed in Table 1.1. The final CoCP 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 CoCP is to set out a written set of standards and measures that will be implemented during the construction process to ensure a consistent and effective approach to managing potential environmental impacts in order to minimise nuisances to communities and to safeguard the environment. The measures include strategies, control measures and monitoring procedures for managing the potential environmental impacts and limiting disturbance from construction activities as far as reasonably practicable.

1.2.1.3 This is an outline document that is based on the design assessed in the Environmental Statement (see Volume 1, Chapter 3: Project description of the Environmental Statement (Document Reference F1.3)).

1.2.1.4 This Outline CoCP incorporates legislative requirements, current standards and best practice measures to define the standards of construction practice that contractors will be required to adopt and implement. However, compliance with this Outline CoCP will not absolve the Applicant, Principal Contractors or subcontractors from compliance with all legislation and byelaws relating to their construction activities.

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1.3 Scope of the Outline CoCP

1.3.1.1 The scope of this Outline CoCP applies to the onshore site preparation works and construction activities of the Mona Offshore Wind Project located landward of MLWS. The Outline CoCP does not apply to activities associated with the offshore works (i.e. seaward of MLWS).

1.3.1.2 Onshore site preparation works will be undertaken prior to the commencement of construction and comprise the following activities (as defined in the draft DCO (Document Reference C1)):

- Site clearance
- Demolition
- Early planting of landscaping works
- Archaeological investigations
- Environmental surveys
- Ecological mitigation
- Investigations for the purpose of assessing ground conditions
- Remedial work in respect of any contamination or other adverse ground conditions
- The diversion and laying of utilities and services
- Site security works
- The erection of any temporary means of enclosure
- The erection of temporary hard standing
- The erection of welfare facilities
- Creation of site accesses
- The temporary display of site notices or advertisements.

1.3.1.3 The onshore site preparation works listed in 1.3.1.2 will be carried in accordance with the measures set out in this Outline CoCP as secured by the draft DCO.

1.3.1.4 The final CoCP (or CoCPs) will be in general accordance with the principles established in the Outline CoCP and will be agreed with the relevant authority prior to commencing the relevant stage of the onshore and intertidal works (landward of 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 Structure of the Outline CoCP

1.4.1.1 This Outline CoCP follows the structure below:

- Section 1.5 sets out the documents that will be included in the CoCP
- Section 1.6 identifies the key roles and responsibilities of the project team
- Section 1.7 set out the general principles for the implementation of the CoCP
- Section 1.8 describes the general requirements that will be implemented during construction

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- Section 1.10 identifies the management measures for each environmental topic listed below:
 - Traffic management
 - Noise and vibration
 - Dust and air quality
 - Protection of surface water and groundwater environment
 - Onshore ecology and nature conservation
 - Landscape and visual resources.

1.5 Accompanying documents to the CoCP

1.5.1.1 Table 1.1 sets out the outline management plans that append the Outline CoCP (as secured by a requirement in the draft DCO (Document Reference C1)) and the purpose of each document. The outline versions of these plans set out the measures that will be implemented during the onshore site preparation works. Table 1.1 explains how each outline management plan relates to the onsite preparation works.

Table 1.1: Documents to support the implementation of the CoCP.

Outline management plan	Purpose of the outline plan	Onshore site preparation works activities covered by the Plan
Outline Spillage and Emergency Response Plan (Document Reference J26.1)	To set out emergency procedures in case of spillages, leaks or accidents.	<ul style="list-style-type: none"> • Site clearance) • Demolition • Ecological mitigation • Remedial work in respect of any contamination of other adverse ground conditions • The erection of temporary hard standing • The erection of welfare facilities • Creation of site accesses
Outline Dust Management Plan (Document Reference J26.2)	To set out dust control measures in line with Institute of Air Quality Management guidance.	<ul style="list-style-type: none"> • Site clearance • Demolition • Ecological mitigation • Remedial work in respect of any contamination of other adverse ground conditions • The diversion and laying of utilities and services • The erection of temporary hard standing • The erection of welfare facilities • Creation of site accesses

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Outline management plan	Purpose of the outline plan	Onshore site preparation works activities covered by the Plan
<p>Outline Construction Noise and Vibration Management Plan (Document Reference J26.3)</p>	<p>To set out details of Best Practicable Means to manage noise levels and noise monitoring during construction.</p>	<ul style="list-style-type: none"> • Site clearance • Demolition • Ecological mitigation • Remedial work in respect of any contamination of other adverse ground conditions • The diversion and laying of utilities and services • Site security works • The erection of temporary hard standing • The erection of welfare facilities • Creation of site accesses
<p>Outline Communications Plan (Document Reference J26.4)</p>	<p>To set out a framework for engaging stakeholders (i.e. sets out methods of contacting and engaging with affected groups; methods of providing advance notifications); roles and responsibilities for implementing the communication plan; and complaints procedure.</p>	<ul style="list-style-type: none"> • Site clearance • Demolition • Early planting of landscaping works • Archaeological investigations • Environmental surveys • Ecological mitigation • Investigations for the purpose of assessing ground conditions • Remedial work in respect of any contamination of other adverse ground conditions • The diversion and laying of utilities and services • Site security works • The erection of any temporary means of enclosure • The erection of temporary hard standing • The erection of welfare facilities • Creation of site accesses • The temporary display of site notices or advertisements

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Outline management plan	Purpose of the outline plan	Onshore site preparation works activities covered by the Plan
Outline Construction Fencing Plan (Document Reference J26.5)	To set out the type of fencing, its location, its maintenance during construction and its removal.	<ul style="list-style-type: none"> • Site clearance • Demolition • Early planting of landscaping works • Archaeological investigations • Ecological mitigation • Investigations for the purpose of assessing ground conditions • Remedial work in respect of any contamination of other adverse ground conditions • The diversion and laying of utilities and services • Site security works • The erection of any temporary means of enclosure • The erection of temporary hard standing • Creation of site accesses
Outline Construction Surface Water and Drainage Management Plan (Document Reference J26.6)	To set out measures to minimise the pollution risk to waterbodies from contamination runoff and to minimise flood risk from increased surface water runoff	<ul style="list-style-type: none"> • Ecological mitigation • The erection of temporary hard standing • The diversion and laying of utilities and services • The erection of welfare facilities • Creation of site accesses.
Outline Flood Management Plan (Document Reference J26.7)	To set flood warning and evacuation procedures for construction support workers on Llanndulas Beach	<ul style="list-style-type: none"> • Site security works
Outline Soil Management Plan (Document Reference J26.8)	To set out measures to conserve soil resources; avoid damage to soil structure; maintain soil drainage during construction; and identify principles for the reinstatement of the soil profile following the construction.	<ul style="list-style-type: none"> • Investigations for the purpose of assessing ground conditions • Archaeological investigations • Remedial work in respect of any contamination of other adverse ground conditions • The diversion and laying of utilities and services • The erection of temporary hard standing • Creation of site accesses

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Outline management plan	Purpose of the outline plan	Onshore site preparation works activities covered by the Plan
Outline Site Waste and Resource Management Plan (Document Reference J26.9)	To manage wastes generated and resource use during the construction phase of Mona Offshore Wind Project.	<ul style="list-style-type: none"> • Site clearance • Demolition • Remedial work in respect of any contamination of other adverse ground conditions • The diversion and laying of utilities and services • The erection of temporary hard standing • The erection of welfare facilities • Creation of site accesses
Outline Artificial Light Emissions Plan (Document Reference J26.10)	To set out construction lighting requirements and the measures to control light spill.	<ul style="list-style-type: none"> • Site security works • The erection of welfare facilities
Outline Biosecurity Protocol (Document Reference J26.11)	To set out the measures for managing biosecurity risks, including invasive species, diseases and pathogens.	<ul style="list-style-type: none"> • Site clearance • Demolition • Early planting of landscaping works • Archaeological investigations • Environmental surveys • Ecological mitigation • Investigations for the purpose of assessing ground conditions • Remedial work in respect of any contamination or other adverse ground conditions • Creation of site accesses
Outline Discovery Strategy for Contaminated Land (Document Reference J26.12)	To set out the procedures if unexpected contamination is encountered during construction	<ul style="list-style-type: none"> • Demolition • Archaeological investigations • Ecological mitigation • Investigations for the purpose of assessing ground conditions • Remedial work in respect of any contamination or other adverse ground conditions • The diversion and laying of utilities and services • The erection of temporary hard standing • Creation of site accesses
Outline Construction Traffic Management Plan (Document Reference J26.13)	To set out details of routes for construction traffic; delivery timings and logistics; location of wheel wash facilities.	<ul style="list-style-type: none"> • The diversion and laying of utilities and services • Creation of site accesses

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Outline management plan	Purpose of the outline plan	Onshore site preparation works activities covered by the Plan
Outline Landfall Construction Method Statement (Document Reference J26.14)	To set out construction methods for the Landfall and Transition Joint Bay	<ul style="list-style-type: none"> • Site clearance • Demolition
Outline Onshore Construction Method Statement (Document Reference J26.15)	To set out the construction methods for key activities including watercourse crossings along the Onshore Cable Corridor, the set up of temporary construction compounds and the construction of the Onshore Substation	<ul style="list-style-type: none"> • Site clearance • The diversion and laying of utilities and services • Site security works • The erection of welfare facilities • Creation of site accesses
Outline Highways Access Management Plan (Document Reference J26.16)	To set out the details and preliminary access designs for all temporary construction compound (TCC) accesses and the Onshore Substation access.	<ul style="list-style-type: none"> • The diversion and laying of utilities and services • Creation of site accesses
Outline Public Rights of Way Management (PRoW) Strategy (Document Reference J26.17)	To set out management measures for public rights of way including bridleways and footpaths and other routes for non-motorised users during the construction.	<ul style="list-style-type: none"> • The erection of temporary means of enclosure • Creation of site accesses
Outline Arboriculture Method Statement (Document Reference J26.18)	To set out measures to prevent potential harm to retained trees.	<ul style="list-style-type: none"> • Site clearance • Early planting of landscaping works • The erection of temporary means of enclosure • Creation of site accesses

- 1.5.1.2 The Outline CoCP should be read alongside the following documents:
- Outline Landscape and Ecology Management Plan (Document Reference J22)
 - Outline Onshore Written Scheme of Investigation (WSI) (Document Reference J23)
 - Design Principles (Document Reference J3).

1.5.1.3 The final CoCP(s) will be in general accordance with the principles established in the Outline CoCP and will be agreed with the relevant authority prior to commencing construction of the relevant stage of the onshore and intertidal works (above MLWS) alongside any relevant activity-specific final versions of the management plans as listed in Table 1.1 (as secured by a requirement in the draft DCO (PDA-003)).

1.6 Roles and responsibilities

1.6.1 Project team

1.6.1.1 Whilst the key roles for the construction project team will not be assigned until post consent, the environmental roles required to implement the Outline CoCP are set out below.

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Primary management

- 1.6.1.2 The Applicant and its onshore project management team will be responsible for coordinating the onshore and intertidal works, ensuring that the measures in the CoCP are being implemented and giving necessary direction to Principal Contractor(s) (e.g. setting contractual obligations). The Principal Contractor(s) management team will be responsible for coordinating the works within each Principal Contractor(s) respective contracts.

Secondary management

Site Manager

- 1.6.1.3 The Site Manager will be responsible for maintaining the CoCP document and systems as a working document; ensuring environmental standards are adhered to and monitoring compliance during construction; carrying out regular monitoring and inspections of construction work activities; and undertaking staff induction courses on environmental issues, with support from the dedicated Environmental Coordinator and environmental specialists. The Site Manager will be responsible for recording the content and attendance for all site inductions and tool-box talk activities.
- 1.6.1.4 Responsibilities will also include managing the coordination between the environmental specialists and the engineering teams.

Environmental Co-ordinator

- 1.6.1.5 The Environmental Co-ordinator will be responsible for the interface between the environmental specialists and the Principal Contractor(s). They will have the primary responsibility for managing environmental issues through the construction and post-construction monitoring (where applicable) and for obtaining the relevant licences and consents. Where particular environmental constraints are present, the Environmental Coordinator will be responsible in ensuring all staff are briefed on these constraints via induction or daily tool-box talks.

Health and Safety Manager

- 1.6.1.6 The Health and Safety Manager will be responsible for identifying and managing health and safety risk for the onshore and intertidal works, in accordance with legal requirements and best practice, which will be set out in the Health and Safety Plan prepared post-consent.

Technical roles

- 1.6.1.7 In addition to the roles below, the project team will also include an Ecological Clerk of Works (ECoW), a Communication Liaison Officer and an Arboriculture Consultant. These roles are defined in the Outline LEMP (Document Reference J22), the Outline Communications Plan (Document Reference J26.4) and the Outline Arboriculture Method Statement (Document Reference J26.18) respectively.

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Clerk of Works

- 1.6.1.8 The Clerk of Works will be the site representative and would be responsible for overseeing construction activities to ensure all environmental commitments are met and compliance with the conditions of all licences and permits.

Agricultural Liaison Officer

- 1.6.1.9 The Agricultural Liaison Officer (ALO) will be appointed prior to the commencement of onshore site preparation works and will be the principal contact for ongoing engagement about practical matters with landowners and occupiers before and during the construction process.
- 1.6.1.10 The ALO (or their company) will be contactable within the core working hours during the construction phase to landowners and occupiers and will provide 24-hour team or company contact details for use in the case of emergency.

Archaeological Clerk of Works

- 1.6.1.11 The Archaeological Clerk of Works will report on archaeological matters and will be responsible for undertaking the roles as set out in the Outline Onshore WSI (Document Reference J23).

1.7 General principles

1.7.1 Introduction

- 1.7.1.1 This section sets out the over-arching principles being proposed for the implementation of the CoCP.

1.7.2 Construction principles

- 1.7.2.1 The Mona Offshore Wind Project will be constructed in an environmentally sensitive manner and will meet the requirements of all relevant legislation, codes of practice and standards as identified in the DCO and Environmental Statement.

1.7.3 Health and safety principles

- 1.7.3.1 Appropriate industry standards will be adopted and implemented for the health, safety and welfare of the construction staff on the Mona Offshore Wind Project. Arrangements will also be put in place to discharge duties under the Construction (Design and Management) Regulations 2015.
- 1.7.3.2 A Health and Safety Plan for the onshore works will be prepared by the Principal Contractor(s) post consent. The Health and Safety Plan will set out how the health and safety risks to construction workers, visitors and the public are identified and managed in accordance with legal requirements and best practice for the onshore works.

1.7.4 Environmental management

- 1.7.4.1 Each Principal Contractor is to be British Standard (BS) EN ISO 14001 (Environmental Management System (EMS)) certified. The EMS will provide the process for which environmental management is undertaken to ensure that the relevant findings of the

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Environmental Statement are addressed during the construction phase. The EMS will set out:

- The procedures to be implemented to monitor compliance with environmental legislation and other relevant requirements
- The key environmental aspects of the construction works and how they will be managed
- Staff competence and training requirements
- Record-keeping arrangements
- Monitoring compliance and the effectiveness of the measures included within the CoCP, as approved by the relevant planning authority in consultation with the relevant stakeholders.

1.7.4.2 As part of the EMS, the Principal Contractors will be required to plan their works in advance to ensure the works incorporate measures to reduce environmental effects.

1.7.5 Outline and final CoCPs

1.7.5.1 The Outline CoCP and later the final CoCP(s) will be incorporated into the contracts for the Principal Contractors of all onshore and intertidal works authorised by the DCO. All Principal Contractors, subcontractors and their suppliers will be required to comply with all provisions of the Outline CoCP and detailed CoCP and provide evidence on how they will ensure its requirements are implemented and monitored.

1.7.5.2 During the construction process, the implementation of the measures within the detailed CoCP will be monitored to ensure the measures are implemented correctly and that the measures remain effective. Management measures will be updated where necessary in discussion with the relevant planning authority.

1.7.6 Construction method statements

1.7.6.1 The Landfall Construction Method Statement and Onshore Construction Method Statement form part of the CoCP and will be secured through a requirement of the DCO. The method statements will describe how specific construction activities will be undertaken based on construction industry good practice guidance, legislative requirements and measures from the final CoCP. They will include detailed method statements for the construction of the Landfall, Onshore Cable Corridor, Onshore Substation and 400kV Grid Connection Cable Corridor and activities such as the watercourse crossings. The final Landfall Construction Method Statement and Onshore Construction Method Statement will be in general accordance with the Outline Landfall Construction Method Statement and the Outline Onshore Construction Method Statement included in the DCO application (Document Reference J26.14 and J26.15 respectively).

1.7.7 Training

1.7.7.1 All onshore and intertidal construction staff employed on the Mona Offshore Wind Project will receive training on their responsibilities for minimising the risk to the environment and implementing the measures set out in the CoCP.

1.7.7.2 The appointed Principal Contractor(s) will (in accordance with the requirements of the CDM Regulations, 2015) ensure all its workers have site-specific inductions and any further information and training they need. The training will include site briefings and

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toolbox talks to equip the workforce with the necessary knowledge on health, safety and environmental topics, and the relevant environmental control measures pertinent to works to be carried out that day.

1.8 General requirements

1.8.1 Programme

1.8.1.1 The programme for the construction of the Mona Offshore Wind Project is set out in Volume 1, Chapter 3: Project description of the Environmental Statement (Document Reference F1.3).

1.8.2 Working hours

Core working hours

1.8.2.1 Core working hours for the construction of the onshore and intertidal elements of the Mona Offshore Wind Project as secured in the DCO and are set out below:

- 07:00 to 19:00 Monday to Saturday
- No core working proposed on Sundays or bank holidays
- Up to one hour before and after core working hours for mobilisation (“mobilisation period”).

1.8.2.2 During the mobilisation period, the contractor may undertake the following activities:

- Arrival and departure of the workforce at the site, and movement to and from areas across the Mona Offshore Wind Project
- Site inspections and safety checks; site meetings
- Site clean-up (site housekeeping that does not require the use of plant)
- Low-key maintenance including site maintenance, safety checking of plant and machinery (provided this does not require or cause hammering or banging).

1.8.2.3 Mobilisation does not include heavy good vehicle (HGV) movements into and out of construction areas (i.e. HGV movements should only occur at the construction areas during the core working hours unless otherwise agreed) but suppliers can make use of the wider highway network outside these hours to travel.

Extended working hours

1.8.2.4 In certain circumstances, specific works may have to be undertaken outside the core working hours listed in paragraph 1.8.2.1 in order to maintain time critical activities. These activities will be agreed by giving at least 48 hours’ notice in advance of the works to the relevant planning authority. The activities where extended hours may be required are listed below: :

- Landfall works
- Complex trenchless techniques: these activities may require 24-hour machinery operation, dependent on the ground conditions
- Delivery and installation of Onshore Substation components
- Oil filling of transformers at the Onshore Substation

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- Concrete works and finishing at the Onshore Substation
- Commissioning of the Onshore Substation
- Electrical circuit pulling, jointing and testing along the Onshore Cable Corridor
- Dewatering activities
- Programme of safety critical operations.

Emergency works

1.8.2.5 Emergency works may also be undertaken outside of the core working hours. In the event of any emergency, notification of the emergency will be given to the relevant planning authority and highways authority as soon as reasonably practicable.

1.8.3 General site layout and good housekeeping

1.8.3.1 Where reasonably practicable, measures will be taken to contain and limit the visual intrusion of the onshore construction sites. Where possible, the location and layout of the compounds (e.g. siting of welfare facilities) will be designed to avoid overlooking residential properties. Layout plans of the construction compounds will be provided, showing any sensitive areas and buffer zones (e.g. ecological habitats or protected species), and areas where storage of potential pollutants (e.g. fuels, oils and other chemicals) will be avoided.

1.8.3.2 A good housekeeping policy will be applied to the construction areas at all times. As far as reasonably practicable, the following principles will be applied:

- All working areas will be kept in a clean and tidy condition
- Adequate welfare facilities will be provided for the construction staff – including mess rooms, locker rooms, showers and toilet facilities in compliance with The Construction (Design and Management) Regulations 2015
- Smoking areas at site offices/compounds or work sites will be equipped with containers for smoking wastes – these will not be located at the boundary of working areas or adjacent to neighbouring land
- All necessary measures will be taken to minimise the risk of fire and the contractor will comply with the requirements of the local fire authority
- Waste from the construction areas will be stored securely to prevent wind blow
- Waste (particularly food waste) will be removed from the welfare facilities at frequent intervals.

1.8.4 Site security, screening and fencing

1.8.4.1 Construction compounds will be secured to minimise the opportunity for unauthorised entry; temporary fencing will also be provided along the Onshore Cable Corridor, 400kV Grid Connection Cable Corridor and Mona Onshore Substation. The type of fencing will be selected to suit its location and purpose in line with the approved Construction Fencing Plan, which is part of the CoCP; the CoCP is secured as a requirement in the DCO. An Outline Construction Fencing Plan is included in DCO application (Document Reference J26.5).

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1.8.5 Lighting

1.8.5.1 External lighting of the construction work areas and temporary construction compounds will be in line with the Artificial Light Emissions Plan as secured by a requirement 9 (as part of the CoCP) of the draft DCO (Document Reference C1). An Outline Artificial Light Emissions Plan is included in the DCO application (Document Reference J26.10). Lighting will be designed and positioned to:

- Provide the necessary levels for safe working
- Minimise light spillage or pollution
- Minimise disturbance to adjoining residents and occupiers of buildings and to wildlife.

1.8.5.2 Lighting during construction will take into account the requirements set out in British Standard EN 12464-2:2014 (BSI, 2014) and the Bat Conservation Trust (BCT) Guidance Note 8 Bats and artificial lighting (BCT, 2018) and the BCT and Institute of Lighting Professionals (ILP) Guidance Note GN08/23. Lighting units will be designed to minimise illumination outside the construction works area (e.g., will be directional, task orientated and where possible, fully shielded and will include directional beams, non-reflective surfaces and barriers and screens). Construction phase lighting will be limited to permitted working hours in low light conditions, with lower-level security lighting outside these times. Details regarding the location, height, design and luminance of lighting for planned construction works (including measures to limit obtrusive glare to nearby properties) will be set out in the final Artificial Lighting Emissions Plan that will be progressed post-consent.

1.8.6 Management of construction waste

1.8.6.1 Waste from the construction of the Mona Offshore Wind Project will be managed in accordance with the principles of the waste hierarchy (i.e. avoid, reduce, reuse, recycle, recover and disposal) and the Site Waste Management Plan (SWMP), which is part of the CoCP. The CoCP is secured as a requirement in the DCO. An Outline SWMP is included in the DCO application (Document Reference J26.9). The SWMP will be updated during the detailed design process and will be maintained by the Principal Contractors during the construction process to record the movement of waste from the construction areas. All waste will be transported and managed by appropriately licenced contractors and subject to the duty of care requirements.

1.8.7 Materials management

1.8.7.1 A Materials Management Plan (MMP) will be prepared during the detailed design process in line with the CL:AIRE (Contaminated Land: Applications in Real Environments) Definition of Waste: Development Industry Code of Practice (CL:AIRE, 2011).

1.8.8 Pest control

1.8.8.1 The risk of pest/vermin infestation will be reduced by ensuring any putrescible waste is stored appropriately and regularly collected from the construction areas, and effective preventative pest control measures are implemented. Any pest infestation will be dealt with promptly and notified to the relevant local authority as soon as practical.

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1.8.9 Emergency planning and procedures

1.8.9.1 Emergency procedures will be developed by each Principal Contractor for the onshore elements of the Mona Offshore Wind Project, taking into account the anticipated hazards and the conditions at each work site. The procedures will be documented in a Spillage and Emergency Response Plan, which is part of the CoCP; the CoCP is secured as a requirement of the DCO. An Outline Spillage and Emergency Response Plan is included in the DCO application (Document Reference J26.1). The final Spillage and Emergency Response Plan will include emergency pollution control measures (based on NRW guidelines where appropriate), bentonite breakout plan, fire and site evacuation, and spill prevention control procedures and instructions to workforce. The Spillage and Emergency Response Plan will also contain emergency phone numbers and the procedures for notifying the relevant planning authority and statutory authorities where applicable. The procedures will be displayed at the work sites and all site staff will be required to follow them.

1.8.10 Surface water drainage management

1.8.10.1 The Principal Contractors will develop and implement appropriate measures to minimise the pollution risk to waterbodies from contamination surface runoff and to minimise the flood risk from increased surface runoff. Surface runoff will be managed in accordance with measures set out in the Construction Surface Water and Drainage Management Plan, which is part of the CoCP; the CoCP is secured as a requirement in the DCO. An Outline Construction Surface Water and Drainage Management Plan is included in the DCO application (Document Reference J26.6).

1.8.11 Communication plan

1.8.11.1 The Principal Contractors will follow a proactive approach in communications in accordance with the Communications Plan, which forms part of the CoCP; the CoCP is secured as a requirement in the DCO. Under the plan, occupiers of nearby properties and relevant planning authorities will be informed in advance of works taking place, (in particular, those affecting Public Right of Way (PRoW) and local roads) including the duration of the works. The means of notification will be confirmed in the final Communication Plan as the communication plan is developed post consent.

1.8.11.2 The Communications Plan will also include a complaints procedure: complaints will be investigated and, where required, mitigation will be implemented. All complaints will be logged and the response will be recorded. An Outline Communications Plan is included in the DCO application (Document Reference J26.4).

1.9 Temporary construction compounds

1.9.1 Overview

1.9.1.1 A hierarchy of temporary construction compounds (TCCs) will be provided within the Mona Onshore Development Area (see Figure 1.1) and will comprise:

- primary TCC
- secondary TCCs
- Landfall TCC
- Onshore Substation TCC.

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- 1.9.1.2 The TCCs will be established by stripping and storing soils; crushed stone or other suitable material will be used across the area to create hardstanding. Tarmacked areas will also be provided in areas of heavy vehicle use (e.g. car parking, access from public highway).
- 1.9.1.3 A temporary laydown area will also be provided on the construction access road of the Onshore Substation.

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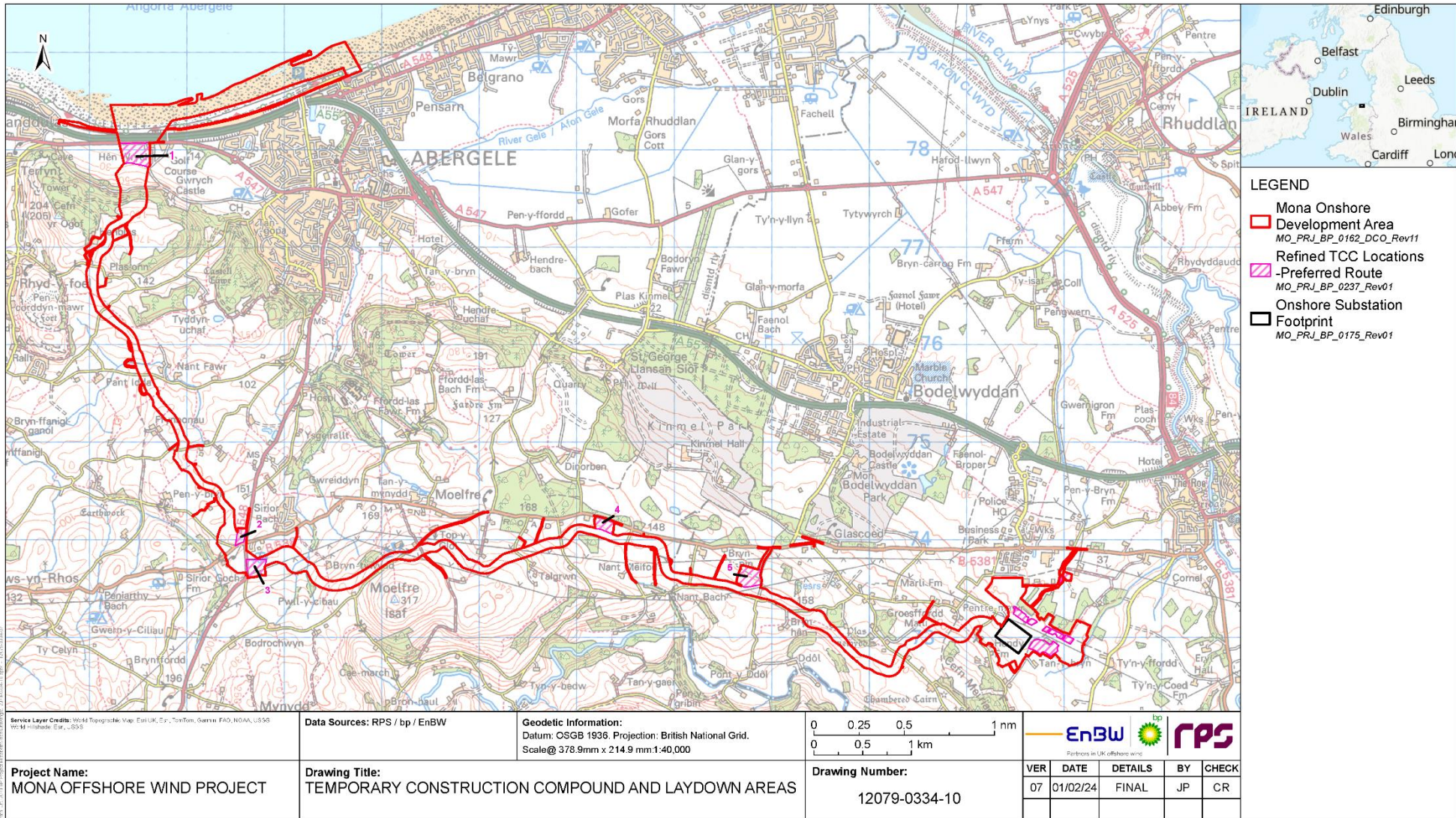


Figure 1.1: Temporary construction compounds and laydown areas.

Mona Onshore Substation construction compounds

1.9.1.4 Construction compounds will be required at the Mona Onshore Substation. The compounds will be located within the temporary working area and provide offices, welfare facilities, storage of plant and equipment, soil and material storage and parking for construction staff. A laydown area will also be provided to facilitate the construction of the Onshore Substation construction access road and the temporary bellmouth from Glascoed Road.

Primary construction compound

1.9.1.5 There will be one primary compound within the Mona Onshore Development Area to support the construction of the Onshore Cable Corridor and will be selected from the compounds shown in Figure 1.1. It will operate as a central base for the onshore construction works and will house the central offices, welfare facilities, and stores, as well as acting as a staging post and secure storage for equipment and component deliveries.

1.9.1.6 The primary construction compound will be fenced in line with the Fencing Plan and on-site security will be deployed on a 24-hour basis. The Fencing Plan is part of the CoCP, which is secured as a requirement of the DCO. The primary construction compound may include:

- Portacabin with offices, briefing and welfare facilities
- Staff car parking
- Wheel wash facilities (if necessary)
- Indoor and outdoor lock-up storage areas
- Storage for cables, cable drums, ducting and other construction materials including soil and aggregate
- Storage for machinery, lifting equipment and specialist equipment such as trenchless technique equipment
- Storage for fuels and bundled generator (portable generator(s) which could run on a 24-hour basis)
- Waste management (associated with the Mona Offshore Wind Project only) in line with the Site Waste Management Plan, which is part of the CoCP; the CoCP is secured as a requirement of the DCO
- Security facilities, lighting and fencing
- Other items associated with supporting the onshore construction works.

1.9.1.7 In establishing the compound, the Principal Contractor will:

- Ensure any crossing points over existing local services will be installed in a manner agreed with the asset owner
- Ensure surface runoff is managed appropriately
- Ensure any temporary services necessary to support the main construction compound will be installed in a manner agreed with the landowner and service provider.

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Secondary construction compounds

- 1.9.1.8 Up to four secondary construction compounds will also be required which will be located strategically along the Mona Onshore Cable Corridor. They will be used for laydown and storage of materials and plant, as well as space for small temporary satellite offices, welfare facilities, security, parking and wheel washing facilities.
- 1.9.1.9 The secondary construction compounds identified are typically currently in agricultural use. The location of these storage areas has been sited away from watercourses and flood zones where possible.
- 1.9.1.10 When in use, all secondary construction compounds will be fenced in line with the Fencing Plan and on-site security may be deployed. The Fencing Plan forms part of the CoCP, which is secured by a requirement of the DCO. Each secondary construction compound may include:
- Portable offices, briefing and welfare facilities
 - Some staff car parking
 - Wheel wash facilities (if necessary)
 - Secure container storage facilities
 - Storage for cables, cable drums, ducting and other construction materials including soil and aggregate required for that section of the Mona Onshore Cable Corridor
 - Storage for machinery, lifting equipment and specialist equipment such as drilling rigs for the trenchless techniques)
 - Storage for fuels and banded generator (portable generator(s) which could run on a 24-hour basis)
 - Waste management (associated with the Mona Offshore Wind Project only)
 - Security facilities, lighting and fencing
 - Other items associated with supporting the onshore construction works in that locality.
- 1.9.1.11 In establishing the compounds, the Principal Contractor will:
- Ensure any crossing points over existing local services will be installed in a manner agreed with the asset owner
 - Ensure any temporary services necessary to support the secondary construction compound will be installed in a manner agreed with the landowner and service provider
 - Include appropriate sediment control and drainage measures to ensure management of surface runoff. The measures would be set out in the Construction Surface Water and Drainage Management Plan, which forms part of the CoCP; the COCP is secured as a requirement of the DCO.

Storage areas

- 1.9.1.12 Additional storage areas may be required along the Mona Onshore Cable Corridor and Mona 400kV Grid Connection Cable Corridor and at the Onshore Substation. These will operate as areas where some limited storage may be required within the temporary

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corridor. The areas may also be used to store component deliveries, plant and machinery.

1.9.1.13 When required, topsoil will be cleared and retained onsite. The location of these storage areas will be sited away from watercourses and flood zones where possible.

1.9.1.14 In establishing the storage areas, the Principal Contractor will:

- Ensure any existing local services are suitably protected in a manner agreed with the asset owner
- Ensure appropriate drainage and sediment control measures are implemented.

Trenchless Technique compounds

1.9.1.15 Trenchless techniques will require a compound to contain the drilling rig, equipment and the drill entry or exit pit. These compounds will be located either side of the haul road and within the temporary construction corridor.

1.9.1.16 The trenchless technique compounds will be provided with suitable surfacing, typically this will be constructed from stone in a similar way to the other construction compounds. The compound will be secured by fencing and provided with lockable gates to control access where necessary. Appropriate drainage and sediment control measures will be implemented to control surface run-off from the compound.

1.9.2 Temporary access roads and haul road

1.9.2.1 A temporary haul road will be installed within the Mona Onshore Cable Corridor to reduce the number of HGVs associated with the Mona Offshore Wind Project travelling on the public highway. The haul road will be constructed early in the construction programme and will be used where needed throughout the installation of the onshore export cables and Mona 400 kV Grid Connection Cable. The haul road will be 6 m wide (excluding passing places).

1.9.2.2 A dedicated construction access for the Onshore Substation will be provided from Glascoed Road: the access will follow the alignment of the reinstated construction access road used by the Burbo Bank Extension Offshore Wind Project. The access road will extend south, running parallel with the access road for the National Grid Bodelwyddan Substation, and will connect to the temporary laydown area. Beyond the laydown area the construction access will use the proposed permanent access route, albeit that during construction, a temporary surface may be used.

1.9.3 Clearance of site on completion

1.9.3.1 Temporary construction compounds, storage areas and accesses will be cleared on completion of the construction works; all plant, temporary buildings and vehicles will be removed.

1.9.3.2 Following completion of the onshore export cable installation and Onshore Substation, the working area will be reinstated to a state commensurate with a condition agreed with the relevant planning authority (as secured in the DCO). This will include:

- Reinstatement of topsoil and subsoil, including loosening or ripping of compacted soil
- Reinstatement of land drainage systems, where necessary post construction drains may be installed, typically parallel to the Mona Onshore Cable Corridor

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- Reseeding of fields and any cover crop species mix to be agreed with landowner with reference to soil type and land use
- Reconstruction of any drains or ditches crossed using an open cut method
- Replanting of any hedgerows or felled trees as described in LEMP (secured in the DCO and approved by the relevant planning authority)
- Restoration or repair of fences, gates, tracks or hard standing
- Reinstatement of any PRow where temporary diversions have been put in place during construction.

1.10 Management of onshore environmental issues

1.10.1 Traffic management

Objectives

- 1.10.1.1 To carry out the construction of the Mona Offshore Wind Project in such a way that maintains highway safety and avoids or minimises adverse effects on local communities and highway users.

Highway management measures

- 1.10.1.2 Prior to the commencement of material traffic movements, a Construction Traffic Management Plan (CTMP) for the construction of the Mona Offshore Wind Project, will be prepared in consultation with the relevant planning authority Authority, Local Highway Authority and Welsh Government. The CTMP is part of the CoCP, which is secured as a requirement of the DCO and will be agreed with relevant stakeholders prior to the start of construction. An Outline CTMP is included in the DCO application (Document Reference J26.13).
- 1.10.1.3 The purpose of the CTMP is to document measures to manage construction traffic in accordance with the wider principles established in this Outline CoCP.
- 1.10.1.4 The CTMP will set out:
- The routes for traffic associated with the construction of the Mona Offshore Wind Project
 - The local management of vehicle movements to minimise the risks of vehicles meeting each other on narrow sections of the highway
 - Video condition surveys will be undertaken before the start of works and after the substantial completion of works on minor links used by HGVs to access the Mona Onshore Cable Corridor
 - Measures to keep streets clean
 - The provision of appropriate parking facilities for construction workers
 - Traffic management measures at those points where cable trenches are cut across highways or where existing access rights are affected
 - Requirements to monitor load sizes and vehicle usage.

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- 1.10.1.5 The design of HGV access points, including visibility standards and, where necessary, temporary speed restrictions on the adjacent highway will be agreed with the relevant Highways Authority.
- 1.10.1.6 The CTMP will set out traffic management measures at those points where cable trenches cut across PRow and manage the interface with the public and construction vehicles.
- 1.10.1.7 A route for abnormal indivisible loads will be identified (this will be between the port of entry, the Strategic Road Network and the Onshore Substation). The route, timing and method of transport of abnormal indivisible loads will be discussed and agreed with the relevant highways and bridge authorities and the police via a Permit for transport of abnormal loads.

1.10.2 Noise and vibration

Objectives

- 1.10.2.1 To control and limit noise and vibration levels, so far as is reasonably practicable, to minimise disturbance to sensitive receptors.

Management measures

- 1.10.2.2 Construction works for the Mona Offshore Wind Project will be undertaken in accordance with the best practicable means (as defined in Section 72 of the Control of Pollution Act 1974), to minimise noise and vibration effects. Noise control measures will be consistent with the recommendations of the current version of British Standard (BS) 5228 'Code of Practice for Noise and Vibration Control on Construction and Open Sites'
- Best Practicable Means including the following:
 - The use of quieter alternative methods, plant and/or equipment, where reasonably practicable
 - The use of site hoardings, enclosures, portable screens and/or screening nosier items of plant, where reasonably practicable
 - Maintaining and operating all vehicles, plant and equipment in an appropriate manner, to ensure that extraneous noise from mechanical vibration is kept to a minimum
 - Plant and vehicles to be fitted with mufflers/silencers that are maintained in good working order
 - The use of silenced equipment as far as possible and low impact type compressors and generators fitted with lined and sealed acoustic covers
 - Ensuring engines are switched off when machines are idle.
- 1.10.2.3 Measures to mitigate construction noise and vibration will be set out in a Construction Noise and Vibration Management Plan which is part of the CoCP; the CoCP is secured as a requirement in the DCO. The Construction Noise and Vibration Management Plan will be agreed with relevant local authorities prior to the start of construction. An Outline Construction Noise and Vibration Management Plan is included in the DCO application (Document Reference J26.3).

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1.10.3 Dust management

Objectives

- 1.10.3.1 To minimise the generation of dusts near sensitive receptors during construction and to facilitate community engagement and a proactive approach to complaints regarding nuisance dusts.

Management measures

- 1.10.3.2 Dust management measures will be implemented in accordance with the Dust Management Plan which is part of the CoCP; the CoCP is secured as a requirement in the DCO. An Outline Dust Management Plan is included in the DCO application (Document Reference J26.2) and is based on the Institute of Air Quality Management's (IAQM) Guidance on the assessment of dust from demolition and construction (IAQM, 2014). The Dust Management Plan will be agreed with relevant planning authority prior to the start of construction. The measures will include:

- Preparing and maintaining the site
- Construction activities
- Earthworks
- Site management and monitoring
- Communication.

- 1.10.3.3 To control emissions during construction, low emissions mobile plant will be used.

1.10.4 Protection of the surface water and groundwater environment

Objectives

- 1.10.4.1 To minimise the risk of surface water flooding during the construction phase, to prevent pollution of surface watercourses and to minimise the impact on local surface water features.

Management measures

- 1.10.4.2 Measures will be implemented to minimise the pollution risk to waterbodies from contaminated runoff and to minimise flood risk from increased surface water runoff. These measures will be set out in a Construction Surface Water and Drainage Management Plan, which is part of the CoCP; the CoCP is secured as a requirement in the DCO.

- 1.10.4.3 Measures to control the increased flood risk from surface runoff include the following:

- The temporary construction compounds, accesses and haul road will primarily be constructed from an engineered fill, with geotextile layers; the material will be granular and semi-permeable of an appropriate standard
- Suitable pre-construction drainage will be installed to ensure existing land drainage flow is maintained.

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Flood protection

1.10.4.4 Construction support activities on Llanndulas Beach (required during the construction of the Landfall) are located within Flood zone 2 and 3. Flood warning and evacuation procedures for construction support workers on Llanndulas Beach are set out in the Flood Management Plan which is part of the CoCP; the CoCP is secured as a requirement in the DCO. An Outline Flood Management Plan is included in the DCO application (Document Reference J26.7).

Pollution prevention

1.10.4.5 A proactive approach will be adopted to pollution prevention: measures for managing the storage of fuels and chemicals will be set out in the Spillage and Emergency Response Plan which is part of the CoCP; the CoCP is secured as a requirement of the DCO. An Outline Spillage and Emergency Response Plan is included in the DCO application (Document Reference J26.1) and include the following:

- Any tanks and associated pipe work containing oils and fuels will be double skinned
- Areas at risk of spillage, such as bulk fuel and oil storage tanks, will be bunded; hazardous substances stores will include drip trays. These areas will be carefully sited to minimise the risk of hazardous substances entering the drainage system or the local watercourses
- Additionally, the bunded areas will have impermeable bases to limit the potential for migration of contaminants into groundwater following any leakage/spillage. Bunds used to store fuel, oil etc. to have a 110% capacity
- Small plant will be provided with drip trays or commercial nappies
- Drainage works will be constructed to relevant statutory guidance and approved via the Lead Local Flood Authority prior to the commencement of construction.

Ground conditions

1.10.4.6 A campaign of intrusive site investigations has been undertaken in 2023 at locations at the Mona Onshore Substation and along the Onshore Cable Corridor. The results from the survey will be reviewed and the information will be used to further characterise the ground conditions.

1.10.4.7 Where piled foundations are considered as part of the detailed design for the onshore elements of the Mona Offshore Wind Project a piling risk assessment will be undertaken to demonstrate that the piled foundations would not create a pathway for pollutants and will form part of the final CoCP.

Water Supplies

1.10.4.8 Discussions with Dŵr Cymru/Welsh Water and landowners will be undertaken at the detailed design stage to confirm the location of public and private water supplies. Prior to any construction activities, utility surveys will be undertaken to establish if any infrastructure is present prior to any intrusive work being undertaken.

1.10.4.9 Measures to mitigate the risk to private groundwater supply sources will be developed and implemented in accordance with the hierarchy below:

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- **Groundwater supply source at high risk:** Provision of permanent alternative source of supply (e.g. borehole or mains water connection) or site visit and additional hydrogeological characterisation to enable a more detailed assessment of risk (most notably where there is significant uncertainty in the outcome of the original risk assessment)
- **Groundwater supply source at moderate risk:** Monitoring during construction phase, with contingency measures in place should supply source be temporarily affected by the activity activities or site visit and additional hydrogeological characterisation to enable a more detailed assessment of risk (most notably where there is significant uncertainty in the outcome of the original risk assessment)
- **Groundwater supply source at low risk:** Temporary contingency measures in place should supply source be affected during construction phase
- **Groundwater supply source at negligible risk/no risk:** No mitigation measures required.

1.10.4.10 Works to be undertaken within proximity to Dŵr Cymru/Welsh Water assets will be designed in accordance with the water authority's design standards and will require to be approved by Dŵr Cymru/Welsh Water prior to the commencement of works.

1.10.5 Onshore ecology

Objectives

1.10.5.1 To minimise the impact of construction works on protected species and designated sites and to minimise the loss of nature conservation features such as hedgerows, waterbodies and mature trees.

Management measures

1.10.5.2 Measures to manage construction impacts on protected species and habitat features are set out within the Landscape and Ecology Management Plan (LEMP). The LEMP is secured as a requirement of the DCO and will be agreed with the relevant planning authority. An Outline LEMP is included in the DCO application (APP-208)

1.10.5.3 The LEMP considers the following:

- Buffer zones - Works-free protective buffer zones will be established around retained habitats of ecology and nature conservation concern, namely woodland, mature broadleaved trees, hedgerows and ponds, as well as sections of watercourses that will not be crossed by open-cut trenching. These buffer zones will be maintained throughout the works period. Tracking of heavy vehicles, the storage and refuelling of vehicles, storage of plant/machinery and soils will be prohibited within the buffer zones
- Protected species measures including:
 - Timings and scope of pre-construction surveys,
 - Mitigation measures during construction (e.g. fencing)
 - Night working restrictions and lighting management measures for habitats of value to protected or otherwise notable species
 - Post-construction mitigation measures and longer term ecology management

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- Monitoring and reporting
- The role and responsibilities of the ECoW during the onshore site preparation works and the onshore construction process

General

1.10.5.4 This section sets out the general management measures that will be implemented to minimise impacts on onshore ecological receptors:

- Vehicle speeds will be restricted within the working corridor to minimise disturbance of various species,
- Topsoil and subsoil stripping, handling, storage and replacement will be in accordance with the Soil Management Plan to minimise impacts on soil structure and ecology. The Soil Management Plan is part of the CoCP; the CoCP is secured by a requirement in the DCO. An Outline Soil Management Plan is included in the DCO application (Document Reference J26.8). Any monitoring requirements will be set out in the final LEMP which is secured as a requirement of the DCO.
- Excavations left open overnight will be covered or fenced (as required for health and safety purposes) around the excavation to prevent animals falling in during non-working hours. The excavations should then be checked by an appointed site operative (trained by an ecologist) prior to the continuation of works

Biosecurity

1.10.5.5 Management measures to control the spread of plant and animal disease will be set out in the Biosecurity Protocol (Document Reference J26.11) which is part of the CoCP; the CoCP is secured as a requirement in the DCO. The Biosecurity Protocol will be agreed with the relevant planning authorities prior to the start of construction. An Outline Biosecurity Protocol is included in the DCO application (Document Reference J26.11). Where necessary, works will be supervised by the ECoW. Known locations of invasive plant species will be marked on site and vehicle movements restricted in the vicinity of these locations until the invasives have been appropriately removed. Any soil containing or likely to contain invasive plant material to be stored separately from non-contaminated soil, and treated as appropriate, with control measures adopted.

1.10.6 Landscape and visual resources

Objectives

1.10.6.1 Construction works will be carried out in such a way to ensure that disturbance to landscapes and visual receptors is minimised.

Management measures

1.10.6.2 To manage hedgerows and trees impacted as part of the construction of the onshore works, a LEMP will be submitted to and approved by the relevant planning authority prior to the removal any trees or hedgerows.

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- 1.10.6.3 Prior to site clearance works, a plan will be prepared that identifies the trees and vegetation that will be retained during the construction phase. The plan will set out the fencing measures to be installed and maintained throughout the construction process.
- 1.10.6.4 During construction, appropriate lighting will be used to reduce the incidence of visual intrusion to sensitive receptors. Construction lighting will be in line with the Artificial Light Emissions Plan which is part of the CoCP; the CoCP is a requirement of the DCO. An Outline Artificial Light Emissions Plan is included in the DCO application (Document Reference J26.10)
- 1.10.6.5 Prior to construction, tree protection fencing will be installed around trees to be retained. The fencing will demark construction exclusion zones and it will be positioned according to the root protection zone of recorded trees. The tree protection fencing will remain in situ until the completion of construction. Measures to minimise the potential for harm to occur to retained trees will be implemented in accordance with the Arboriculture Method Statement, which is part of the CoCP; the CoCP is secured as a requirement in the DCO. An Outline Arboriculture Method Statement is included in the DCO application (Document Reference J26.18).

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