

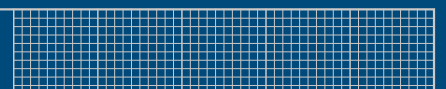


Part 4: Habitats Directive Assessment Volume 5: Appendices Appendix F: Schedule of Measures

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Dublin Array Offshore Wind Farm

Habitats Directive Assessment

Appendix F, Schedule of Measures

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Acronyms

Term	Definition
CBRA	Cable Burial Risk Assessment
CEMP	Onshore Construction Environmental Management Plan
CIP	Cable Installation Plan
COLREGS	Convention on the International Regulations for Preventing Collisions at Sea
DAHG	Department of Arts, Heritage and the Gaeltacht
ECC	Export Cable Corridor
IMO	International Maritime Organisation
IWDG	Irish Whale and Dolphin Group
MARPOL	Marine Pollution
MMMP	Marine Megafauna Mitigation Plan
MMO	Marine Mammal Observer
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
NRA	National Roads Authority
PAM	Passive Acoustic Monitoring
PEMP	Project Environmental Management Plan
WWTP	Wastewater Treatment Plant

1 Schedule of Measures

Approach to SISAA

- 1.1.1 As stated in the SISAA, for the purposes of Stage One AA Screening, it is permissible to take account of the *constituent elements of the proposed project* that are inherent in it and which have the effect of reducing the harmful effects of the project on the site concerned. This includes where *such elements are incorporated into the design* of the proposed project, not with the aim of reducing the negative effects of that project on the site concerned, but as standard features required for all projects of the same type. The Applicant has adopted this approach in the SISAA.
- 1.1.2 Other measures, such as ‘avoidance and preventative measures’ and ‘additional mitigation measures’, that are intended to avoid or reduce a likely harmful effect of the proposed project on a European site should only be taken into account in the Stage Two AA, as such measures should be subject to a full and precise analysis of whether they are capable of avoiding or reducing the effects on the European site concerned, including the scrutiny afforded by the public participation process. Accordingly, the SISAA does not consider or take into account these types of measures.

Approach to NIS

- 1.1.3 In addition to project design features, the NIS takes into account the following additional measures:
- ▲ *Other Avoidance and Preventative Measures:* These are measures that were identified throughout the early development phase of the project, also to avoid and prevent likely significant effects, which go beyond design features. These measures were incorporated in as constituent elements of the project, they are referenced in the project description chapter of this HDA, and they form part of the project for which development consent is being sought. These measures are distinct from design features and are found within our suite of management plans, as referenced within Table 1; and
 - ▲ *Additional Mitigation:* These are measures that were identified after the assessment within Section 5 of the NIS, for the project alone, and within Section 6 of the NIS, for the project in combination with other plans and projects, which were specifically introduced to avoid, prevent and reduce adverse effects on the integrity on the European sites concerned, as also referenced within Table 1.

Table 1

- 1.1.4 Table 1 comprises a schedule of the project design features that are relevant to the SISAA and NIS, and the other avoidance and preventative measures and additional mitigation measures that are relevant to the NIS. Finally, Table 1 identifies where within the planning application the feature or measure is secured.

Table 1 Schedule of Measures – Habitats Directive Assessment

Measure	Receptor				
	Benthic Subtidal and Intertidal Ecology	Migratory fish species	Marine Mammals	Offshore and Intertidal Ornithology	Onshore
<p>Procedures for impact piling, will include:</p> <ul style="list-style-type: none"> Implementation of a 1000m mitigation zone; Pre-piling Marine Mammal Observer (MMO) watches; Pre-piling Passive Acoustic Monitoring (PAM); Soft start procedure; and Breaks in piling procedure. 		✓	✓		
The Applicant commits to the implementation of at-source noise mitigation methods (e.g. bubble curtains, casings, resonators) to reduce the source level of the underwater noise from pile driving by at least 10 decibels.		✓	✓		
<p>Procedures for geophysical surveys using 3D Ultra-High Resolution Seismic (sparker) equipment, will include:</p> <ul style="list-style-type: none"> Implementation of a 1000m mitigation zone; Pre-shooting (in relation to survey start) MMO watches; Delay of operations if marine mammals detected for at least 30 mins; Soft start procedure; Line changes longer than 40 minutes will be stopped with a pre watch of 30 mins, followed by soft start to resume; and Breaks in operation of between 5-10 mins will prompt a MMO watch. 		✓	✓		
<p>Procedures for Unexploded Ordnance detonation will include:</p> <ul style="list-style-type: none"> Implementation of a mitigation zone of 1km; Pre-detonation MMO and PAM; Soft start charges; Use of bubble curtains; and Post detonation searches. 		✓	✓		
Installation of cables to an optimum cable burial depth - offshore cables will, where possible, be buried in the seabed to the optimal performance burial depth for the specific ground conditions. Where optimum burial depth cannot be achieved secondary protection measure will be deployed e.g. concrete mattress, rock berm, grout bags or an equivalent in key areas.	✓	✓			

Measure	Receptor				
	Benthic Subtidal and Intertidal Ecology	Migratory fish species	Marine Mammals	Offshore and Intertidal Ornithology	Onshore
<p>Applicant will implement the following, in line with the Sea Pollution Act 1991 and Marine Pollution (MARPOL) convention and other similar binding rules and obligations imposed on ship owners and operators by inter alia the International Maritime Organisation as relevant:</p> <ul style="list-style-type: none"> Marine Pollution Contingency Plan to cover accidental spills, potential contaminant release and include key emergency contact details (e.g., the Irish Coast Guard and will comply with the National Maritime Oil/ Hazardous and Noxious Substances Spill Contingency Plan (IRCG, 2020). Measures include Storage of all chemicals in secure designated areas with impermeable bunding (up to 110% of the volume); and double skinning of pipes and tanks containing hazardous materials to avoid contamination. 	✓	✓	✓		
<p>Waste management and disposal arrangements - the developer will dispose of sewage and other waste in a manner which complies with all regulatory requirements, including but not limited to the International Maritime Organisation (IMO) MARPOL requirements.</p>	✓	✓			
<p>During the lifetime of the project the Applicant and its contractors will comply with all measures outlined in the Marine Biosecurity Plan to include:</p> <ul style="list-style-type: none"> All vessels of 400 gross tonnage and above to be in possession of a current international Anti-fouling System certificate; Details of all ship hull inspections and biofouling management measures be documented by the Contractor; and All vessels to be compliant (where applicable) with the International Convention for the Control and Management of Ships' Ballast Water and Sediments (Ballast Water Management Convention, developed and adopted by the IMO. 	✓	✓			
<p>A code of conduct will be implemented by all vessel operators when encountering marine species. In addition, vessel movements to and from construction sites and ports will, where feasible, follow existing routes. While these measures are primarily targeted towards marine mammals and birds at sea, they would equally reduce the risk of injury and disturbance to marine turtles and other larger mobile receptors, such as basking sharks.</p>		✓	✓		
<p>Impact piling of a single pile will occur at any one time, i.e. no simultaneous impact piling will occur.</p>		✓	✓		

Measure	Receptor				
	Benthic Subtidal and Intertidal Ecology	Migratory fish species	Marine Mammals	Offshore and Intertidal Ornithology	Onshore
<p>The CEMP details the following measures to minimize pollution risk to aquatic habitats:</p> <ul style="list-style-type: none"> Refuelling will take place at least 50m from watercourses and where possible it will not occur when there is risk that oil from a spill could directly enter the water environment, for example, periods of heavy rainfall or when standing water is present will be avoided; A vehicle management plan and speed limit will be strictly enforced onsite to minimise the potential for accidents to occur; <ul style="list-style-type: none"> Drip trays will be placed under stationary vehicles which could potentially leak fuel/oils; Areas will be designated for washout of vehicles which are a minimum distance of 50m from a watercourse; <ul style="list-style-type: none"> Washout water will also be stored in the washout area before being treated and disposed of; If any water is contaminated with silt or chemicals, runoff will not enter a watercourse directly or indirectly prior to treatment; <ul style="list-style-type: none"> Water will be prevented as far as possible, from entering excavations such as trenches; Areas of battery storage will be bunded and positively drained so that the quality of runoff can be monitored and contained if required; Procedures will be adhered to for storage of fuels and other potentially contaminative materials to minimise the potential for accidental spillage (e.g. stored in 110% bunded storage facilities); and A plan for dealing with spillage incidents will be designed prior to construction, and this will be adhered to should any incident occur, reducing the effect as far as practicable. This will be included in the CEMP. 					✓
Should Annex I reef be found within the Offshore ECC overlapping with the boundary of Rockabill to Dalkey Island Special Area of Conservation, the Applicant commits to avoidance of these features to preclude direct impacts to these reefs from cable installation and protection within the Offshore ECC.					
<ul style="list-style-type: none"> Horizontal Directional Drilling will be used to cross watercourses along the Onshore Electrical System so there will be no direct loss of foraging habitat for otters within the river itself or creation of any barriers to passage. The pre-construction survey will aim to identify any changes in otter activity, holt locations, etc., since the original surveys. The pre-construction survey should be conducted no more than 10-12 months in advance of construction commencing. This will ensure that there will be sufficient time to comply with all licensing and additional mitigation requirements (e.g., holt exclusion and / or the creation of artificial holts). A 150 m buffer will be implemented around any identified holts, where no works will encroach. Where holts are identified within 150m of the proposed works areas, and have been verified as inactive, the entrances may be lightly blocked with vegetation and a light application of soil (soft blocking) to prevent their reoccupation. If the entrances remain undisturbed for five days, the holt may then be destroyed (where required) immediately using a mechanical digger. These actions must be conducted under the supervision of the holder of the Section 25 NPWS derogation under the 1997 Habitat Regulations (National Roads Authority (NRA), 2008). 					✓
<p>Avoiding multiple trenchless crossings at any one time will allow otters to naturally migrate away from any source of disturbance.</p> <p>Avoiding the loss of riparian habitat loss through trenchless techniques will ensure that no otter holts will be damaged or lost and therefore, no holt exclusion will be necessary.</p>					✓
Where holts are found that are likely to be disturbed, their activity level will be assessed to verify whether they are active or inactive. Active breeding otter holts within 150m of proposed works may require a derogation license for disturbance (NRA, 2008). Any necessary removal of otter holts must be conducted under a Section 25 derogation under the 1997 Habitats Regulations (NRA, 2008).					✓

Measure	Receptor				
	Benthic Subtidal and Intertidal Ecology	Migratory fish species	Marine Mammals	Offshore and Intertidal Ornithology	Onshore
<p>The pre-construction survey will also check the two holts identified at the O&M Base and Shanganagh-Bray Waste Water Treatment Plant (WWTP) for breeding activity.</p> <ul style="list-style-type: none">A Pre-construction survey to identify any new holts within riparian habitats near planned river crossings.Buffers zones for the two potential holts identified at the Operation and Maintenance Base and Shanganagh-Bray WWTP.No trenchless crossing activities will encroach within 150m of any known breeding holts.Trenchless techniques to be implemented to avoid loss of habitat, activities will be temporary and localized.					✓



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