Appendix 5-1 Addendum: Construction Environmental Management Plan

ORIEL WINDFARM
OFFSHORE RENEWABLE ENERGY

A TETRA TECH COMPANY

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Energy for generations

ORIEL WIND FARM PROJECT

Environmental Impact Assessment Report - Addendum
Appendix 5-1 Addendum: Construction Environmental Management Plan

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Acronyms

Term	Meaning
AIS	Air Insulated Switchgear
BS	British Standard
CBM	Cement Bound Material
CEMP	Construction Environment Management Plan
CIRIA	Construction Industry Research and Information Association
CLO	Community Liaison Officer
CTMP	Construction Traffic Management Plan
DHLGH	Department of Housing, Local Government and Heritage
ECoW	Environmental Clerk of Works
EIAR	Environmental Impact Assessment Report
EIERP	Environmental Incident and Emergency Response Plan
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
HSA	Health and Safety Authority
GGBS	Ground Granulated Blast Furnace Slag
GIS	Gas Insulated Switchgear
GNI	Gas Networks Ireland
GSI	Geological Survey Ireland
HDD	Horizontal Directional Drilling
HWM	High Water Mark
IAPS	Invasive Alien Plant Species
IEF	Important Ecological Feature
IEMA	Institute of Environmental Management and Assessment
IFI	Inland Fisheries Ireland
NIAH	National Inventory of Architectural Heritage
NIS	Natura Impact Statement
NMI	National Museum of Ireland
NMS	National Monuments Service
NPWS	National Parks and Wildlife Service
NRA	National Roads Authority
NSL	Noise Sensitive Location
OHL	Overhead Power Line
OSS	Offshore Substation
OWL	Oriel Windfarm Limited
pHNA	Proposed Natural Heritage Area
PPP	Pollution Prevention Plan
PPV	Peak Particle Velocity
RAMS	Risk Assessment Method Statements
RPS	Record of Protected Structures
SEAR	Safety and Environmental Awareness Report
TJB	Transition Joint Bay
TII	Transport Infrastructure Ireland
WMP	Waste Management Plan
WTG	Wind Turbine Generator

1. INTRODUCTION

1.1 Introduction

A planning application for the Oriel Wind Farm Project (hereafter referred to as 'the Project') was submitted to An Coimisiún Pleanála (ACP) (formerly An Bord Pleanála) in May 2024. The Environmental Impact Assessment Report (EIAR), which accompanied the planning application (case reference ABP-319799-24), included appendix 5-1: Construction Environmental Management Plan (CEMP) in support of chapter 5: Project Description of the EIAR (volume 2A).

This Addendum provides information to supplement the CEMP presented in appendix 5-1 of EIAR (volume 2A). It has been prepared in response to a Request for Further Information (RFI) from ACP the planning application (case reference 319799) for the Project.

The 'Schedule-Further Information Request' provided by ACP listed 19 items of further information. The Schedule did not request further information on the CEMP. However, as a result of preparation of the information in response to the RFI, changes have arisen that require an update to the CEMP. These changes are presented in this document.

The section and subsection headings in this Addendum correspond to those used in appendix 5-1: CEMP (EIAR volume 2A). The reader is directed to review the information presented in this Addendum alongside the CEMP in the EIAR (volume 2A).

An outline Commitments Register (version 1.0A) has been updated as part of this Addendum and is included in Annex A.3. This register requires to be updated (on consent) to ensure a full list of all commitments made in the EIAR, commitments made during the consent application process and any relevant planning conditions are included. Responsibilities and relevant documentation for approval will also need to be assigned. Updates made to the Commitments register (version 1.0A) as part of this Addendum have been made in blue text. There are no changes to Annex A.1 or A.2 of the CEMP.

1.2 Scope

There are no changes to Appendix 5-1: Construction Environmental Management Plan.

2. PROJECT DESCRIPTION

Chapter 5 Addendum: Project Description (EIAR Volume 2A Addendum) provides a description of the changes to the project design (all of which are within the planning application boundary) which arose as a result of addressing the responses to the RFI. The reader is directed to chapter 5 Addendum: Project Description (EIAR Volume 2A Addendum) for further details.

3. RESPONSIBILITIES; CORRESPONDENCE AND GENERAL COMMUNICATION

3.1 Roles and responsibilities – All

There are no changes to Appendix 5-1: Construction Environmental Management Plan.

3.2 Roles and responsibilities – Employer

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.3 Roles and responsibilities – Contractor

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.4 Contractor's Environmental Manager

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.5 Environmental Clerk of Works (ECoW)

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.6 Geotechnical engineer

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.7 Community Liaison Officer

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.8 Community Engagement Manager

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.9 Archaeologist (onshore)

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.10 Ecologist

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.11 Correspondence, records and reporting

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.12 Site induction

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.13 Training and toolbox talks

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.14 Environmental audits

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.15 Risk assessment and method statements

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.16 Notice boards

There are no changes to appendix 5-1: Construction Environmental Management Plan.

3.17 Review and change management

There are no changes to appendix 5-1: Construction Environmental Management Plan.

4. COMMUNITY LIAISON

4.1 Community liaison

There are no changes to appendix 5-1: Construction Environmental Management Plan.

4.2 Advance notice of works

There are no changes to appendix 5-1: Construction Environmental Management Plan.

4.3 Enquiries and complaints

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5. GENERAL SITE MANAGEMENT AND POLLUTION PREVENTION

5.1 General site management and pollution prevention

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.1 Responsibility

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.2 Good housekeeping and general pollution prevention measures

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.3 Hours of work

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.4 Site security

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.5 Hoarding and fencing

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.6 Services and lighting

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.7 Energy management

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.8 Temporary construction compounds

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.9 Reinstatement of working areas on completion

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.10 Management of fuels and oils

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.11 Noise and vibration

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.12 Dust

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.13 Surface water management

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.1.14 Accidental spills

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.2 Environmental incident and emergency response

5.2.1 General requirements

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.2.2 Safety and Environmental Awareness Reports (SEAR) and Environmental Auditing

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.2.3 Pollution/spill incident

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.2.4 Emergency access

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.2.5 Extreme weather events and flood risk

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.2.6 Fire and explosion risk

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.3 Climate

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.4 Population and human health

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.5 Biodiversity

In addition to the measures outlined in chapter 19: Onshore Biodiversity (EIAR volume 2C), the following measures will also be implemented at the landfall location where the offshore cable corridor traverses Dunany Point pNHA and CB1 Shingle and gravel bank habitat (as outlined in chapter 19 Addendum: Onshore Biodiversity, EIAR volume 2C Addendum):

- Due to the occurrence of CB1 Shingle and gravel bank habitat within a dynamic and changing coastal environment, a pre-construction habitat survey will be undertaken to identify any future potential for this habitat to correspond with Annex I habitat in the Habitats Directive;
- During construction, a suitably qualified and experienced ecologist will supervise the works within Dunany Point pNHA CB1 Shingle and gravel bank habitat, ensuring that CB1 Shingle and gravel habitat

layers including cobble, pebble, gravel and sand required for removal to facilitate the offshore cable corridor, are stored by their respective particle size for later reinstatement; and

- Post-construction, that reprofiling and reinstatement of the affected shingle beach area is completed.

Disturbance measures

In response to RFI 7.Z, clarification regarding the timing of the works within the intertidal area at the landfall location is provided below.

As part of the onshore biodiversity assessment presented in chapter 19: Onshore Biodiversity (EIAR volume 2C), a number of measures are proposed to reduce disturbance impacts on important ecological features. At the landfall location, this includes measures such as timing of the works to avoid potential impacts on both breeding birds (March to August, inclusive) occurring at the landfall location and wintering birds (October to April, inclusive) occurring within the intertidal environment.

In relation to the timing of works to avoid impacts on breeding birds (March to August, inclusive), vegetation removal at the landfall location (location of transition joint bay and onshore cable route) will only occur prior to the breeding bird season (i.e. September to February). In relation to the timing of works to avoid impacts on wintering birds within the intertidal area, works will not occur during this peak season for intertidal birds (October to April, inclusive).

On this basis, and in line with the high-level indicative construction programme outlined in Figure 5-30 of chapter 5: Project Description (see volume 2A), the works at the landfall location (expected duration of approximately 12 weeks) will occur:

- Within the onshore area (i.e. above the High-Water Mark) of the landfall location at any time of year, provided that vegetation removal has taken place outside of the bird nesting season (i.e. September to February).
- Within the intertidal area at the landfall location between May and September (outside the peak season for intertidal birds).

Surface water measures

There are no changes to appendix 5-1: Construction Environmental Management Plan.

Removal and/or fragmentation measures

In response to RFI 14.E, justification regarding the removal of trees which are clustered proximate to the eastern crossing of the River Dee in addition to locations of bat boxes, is provided below.

As part of the onshore biodiversity assessment presented in chapter 19: Onshore Biodiversity (EIAR volume 2C), a number of measures are proposed to reduce the potential impacts from destruction and/or fragmentation on the important ecological features.

At the eastern crossing of the River Dee (i.e. Drumcar), several trees were identified as having features suitable for roosting bats. Bat trees BT4, BT5 and BT14-18, were identified as having ‘low’ potential to support bat roosting. These trees are located in close proximity to the River Dee and the identified ‘hotspot’ of bat activity, as described in EIAR appendix 19-1: Onshore Biodiversity – Supporting Information (EIAR volume 2C).

To clarify, the identified ‘hotspot’ is associated with the River Dee corridor, not Drumcar woodland where the above trees are located. Additionally, these trees are of ‘low’ bat roosting potential and are proposed for ‘soft’ fell to protect any bats that happen to be roosting within them at the time of felling. Although they may support the wider commuting corridor available to local bat populations, their removal is not considered to effect bat activity or the ‘hotspot’ associated with the River Dee.

Additionally, since submission and during baseline update surveys undertaken in June 2024, it was noted that BT15-18 have fallen due to storm events between May 2023 and June 2024 (see appendix 19-1 Addendum: Onshore Biodiversity – Supporting Information, EIAR volume 2C).

Invasive alien species measures

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.6 Land and agriculture

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.7 Soil, geology and hydrogeology

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.8 Hydrology and flood risk

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.9 Air quality

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.10 Noise and vibration

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.11 Cultural heritage

In addition to the measures outlined in chapter 26: Cultural Heritage (EIAR volume 2C), the following mitigation measures will be implemented at Dunany.

Construction activities with potential to impact on Areas of Archaeological Potential

AAP1 – Dunany Demesne

Although the onshore cable route options have been adjusted within the planning application boundary (see chapter 5 Addendum: Project Description), the mitigation measures outlined for AAP1 section 26.10.5 of chapter 26: Cultural Heritage (EIAR volume 2C) remain unchanged.

Dunany Demesne (RPS LHS019-009) Southern Boundary

The following additional mitigation measures are required for the southern boundary wall of Dunany Demesne for the sections of wall that will be directly impacted by cable route Options 1 or 2:

- *Pre-construction vegetation clearance, inspection and method statement for demolition and reconstruction*: All vegetation along the required sections of the demesne boundary wall will be removed by hand under the supervision of a licensed archaeologist and in accordance with a method statement prepared by a built-heritage specialist. Clearance will be carried out in a controlled manner to expose the wall fabric without causing damage.

- *Detailed drawn, photographic and condition survey*: Once exposed, a full measured survey of the wall will be carried out, including identification of key features, such as coping stones, changes in construction, and areas of deterioration. Recording of distinctive stones (coping, quoin stones, gate-piers, unusually large or shaped blocks) including a record of construction, mortar type, coping style, bonding pattern and any architectural features; the survey will also include a condition assessment noting areas of collapse, voids, previous repairs and fabric integrity. This record will form the basis for reinstatement.

- *Conservation-led construction method statement*: A method statement will be prepared by a conservation architect, setting out the reconstruction technique, sequencing, materials, mortar specification and workmanship standards.

- *Controlled dismantling of affected sections*: Any section of the wall to be removed will be dismantled by hand under archaeological supervision. All salvageable stone will be retained for reuse during reinstatement under conservation supervision. All original fabric will be retained unless demonstrably unsafe or degraded beyond reuse.

- *Protection, storage and cataloguing of stone*: Recovered stone will be stored on timber pallets or in labelled crates in a secure location within the site. A catalogue of stone type, size and location will be maintained to ensure accurate reconstruction.

- *Reconstruction of the wall using original fabric and techniques*: Following completion of the cable works, the boundary wall will be reconstructed to match its original profile, alignment, coursing, bonding pattern and coping detail. Original stone will be reused wherever possible; any new stone required will match the existing in geology, size, tooling and appearance. Mortar will be mixed to match surviving material in composition and colour.

- *Monitoring during dismantling and reinstatement*: Both demolition and reconstruction phases will be monitored by the project archaeologist and conservation specialist to ensure correct handling of original fabric and fidelity to the pre-construction record.

- *Protection of upstanding sections of the demesne wall*: All upstanding sections of the Dunany Demesne boundary wall outside the impacted sections will be preserved in situ and protected during construction within Dunany Demesne. A robust fence marking a clear no-go buffer (c. 5m from the wall) will be put in place, with no plant or materials allowed inside it. Any activity taking place close to the wall along the laneway on the southern side during the cable installation will be supervised by a licensed archaeologist to ensure there is no accidental impact or disturbance.

5.12 Landscape and seascape

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.13 Traffic and transport

An Addendum to the Construction Traffic Management Plan (CTMP) (appendix 5-9 Addendum in volume 2A Addendum) has been prepared. The CTMP will be updated and implemented by the Contractor to reduce the potential for impacts on traffic and transport during the construction phase.

Please see appendix 5-9 Addendum: Construction Traffic Management Plan for further details.

5.14 Material assets

There are no changes to appendix 5-1: Construction Environmental Management Plan.

5.15 Waste

There are no changes to appendix 5-1: Construction Environmental Management Plan.

References

There are no changes to appendix 5-1: Construction Environmental Management Plan.

A.1 Required contractor's information

There are no changes to appendix 5-1: Construction Environmental Management Plan.

A.2 Environmental Policy

There are no changes to appendix 5-1: Construction Environmental Management Plan.

A.3 Commitments Register

An updated Commitments Register includes additional commitments made in the preparation of the response to the RFI. The changes are shown in blue text.

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation		
No.	**Topic**	**EIAR Chapter**	**Aspect**	**Commitment (please read in conjunction with the EIAR chapter)**	**Related Planning Condition**	**Relevant document for Implementation**	**Responsible Party**
1	Climate	Chapter 17	Materials with reduced environmental impact	Materials with a reduced environmental impact will be incorporated into the construction design through re-use of materials or incorporation of recycled materials in place of conventional building materials. The following materials shall be considered for the construction phase:- •Ground Granulated Blast Furnace Slag (GGBS) & Pulverised Fuel Ash - Used as replacements for Portland cements to increase sustainability and carbon footprint of civil and structural works; and •Steel - The recovery rates associated with using recycled steel are high and research exists which shows that 99% of structural steel arising from demolition sites is recycled or re-used. The carbon emissions emitted during the production of virgin steel can be higher than some other structural materials on a tonne by tonne basis, and recycled steel should be used where possible.	To be updated.	CEMP	Applicant/ Contractor
2	Climate	Chapter 17	Measures to minimise CO2 during construction	The following measures will be implemented by the Contractor to avoid/minimise CO_2 emissions during the construction phase: •Reducing the idle times by providing an efficient material handling plan that minimizes the waiting time for loads and unloads. Reducing idle times could save 10% of total emissions during construction phase; •Turning off vehicular engines when not in use for more than five minutes. This restriction will be enforced strictly unless the idle function is necessary for security or functionality reasons; and •Regular maintenance of plant and equipment. Technical inspection of vehicles to ensure they will perform the most efficiently.	To be updated.	CEMP	Applicant/ Contractor
3	Climate	Chapter 17	Energy management measures during construction	The Contractor will be required to implement energy management measures for the duration of the works such as: •The use of thermostatic controls on all space heating systems in site buildings to maintain optimum comfort at minimum energy use; •The use of sensors on light fittings in all site buildings and low energy lighting systems; •The use of adequately insulated temporary building structures for construction compounds fitted with suitable vents; •The use of low energy equipment and 'power saving' functions on all PCs and monitors in the site offices; •The use of low flow showers and tap fittings; and •The use of solar/thermal power to heat water for the on-site welfare facilities and contamination unit (sinks and showers).	To be updated.	CEMP	Applicant/ Contractor
4	Climate	Chapter 17	Carbon footprint	The Contractor will be required to measure and record all activity data (fuel use, material use, transport, etc.) to allow for the development of a carbon footprint for the construction phase of the Project.	To be updated.	CEMP	Applicant/ Contractor
5	Population and Human Health	Chapter 18	CEMP CTMP	Implement Construction Transport Management Plan (CTMP)	To be updated.	CEMP; CTMP	Applicant/ Contractor
6	Population and Human Health	Chapter 18	CEMP	Training and employment opportunities will be offered through a workforce management plan.	To be updated.	-	Applicant/ Contractor
7	Biodiversity	Chapter 19	EMP	For overall Onshore Biodiversity management a an Ecological Management Plan will be produced and implemented. This will include all measures included in section 5.5 of the CEMP.	To be updated.	CEMP	Applicant/ Contractor
8			Buffer Zone	A 10 m buffer zone from Dunany Point pNHA will be implemented on the landward side within the planning application boundary. The buffer zone will be physically demarked using post and rail/post and rope/bunting, or equivalent, and be signposted to identify an ecological sensitivity. The ecologist will assess and verify the demarcation and signage before works commence. See EIAR appendix 19-1: Onshore Biodiversity – Supporting Information, section 19.4 for specific detailed measures;	To be updated.	CEMP	Applicant/ Contractor
9			Pre-construction surveys	Pre-construction surveys (complete protected and invasive species survey, including breeding bird assessment). See appendix 19-1, section 19.4 for specific detailed measures.	To be updated.	CEMP	Applicant/ Contractor
9A			Pre-construction surveys	Due to the occurrence of CB1 Shingle and gravel bank habitat within a dynamic and changing coastal environment, a pre-construction habitat survey will be undertaken to identify any future potential for this habitat to correspond with Annex I habitat in the Habitats Directive;	To be updated.	CEMP	Applicant/ Contractor
10			Timing of works	Timing of the works at the landfall to avoid the peak season for intertidal birds (October to April, inclusive). Timing of vegetation removal works to avoid the bird nesting season (March to August, inclusive). Avoidance of light spill during night-time hours, and badger buffer zones between 30 m and 150 m depending on works type and season. See appendix 19-1, section 19.4 for specific detailed measures.	To be updated.	CEMP	Applicant/ Contractor
11			Timing of works	Timing of the works to avoid the bird nesting season (March to August, inclusive), replacement of all removed hedgerows, retention of trees with moderate suitability to roosting bats, and soft felling of trees with low suitability for roosting bats. See appendix 19-1, section 19.4 for specific detailed measures.	To be updated.	CEMP	Applicant/ Contractor
12			Timing of works	Timing of the instream works to avoid the IFI recommended 'closed season' (October to May, inclusive), and protection of watercourses from siltation, hydrocarbons and other pollutants using suitably material storage, procedures, buffer zones, and sediments control measures. See appendix 19-1, section 19.4 for specific detailed measures.	To be updated.	CEMP	Applicant/ Contractor
13			During works	During construction, a suitably qualified and experienced ecologist will supervise the works within Dunany Point pNHA CB1 Shingle and gravel bank habitat, ensuring that CB1 Shingle and gravel habitat layers including cobble, pebble, gravel and sand required for removal to facilitate the offshore cable route, are stored by their respective particle size for later reinstatement; and	To be updated.	CEMP	Applicant/ Contractor
14			Post Construction Habitat Reinstatement	Post-construction, it will be ensured that reprofiling and reinstatement of the affected shingle beach area is completed.	To be updated.	CEMP	Applicant/ Contractor

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation		
No.	**Topic**	**EIAR Chapter**	**Aspect**	**Commitment (please read in conjunction with the EIAR chapter)**	**Related Planning Condition**	**Relevant document for Implementation**	**Responsible Party**
15	Land and Agriculture	Chapter 20	Access to property	Existing access to property, including homes, agricultural fields and farm facilities will, where practicable, be maintained during construction, otherwise reasonable temporary access will be provided.	To be updated.	CEMP	Applicant/ Contractor
16			Disruption to water supply	Any disruption to water supply will be reinstated immediately by the Contractor or an alternative source supplied until the source is reinstated, unless otherwise agreed with the landowner	To be updated.	CEMP	Applicant/ Contractor
17			Drainage	All drainage likely to be affected or disturbed during the construction phase will be identified and reinstated.	To be updated.	CEMP	Applicant/ Contractor
18			Subsoiling of agricultural lands	All agricultural lands temporarily acquired for the construction will, before return to the landowner, be subsoiled to alleviate compaction and minimise risk of impeded crop growth and will be re-instated to pre-construction conditions unless otherwise agreed with the landowner.	To be updated.	CEMP	Applicant/ Contractor
19	Soil, Geology and Hydrogeology	Chapter 21	Excavated material	Excavated materials will be carefully managed in accordance with industry best practice during construction, to prevent any potential negative impact on the receiving environment and the excess material will be taken directly to an appropriately licenced facility avoiding contact with any open surface water drains. Excavated material will not be left uncovered to avoid run-off of silty water and trial pits will be backfilled at the earliest convenience to avoid leaving stockpiles exposed.	To be updated.	CEMP	Applicant/ Contractor
20			Re-instatement of earthworks	During the earthworks stage of construction, all lands including those temporarily acquired, will be re-instated to pre-construction conditions unless otherwise agreed with the landowner.		CEMP	Applicant/ Contractor
21			Management of topsoil and subsoil	Management of topsoil and subsoil will be managed in accordance with industry best practices. For all trenching along the road, all excavated material will be taken off-site in trucks and disposed of, under licence from the appropriate authority, thus preventing any contaminated run-off to roadside drains during heavy rainfall. In off-road areas where the top 400-500 mm of topsoil will be set aside within the wayleave for later reinstatement, these stockpiles will be stored at least 15 m back from drains and watercourses on level ground with a silt fence inserted at the base.	To be updated.	CEMP	Applicant/ Contractor
22			Imported materials	Imported materials to the site shall be sourced from a reputable supplier to ensure that only clean material is brought to site.	To be updated.	CEMP	Applicant/ Contractor
23			Dewatering all groundwater	Dewatering all groundwater from the trench and joint bays will be managed in line with industry best practices. Groundwater and surface water accumulating in the base of trenches will not be pumped directly to roadside drains or watercourses unless it is clean and free from solids. Solids-contaminated water will be discharged to a designated percolation area designated by a competent person if the soil is not waterlogged. In the case of heavy contamination, the water will either be removed off-site for disposal in a licensed facility by tank truck or pumped to a portable on-site settlement tank for treatment. These operations will be monitored by a designated competent member of the construction team on a regular basis to ensure that they are working effectively.	To be updated.	CEMP	Applicant/ Contractor
24			Temporary storage of CBM 4	Temporary storage of CBM 4 will be carefully managed. This will be stored on hardstanding areas only where there is no direct drainage to surface waters and where the area has been bunded. Will be applied by using sandbags and geotextile sheeting or silt fencing to contain any solids in run-off.	To be updated.	CEMP	Applicant/ Contractor
25			County Geological Site	The cable route and TJB has been developed to minimise impact on the County Geological Sites along the coast.	To be updated.	CEMP	Applicant/ Contractor
26			Imported crush rock	Imported crushed rock which is imported to the site shall be sourced from a reputable supplier to ensure that only clean material is brought to site.	To be updated.	CEMP	Applicant/ Contractor
27			Drainage	All drainage likely to be affected or disturbed during the construction phase will be identified and reinstated.	To be updated.	CEMP	Applicant/ Contractor
28			Storage and handling of oils, fuels, chemicals and hydraulic fluids	•The storage and handling of oils, fuel, chemicals and hydraulic fluids will be in secure areas within the site compounds and will not occur within a minimum of 10 m from watercourses; •Storage of fuels, chemicals and lubricants at the Contractor's compound must be fenced off and have a lockable gate to prevent unauthorised access or vandalism. •The principal control measures are as outlined in section 5.7 of the CEMP.	To be updated.	CEMP	Applicant/ Contractor
29			GSI Recommendations	The following GSI recommendations are also included within the proposed works: •Access to the site is to be provided for GSI staff during construction to record the exposures of glacial till within the works; and •GSI are to be provided sufficient notification of the commencement of works to allow GSI staff the opportunity to schedule resources to inspect the site.			Applicant/ Contractor
30	Hydrology and Flood Risk	Chapter 22	Reinstatement of steam beds	Following the installation of the cable ducts within watercourse crossings, in the case of an open trench construction method, the stream bed will be reinstated with original or similar material under the supervision of an aquatic ecologist.	To be updated.	CEMP	Applicant/ Contractor
31			Surface water Management	The contractor will be required to implement the following surface water management measures prior to commencing construction and decommissioning works on site, in accordance with Best Practice Guidance for the storage of oil BPGCS005 – Oil Storage Guidelines (Enterprise Ireland, nd), and CIRIA guidance (Report No.113 titled "Control of groundwater for temporary works" (CIRIA, 1986)). The mitigation measures will include and are not limited to those set out in 5.1.13 of the CEMP:	To be updated.	CEMP	Applicant/ Contractor

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation		
No.	**Topic**	**EIAR Chapter**	**Aspect**	**Commitment (please read in conjunction with the EIAR chapter)**	**Related Planning Condition**	**Relevant document for Implementation**	**Responsible Party**
32	Air Quality	Chapter 23	Traffic Management Plan	Implement Construction Traffic Management Plan (CTMP)	To be updated.	CEMP, CTMP	Applicant/ Contractor
33			Site roads	•Site roads shall be regularly cleaned and maintained as appropriate. Hard surface roads shall be swept to remove mud and aggregate materials from their surface while any un-surfaced roads shall be restricted to essential site traffic only; •Any site roads with the potential to give rise to dust will be regularly watered, as appropriate, during dry and/or windy conditions (also applies to vehicles delivering material with dust potential); •All vehicles exiting the site shall make use of a wheel wash facility prior to entering onto public roads, to ensure mud and other wastes are not tracked onto public roads; •Wheel will be self-contained systems that do not require discharge of the wastewater to water bodies; •Public roads outside the site shall be regularly inspected for cleanliness, and cleaned as necessary; •Material handling systems and site stockpiling of materials shall be designed and laid out to minimise exposure to wind; •Water misting or sprays shall be used as required if particularly dusty activities are necessary during dry or windy periods; •All vehicles which present a risk of spillage of materials, while either delivering or removing materials, will be loaded in such a way as to prevent spillage on to the public road; •The Contractor will be required to ensure that all vehicles are suitably maintained to ensure that emissions of engine generated pollutants is kept to a minimum; and •The Contractor will be required to monitor monthly dust deposition levels each month for the duration of construction for comparison with the guideline of 350 mg/m2/day (for non-hazardous dusts). This monitoring should be carried out at a minimum of four locations at sensitive receptors around the Project works. Where dust levels are measured to be above this guideline the mitigation measures in the area will be reviewed as part of the CEMP.	To be updated.	CEMP	Applicant/ Contractor
35	Noise and Vibration	Chapter 25	Competent professional	Contractor to engage a competent acoustician for the duration of construction.	To be updated.	CEMP	Applicant/ Contractor
36			Monthly noise and vibration report	Implement noise control measures as outlined in section 5.1.11 of CEMP.	To be updated.	CEMP	Applicant/ Contractor
37	Cultural Heritage	Chapter 26	Cultural Heritage Sites	The construction team will be made aware of the locations of those upstanding structures that are designated RPS / NIAH sites and the Cultural Heritage sites situated in the immediate vicinity of the onshore cable corridor (Figure 26-4, Appendix 26-1-4, Tables 26-2, 26-3 and 26-5). This will be incorporated into the EMP.	To be updated.	CEMP	Applicant/ Contractor
38			CH6 impacted section	(CH6) A photographic and written record of the impacted section of the rubble stone wall at Drumcar will be made. The impacted section of the wall will be rebuilt using traditional methods and the same materials subject to agreement and any other requirements as may be agreed with the planning authority prior to the commencement of construction	To be updated.	CEMP	Applicant/ Contractor
39			GS2 impacted section	A section of woodland shelterbelt associated with the former Drumcar Demesne (GS2) will be impacted. Replanting to restore any breach in the wooded shelterbelt with similar trees will be undertaken.	To be updated.	CEMP	Applicant/ Contractor
40			Mad chair	The location of the boulder known as the 'Mad Chair of Dunany' on Dunany beach (located outside the planning application boundary at approximately ITM 715647, 791296) will be made known to the construction team;	To be updated.	CEMP	Applicant/ Contractor
41			Dunany Demense wall	An exclusion zone (i.e. where no construction or earthmoving works will take place) of >5 m from the southern walled/hedgerow boundary of Dunany Demesne will be maintained during construction; and	To be updated.	CEMP	Applicant/ Contractor
42			Dunany Demense wall	No works will be carried out that will damage the boundary wall of Dunany Demesne. The proposed permanent access track to TJB (Option 2) will be installed 5 m away from the Dunany Demesne wall to ensure no impact on this feature.	To be updated.	CEMP	Applicant/ Contractor
43			Dunany Demense south boundary wall	The sections of wall that will be impacted will: (i) have vegetation cleared by hand under supervision by a licensed archaeologist. (ii) have a detailed drawn, photographic and condition survey that will inform a conservation-led method statement for reconstruction. (iii) be dismanted and reconstructed by hand under supervision of the licensed project archaeologist	To be updated.	CEMP	Applicant/ Contractor
44			AAP1 – AAP7	See measure for protection in section 5.11 of CEMP	To be updated.	CEMP	Applicant/ Contractor
45	Landscape and Seascape	Chapter 27	Onshore cable route	Replacement hedgerow planting at locations along the onshore cable route; shallow rooting species where required over the onshore cable route to prevent disturbance of the cable by roots.	To be updated.	CEMP	Applicant/ Contractor
46			Onshore cable route	Restoration and repair of gates and fences that have been removed/damaged during the construction works; and	To be updated.	CEMP	Applicant/ Contractor
47	Traffic and Transport	Chapter 28	Traffic management	Implement CTMP	To be updated.	CTMP	Applicant/ Contractor
48			Visibility splays	Implement sightlines In accordance with TII Publication DN-GEO—03060 (TII, 2017) are provided for the substation access and temporary access to the site compounds; and	To be updated.	CTMP	Applicant/ Contractor
49			Traffic management	It is recommended that discussions will be had with St Finian's National School and the St Colmcille National School schools to determine if there is any impact on bus routes/access. The sequencing of the works could be altered to ensure that works take place during school holidays.	To be updated.	CEMP	Applicant/ Contractor

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation		
No.	**Topic**	**EIAR Chapter**	**Aspect**	**Commitment (please read in conjunction with the EIAR chapter)**	**Related Planning Condition**	**Relevant document for Implementation**	**Responsible Party**
50	Material Assets	Chapter 29	Disruption to built services	Any disruption to built services will be reinstated as soon as practicable, unless otherwise agreed with the asset owner, and where practicable by the Contractor;	To be updated.	CEMP	Applicant/ Contractor
51			Liaison and planning	· Where required, ducting will be provided to allow for the provision of services (electrical/water) across severed areas unless otherwise agreed with the asset owner and where practicable;	To be updated.	CEMP	Applicant/ Contractor
52			Ducting	· Any disruption to water supply will be reinstated immediately by the Contractor or an alternative source supplied until the source is reinstated, unless otherwise agreed with the landowner or Uisce Éireann as appropriate;	To be updated.	CEMP	Applicant/ Contractor
53			Liaison and planning	· Prior to commencement of construction works the Contractor will be required to engage with all built services providers. The Contractor will continue liaison with providers as required throughout the construction phase;	To be updated.	CEMP	Applicant/ Contractor
54				· Prior to any mechanical excavation taking place, there will be consultation with ESB Networks to establish and verify the exact locations of all underground electricity cables. Gas Networks Ireland (GNI) will also be consulted, and the exact position of the two gas transmission gas pipelines will be verified prior to works commencing; and	To be updated.	CEMP	Applicant/ Contractor
55				· All work being conducted in the vicinity of underground services will be completed in accordance with the current Health and Safety Authority (HSA) 'Code of Practice for Avoiding Danger from Underground Services'. Furthermore, the ESB Code of Practice and HSA guidance, including the 'Code of Practice for Avoiding Danger from Overhead Electricity Lines', regarding exclusion and safe operating distances around electricity infrastructure will be adhered to. Height restriction barriers and equipment will be used to demark electrical infrastructure.	To be updated.	CEMP	Applicant/ Contractor
56	Resource and Waste Management	Chapter 30	Waste management	Any waste and/or coastal litter arising from the construction, operation and maintenance, and decommissioning phases of the Project will be managed in accordance with the current national waste policy. Any waste and/or coastal litter that cannot be prevented or reused will be deposited at an appropriate facility;	To be updated.	CEMP	Applicant/ Contractor
57			Notification of waste or hazardous material	If any unforeseen waste or hazardous material is encountered during the course of the Project, the EPA will be notified, and the material will be deposited at an appropriate waste facility	To be updated.	CEMP	Applicant/ Contractor
58			Waste manager	A Waste Manager will be nominated who will have overall responsibility for the implementation of all waste processes. In conjunction with this, a clear responsibility structure will be introduced in the Project team to ensure difficulties encountered are raised at an appropriate level and acted upon.	To be updated.	CEMP	Applicant/ Contractor
59			Records of waste	Records will be kept on the quantity nature/type and quality of all waste leaving the site.	To be updated.	CEMP	Applicant/ Contractor
60			Waste management	•The management of waste generated by the Project will reflect the waste management hierarchy, with waste prevention and minimisation being the priority succeeded by reuse and recycling. Where there are opportunities for the beneficial reuse and recycling of materials, these will be considered; •Excess material will be made available for reuse off-site. It is anticipated that the available material will be a clean and valuable resource capable of meeting the specifications of a typical Class 1 material. This material can be reused in local projects under development, assuming by-product classification can be achieved. Alternatively, the material can be recovered at quarries in the local area and beyond. The availability of the material and the scheduling of local construction projects will be kept under review as the project develops. If reuse of surplus material is not possible, it will be sent for appropriate recovery. Any site identified for recovery of soil and stone will require the appropriate planning permission and waste authorisation in place to accept the material on-site; •Sustainable practices will be implemented when choosing materials to be used in the construction of the Project, including the use of cement containing high levels of GGBS or recycled steel (see volume 2C, chapter 17: Climate for further detail relating to sustainable materials);	To be updated.	CEMP	Applicant/ Contractor
61			Waste management plan	All Contractors (and their Sub-Contractors) will produce a Waste Management Plan (WMP), providing details of all waste management procedures for their activities and details of expected waste arisings and proposed procedures for waste management. The Contractor's Environmental Manager will be responsible for the compilation of this document which will implement all the measures outlined in section 5.15 of the CEMP.	To be updated.	CEMP	Applicant/ Contractor