codling wind park

Environmental Impact Assessment Report

Volume 5

Chapter 33 Summary of Mitigation and Monitoring


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Abbreviations

Abbreviation	Term in Full
AEZ	Archaeological Exclusion Zone
AIC	Aeronautical Information Circulars
AIS	Automatic Identification System
ASAM	Aeronautical Services Advisory Memorandum
CCRA	Climate change risk assessment
C&D	Construction and demolition
CDWMP	Construction demolition waste management plan
CEMP	Construction Environmental Management Plan
COLREGs	Convention on the International Regulations for Preventing Collisions at Sea, 1972
CWP	Codling Wind Park
CWPL	Codling Wind Park Limited
CFRAM	Catchment Flood Risk Assessment and Management
DCC	Dublin City Council
DCCAE	Department of Communications, Climate Action and Environment
DECC	Department of Environment, Climate and Communications
DoD	Department of defence
DoHLGH	Department of Housing, Local Government and Heritage
DPC	Dublin Port Company
ECoW	Environmental Clerk of Works
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMF	Electromagnetic Fields
EPA	Environmental Protection Agency
ERCoP	Emergency Response and Cooperation Plan
ESB	Electricity Supply Board
ESBN	ESB Networks
EU	European Union
EVMP	Ecological Vessel Management Plan
FLO	Fisheries Liaison Officer

FMMS	Fisheries Management and Mitigation Strategy
FOS	Fred Olsen Seawind
GLAS	Green Low-Carbon Agri-Environmental Scheme
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicle
HSA	Health and Safety Authority
HWM	High water mark
IAA	Irish Aviation Authority
IAC	Inter Array Cables
IAIP	Integrated Aeronautical Information Package
IAQM	Institute of Air Quality Management
INNS	Invasive Non-Native Species
IRCG	Irish Coastguard
ISMP	Invasive Species Management Plan
ISO	International Organisation for Standardisation
km	Kilometre
LoD	Limit of deviation
LMP	Lighting and Marking Plan
MAP	Maritime Area Planning
MARPOL	International Convention for the Prevention of Pollution from Ships
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MMO	Marine Mammal Observer
MMMP	Marine Mammal Mitigation Protocol
mOD	Metres ordnance datum
MRCC	Marine Rescue and Coordination Centre
MSL	Mean Sean Level
NIS	Natura Impact Statement
NRA	National Roads Authority
NSL	Noise sensitive location
NSP	Navigational Safety Plan
OECC	Offshore Export Cable Corridor
OfTI	Offshore Transmission Infrastructure
OTI	Onshore Transmission Infrastructure

O&M	Operations and maintenance
OSS	Offshore Substation Structure
OWF	Offshore wind farm
PAD	Protocol for Archaeological Discoveries
PAM	Passive acoustic monitoring
SAR	Search and Rescue
SFRA	Strategic Flood Risk Assessment
SOLAS	Safety of Life at Sea
SOPEP	Ship Oil Pollution Emergency Plan
TJB	Transition joint bays
TMP	Traffic Management Plan
UAU	Underwater Archaeological Unit
UXO	Unexploded ordnance
WTG	Wind Turbine Generator
ZoI	Zone of influence

Definitions

Glossary	Meaning
array site	The red line boundary area within which the wind turbine generators (WTGs), inter-array cables (IACs) and the Offshore Substation Structures (OSSs) are proposed.
Archaeological Exclusion Zone (AEZ)	An area identified within the wider Array Site or OECC in which construction activities are excluded to ensure the protection of archaeological sites or features.
Codling Wind Park (CWP) Project	The proposed development as a whole is referred to as the Codling Wind Park (CWP) Project, comprising of the offshore infrastructure, the onshore infrastructure, and any associated temporary works.
Codling Wind Park Limited (CWPL)	A joint venture between Fred. Olsen Seawind (FOS) and Électricité de France (EDF) Renewables, established to develop the CWP Project.
Summary of Mitigation	A summary of all commitments to manage and mitigate potential environmental impacts from the CWP Project
Contractor	The Contractor for the CWP Project as defined in the Conditions of Contract
Developer	The developer, Codling Wind Park Limited (CWPL).
dropped object	Materials or equipment carried by personnel, lifted or carried from support vessels, or smaller items fitted to the wind turbine, such as nuts and bolts or lights, accidentally falling from height into the marine environment.
Environmental Impact Assessment (EIA)	A systematic means of assessing the likely significant effects of a proposed project, undertaken in accordance with the EIA Directive and the relevant Irish legislation.
Environmental Impact Assessment Report (EIAR)	The report prepared by the Developer to describe the findings of the EIA for the CWP Project.
export cables	The cables, both onshore and offshore, that connect the offshore substations with the onshore substation.
generating station	Comprising the wind turbine generators (WTGs) and inter-array cables (IACs).
inter-array cables (IACs)	The subsea electricity cables between each WTG and between the OSSs.
interconnector cables	The subsea electricity cables between OSSs.
Invasive Non Native Species (INNS)	Species that are introduced, intentionally or unintentionally, outside of their natural geographic range, causing environmental, social and/or economic impacts.
landfall	The point at which the offshore export cables are brought onshore and connected to the onshore export cables via the transition joint bays (TJB).

Glossary	Meaning
Natura Impact Statement (NIS)	The report prepared by the Developer to describe the findings of the Natura Impact Assessment for the CWP Project.
Maritime Area Planning (MAP) Act 2021	An Act to regulate the maritime area, to achieve such regulation by means of a National Marine Planning Framework, maritime area consents for the occupation of the maritime area for the purposes of maritime usages that will be undertaken for undefined or relatively long periods of time (including any such usages which also require development permission under the Planning and Development Act 2000) and licences for the occupation of the maritime area for maritime usages that are minor or that will be undertaken for relatively short periods of time
Marine Coordination	The management and surveillance of people, vessels and offshore structures with regard to the safe preparation and execution of offshore activities, in order to minimise the probability of an incident, and to provide effective response if an incident does occur.
method statements	Documents developed by the contractor and their subcontractor(s) that provide details of the different construction activities for the CWP Project.
offshore development area	The entire footprint of the offshore infrastructure and associated temporary works that will form the offshore boundary for the development consent application.
offshore export cables	The cables that transport electricity generated by the WTGs from the offshore substations (OSSs) to the landfall.
offshore export cable corridor (OECC)	The area between the Array Site and the landfall, within which the offshore export cables cable will be installed along with cable protection and other temporary works for construction.
offshore infrastructure	The offshore infrastructure, comprising of the WTGs, IACs, OSSs, Interconnector cables, offshore export cables and other associated infrastructure such as cable and scour protection.
offshore substation structure (OSS)	A fixed structure located within the array site, containing electrical equipment to aggregate the power from the wind turbine generators and convert it into a more suitable form for export to shore.
offshore transmission infrastructure (OfTI)	The offshore transmission assets comprising the OSSs, interconnector cables and offshore export cables. The EIAR considers both permanent and temporary works associated with the OfTI.
onshore development area	The entire footprint of the OTI and associated temporary works that will form the onshore boundary for the development consent application.
onshore transmission infrastructure (OTI)	The onshore transmission assets comprising the TJBs, onshore export cables and the onshore substation. The EIAR considers both permanent and temporary works associated with the OTI.
onshore substation	Site containing electrical equipment to enable connection to the national grid.

Glossary	Meaning
operations and maintenance (O&M) activities	Activities (e.g., monitoring, inspections, reactive repairs, planned maintenance) undertaken during the O&M phase of the CWP Project.
parameters	Set of parameters by which the CWP Project is defined and which are used to form the basis of assessments.
Regulatory Authority	An independent governmental body established by legislative Act, in order to set standards in a specific field of activity, or operations and to regulate those activities or operation in the public interest. In the case of the CWP Project the regulatory authorities are An Bord Pleanála (ABP), the coastal planning authorities, the Maritime Area Regulatory Authority, and any other public body specified by ABP for that purpose of discharging a planning condition. Ireland's new Maritime Area Regulatory Authority (MARA) will then be responsible for compliance monitoring and enforcement during construction (including pre-construction surveys), O&M and decommissioning.
transition joint bay (TJB)	This is required as part of the OTI and is located at the landfall. It is an underground bay housing a joint which connects the offshore and onshore export cables.
unexploded ordnance	Explosive ordnance that has been primed, fused, armed, or otherwise prepared for use in an armed conflict or disposed of or dumped offshore. It may have been fired, dropped, launched or projected and should have exploded but failed to do so.

33 CHAPTER 33 SUMMARY OF MITIGATION AND MONITORING

33.1 Introduction

1. Mitigation measures are developed to eliminate or reduce adverse effects identified in the EIA. The approach to mitigation for the CWP Project is a hierarchical one, which seeks to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.

2. For the purposes of the EIA, two types of mitigation have been defined:

   - Primary (or embedded) mitigation: Throughout the development of the CWP Project, measures have been adopted as part of the evolution of the project design and approach to construction to avoid or otherwise reduce adverse impacts on the environment. These mitigation measures are referred to as 'primary mitigation'. They are an inherent part of the CWP Project and are effectively 'built in' to the impact assessment.
   - Additional (or secondary) mitigation: Additional mitigation includes measures that are not incorporated into the design of the CWP Project and require further activity to secure the required outcome of avoiding or reducing the significance of an effect. Additional mitigation is normally receptor specific and may make reference to management plans to control activities or specific commitments.

3. The mitigation associated with the CWP Project is identified and described in detail in the relevant topic chapters of the EIAR (**Chapters 6–32**) and also in **Chapter 4 Project Description** and **Chapter 3 Site Selection and Consideration of Alternatives**.

4. **Chapter 33 Summary of Mitigation and Monitoring** (this chapter) provides a tabulated summary of the mitigation measures outlined in the abovementioned chapters of the EIAR but should be read in context with the assessments presented in the main chapters and with the additional details provided in the following supporting documents:

   - Fisheries Management and Mitigation Strategy
   - Marine Mammal Mitigation Protocol
   - Ecological Vessel Management Plan
   - Navigational Safety Plan
   - Lighting and Marking Plan
   - Construction Environmental Management Plan
   - Onshore Substation Site Drainage and Water Supply Design Report
   - Onshore Invasive Species Management Plan
   - Construction & Demolition Waste Management Plan
   - Onshore Substation Architectural Design Statement
   - Rehabilitation Schedule

5. To verify predictions and to address areas of uncertainty, monitoring is proposed as a key aspect of environmental management for the construction and O&M of the CWP Project. Monitoring, where proposed, is described within the relevant chapters of the EIAR (**Chapters 6–32**) and summarised in the **In Principle Project Environmental Monitoring Plan (IPPEMP)**.

Table 1 Summary of mitigation and monitoring

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C01	Primary	Positions of WTGs and OSSs have been informed by a wide range of site specific data, including metocean data (e.g. wind speed and direction), geophysical and geotechnical survey data (e.g. bathymetry), environmental data (e.g. benthic surveys and archaeological assessment) and stakeholder consultation. Designing and optimising the layout of the WTGs has considered multiple constraints identified from analysis of these datasets, alongside the consideration of layout principles taken from relevant guidance on the design of OWFs. A summary of the key actions taken to avoid or otherwise reduce impacts is provided below: • The WTG layout options include Search and Rescue (SAR) access lanes to allow a SAR resource to fly on the same orientation continuously through the array site. This is provided to minimise risks to surface vessels and/or SAR resource transiting through the array site. • Archaeological exclusion zones (AEZs) around known features of archaeological interest have been avoided. No works that impact the seabed will be undertaken within the extent of an AEZ during the construction, operational, or decommissioning phases. • The locations of offshore infrastructure been developed to avoid known sensitive ecological habitats, including areas with suitable conditions for Sabellaria spinulosa which can form reefs under some circumstances. Whilst reefs were not identified during the characterisation surveys, as an ephemeral feature it will be necessary to validate the results in advance of construction. A pre-construction geophysical survey will therefore be undertaken to facilitate the micrositing around sensitive habitats such as Sabellaria spinulosa.	Construction Operation	All offshore infrastructure	6, 8, 10, 12, 13, 14, 15, 16, 17 & 18	EIAR Chapter 3 Site Selection and Consideration of Alternatives

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		• The WTG layout options have been developed to avoid or minimise interaction with known areas of high fishing density, where possible. As avoidance is not always possible, the layouts have also been developed to increase the potential for coexistence. • A paleochannel (the remnants of a river or stream channel that flowed in the past) in the centre west of the array site has been avoided.				
C02	Primary	Bedform clearance operations will be undertaken only where necessary, thereby minimising sediment disturbance and alteration to seabed morphology.	Construction	All offshore infrastructure	6, 7, 8, 9 & 14	EIAR Chapter 4 Project Description
C03	Primary	The Applicant will, where practicable, bury all cables within the offshore development area: • IACs and interconnector cables will have a minimum depth of cover of 1.0 m; and • Offshore export cables will have a minimum depth of cover of 1.4 m. In cases where burial is inadequate due to unforeseeable seabed conditions, and at cable crossings, cable protection will be implemented as mitigation to avoid risks to other marine operations.	Construction Operation	Offshore cables	6, 12, 16 & 18	EIAR Chapter 4 Project Description
C04	Primary	Disposal of dredged material will occur in suitable locations within the offshore development area, and in accordance with the requirements under a disposal at sea licence which will be sought separately. This has the benefit of minimising impacts on seabed morphology and the wider sediment regime.	Construction	All offshore infrastructure	6	EIAR Chapter 4 Project Description
C05	Primary	During WTG installation, equipment such as jack up vessels (if required) are expected to remain in any one location for a limited period of time (hours to a few days). This will ensure	Construction	Offshore construction vessels	6	EIAR Chapter 4 Project Description

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		any impacts on the prevailing hydrodynamic, wave and sediment regimes and coastal processes is minimised.				
C06	Primary	Cables will be suitably buried or protected by other means where burial is not practicable. This will reduce the potential for effects relating to the presence of Electromagnetic Fields (EMF).	Operation	Offshore cables	8, 9	EIAR Chapter 4 Project Description
C07	Primary	A Construction Environmental Management Plan (CEMP) has been prepared to provide a management framework, to ensure appropriate controls are in place to manage environmental risks associated with the construction of the CWP Project. It outlines environmental procedures that require consideration throughout the construction process, in accordance with legislative requirements and industry best practice. In summary, the CEMP includes details of: • the Environmental Management Framework for the CWP Project including environmental roles and responsibilities (i.e. ecological clerk of works) and contractor requirements (i.e. method statements for specific construction activities); • mitigation measures and commitments made within the EIAR, Natura Impact Statement (NIS) and supporting documentation for the CWP Project. • measures proposed to ensure effective handling of chemicals, oils and fuels including compliance with the MARPOL convention; • a Marine Pollution Prevention and Contingency Plan to address the procedures to be followed in the event of a marine pollution incident originating from the operations of the CWP Project; • a Emergency Response Plan adhered to in the event of discovering unexploded ordnance;	Construction Operation	All offshore infrastructure	7, 8, 9, 10, 11, 12, 13, 14, 16	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		• Offshore biosecurity and invasive species management detailing how the risk of introduction and spread of invasive non-native species will be minimised; and • Offshore waste management and disposal arrangements. The CEMP will be implemented by the Applicant and its appointed contractor(s) and will be secured through conditions of the development consent. It will be a live document which will be updated and submitted to the relevant authority, prior to the start of construction.				
C08	Primary	A Marine Mammal Mitigation Protocol (MMMP) has been prepared to outline the mitigation requirements for minimising the impacts on marine mammals during the construction of the CWP Project. The MMMP will be implemented by the Applicant and its appointed contractor(s) and will be secured through conditions of the development consent. It will be a live document which will be updated and submitted to the relevant authority, prior to the start of construction. Primary mitigation measures in the Geophysical Survey MMMP (section 7 of the MMMP): • Pre-survey visual watch by an MMO (and PAM if required). Primary mitigation measures in the UXO MMMP (section 10 of the MMMP): • Pre-detonation visual watch by an MMO; and • Pre-detonation PAM (if required to supplement to visual observations).	Construction	All offshore infrastructure	9, 10, 11	Marine Mammal Mitigation Protocol
C09	Primary	Drill fluids, where required, will comply with industry best practice and standards to minimise risk to the environment.	Construction	WTGs OSSs	7	Construction Environmental

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
						Management Plan
C10	Primary	Grouts will comply with the relevant maritime industry specifications which are designed for safety, and suitable for use in the marine environment.	Construction	WTGs OSSs	7	Construction Environmental Management Plan
C11	Primary	In general, the CWP Project has sought to specify the location, scale and extents of permanent and temporary offshore infrastructure; however, in some cases, a degree of locational flexibility is required. Locational flexibility of permanent and temporary infrastructure is described as a limit of deviation (LoD) from a specific point or alignment. LoDs, described in Chapter 4 Project Description, are required to: • Take account of additional ground conditions, data acquired during pre-construction geotechnical surveys, and results from pre-construction offshore UXO surveys; • Avoid and minimise adverse impacts on offshore ephemeral benthic habitats, such as Sabellaria spinulosa reefs, identified during pre-construction surveys; and • Take account of the confirmed position of existing subsea infrastructure and archaeological features.	Construction Operation	All offshore infrastructure	7, 14, 18	EIAR Chapter 4 Project Description
C12	Primary	All WTGs for both layout options will feature a minimum blade tip clearance of 36 m above Mean Sean Level (MSL) (+37.72m LAT). This is beyond the minimum 22 m above HAT clearance required for safety of navigation and has been set by the Applicant to reduce the potential collision risk for offshore ornithology receptors	Operation	WTGs	10, 16	EIAR Chapter 3 Site Selection and Consideration of Alternatives EIAR Chapter 4 Project Description

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C13	Additional	Vegetation removal/clearance will commence outside of the breeding bird season (which is from 1 March to 31 August inclusive) to avoid impacts on nesting birds. Where the construction programme does not allow this time restriction to be observed, then these areas will be inspected by the Ecological Clerk of Works (ECoW) for the presence of breeding birds prior to clearance. Areas found not to contain nests will be cleared within three days of the nest survey, otherwise repeat surveys will be required. The Environmental Management Framework for the CWP Project including the role and responsibilities of the appointed ECoW are described in the Construction Environmental Management Plan (CEMP).	Construction Decommissioning	All onshore infrastructure Landfall	10	Construction Environmental Management Plan
C14	Additional	Construction noise will be managed in accordance with British Standard BS 5228 1:2009 'Code of Practice for Noise and Vibration Control on Construction and Open Sites –Part 1: Noise'. The appointed contractor will put in place the most appropriate noise control measures to ensure that the works in each area comply with the limits detailed in Chapter 24 Noise and Vibration and so that minimisation of noise is achieved by best means practicable. Measures to control noise from construction activities are described in Chapter 24 Noise and Vibration and the Construction Environmental Management Plan (CEMP).	Construction Decommissioning	All onshore infrastructure Landfall	10, 21, 24, 29, 30	Construction Environmental Management Plan
C15	Additional	To reduce the level of artificial lighting, all temporary lighting associated with the construction works will be placed strategically by the appointed Contractor following consultation with the appointed ECoW. This will ensure that illumination beyond the works area is controlled. Lighting will be cowled and directional to reduce significant light splay.	Construction Decommissioning	All onshore infrastructure Landfall	10, 21, 23	Construction Environmental Management Plan
C16	Additional	A Breeding Tern Mitigation Strategy has been prepared to mitigate potential impacts to the tern colonies located close to	Construction	Onshore substation	10	EIAR Chapter 10 Ornithology

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		the onshore substation site. The strategy details several mitigation measures including restricted working periods, visual screening, construction sequencing, noise and lighting limits and monitoring and response measures. Full details of the measures proposed are provided in EIAR Chapter 10 Ornithology.				
C17	Primary	The Onshore Substation Architectural Design Statement accompanies the planning application. As part of the design of the façade for the onshore substation bird of prey deterrents were incorporated at 2 locations: • Creating a steep angle (+60°) to the band between the brick base and metal cladding of the façade; and • Raising of the metal cladding above roof parapet, impairing hunting birds' view of target platform.	Operation	Onshore substation	10	EIAR Chapter 10 Ornithology
C18	Primary	An Ecological Vessel Management Plan (EVMP) has been prepared to determine vessel routing to and from construction sites and ports and to include a code of conduct for vessel operators. The EVMP includes details of: • The types and specifications of vessels for the CWP Project; • How vessels will be monitored and coordinated; and • The use of defined transit routes to site from key construction and operation ports, where practicable to do so. The EVMP will be implemented by the Applicant and its appointed contractor(s) and will be secured through conditions of the development consent. It will be a live document which will be updated and submitted to the relevant authority, prior to the start of construction.	Construction Operation Decommissioning	All offshore infrastructure	9, 10, 11, 13, 15	Ecological Vessel Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C19	Primary	A Navigational Safety Plan (NSP) has been prepared for shipping and navigation purposes, including the safe navigation of fishing vessels. The NSP includes details of: Advisory safe passing distances around structures and works; • Marine coordination and communication to manage the movements of project vessels; • Marking of all infrastructure associated with the project (including subsea cables) on appropriately scaled Admiralty Charts; • Procedures in relation to Local Notices to Mariners, to be updated and re-issued during construction and prior to planned maintenance works; • Consultation with the relevant harbour authorities; • Compliance of all project vessels with international marine regulations as adopted by the Flag State, notably the COLREGs and International Convention for the Safety of Life at Sea (SOLAS); and • Use of a guard vessel(s) as deemed appropriate by risk assessment. The NSP will be implemented by the Applicant and its appointed contractor(s) and will be secured through conditions of the development consent. It will be a live document which will be updated and submitted to the relevant authority, prior to the start of construction.	Construction Operation Decommissioning	All offshore infrastructure	12, 16	Navigational Safety Plan
C20	Primary	A Fisheries Management and Mitigation Strategy (FMMS) has been prepared to provide an overview of the Applicant's approach to fisheries liaison and mitigation with regards to the CWP Project. This includes measures proposed to facilitate co-existence with the commercial fishing industry with the aim of minimising potential impacts to fisheries	Construction Operation Decommissioning	All offshore infrastructure	12	Fisheries Management and Mitigation Strategy

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		stakeholders as far as possible. The FMMS includes details of: • The roles and responsibilities of the Fisheries Liason Officer and other relevant (FLO); • Approach to disseminating information and communicating with fisheries stakeholders; • Procedures to facilitate coexistence; and • Code of good practice for all vessels The FMMS will be implemented by the Applicant and its appointed contractor(s) and will be secured through conditions of the development consent. It will be a live document which will be updated prior to the start of construction.				
C21	Additional	The impact of light associated with offshore construction works shall be reduced through proper placement of light sources in addition to using lights with high directionality. The amount of lighting should be targeted to achieve minimum required or necessary light levels, by reducing the number of lights or by moving from general area lighting to specifically focused task-based lighting.	Construction Decommissioning	All offshore infrastructure	10, 13	Construction Environmental Management Plan
C22	Additional	A Construction Environmental Management Plan (CEMP) has been prepared to provide a management framework, to ensure appropriate controls are in place to manage environmental risks associated with the construction of the CWP Project. The CEMP shall include the responsibilities of an experienced Ecological Clerk of Works (ECoW), to be appointed throughout the construction phase of the project. Though considered to be of low likelihood, it is possible that bats will roost the construction vessels, the WTGs or OSSs during construction. As such, the ECoW will be available for advice should any bats be seen resting or otherwise stopping	Construction	All offshore infrastructure Offshore construction vessels	13	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		on the vessels or infrastructure. Guides on how to identify the different bats, with life size photos, will also be available to the construction personnel to aid with identification of any bats which are seen. If bats are seen this will be logged, with the date, location and weather conditions recorded to aid future research into bat movements within the area.				
C23	Additional	As bats will have had a minimum of 25 years to find roosting opportunities within the offshore infrastructure, should any gaps, expansion joints, or other crevices be present these will be noted and infrared cameras (or similar) used to check for evidence of potential bat roosting. Any such features will be dismantled carefully, by hand where possible, to ensure that if there are bats roosting within the structures (considered highly unlikely at this time) any risks to them are minimised. An appropriately experience ecologist would be available for contact regarding any bats found resting during this phase.	Decommissioning	WTGs OSSs	13	Construction Environmental Management Plan
C24	Primary	Positions of WTGs and OSSs have been informed by a wide range of site specific data, including geophysical and geotechnical survey data, used to identify potential archaeological receptors within the offshore development area. Consequently, archaeological exclusion zones (AEZs) around known features of archaeological interest have been avoided. No works that impact the seabed will be undertaken within the extent of an AEZ during the construction, operational, or decommissioning phases. For features assigned A2 archaeological discrimination rating (potential seabed features), no AEZs are recommended. However, these features have been avoided, where possible. Where this has not been possible, further appraisal is proposed prior to construction. For example, where geophysical surveys may be undertaken in advance of the development, or during a UXO survey, it is recommended	Construction	All offshore infrastructure	14	EIAR Chapter 3 Site Selection and Consideration of Alternatives EIAR Chapter 14 Marine Archaeology & Cultural Heritage

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		that the data will be assessed by a suitably qualified archaeological contractor. This will confirm the presence of ferrous material at the location of features identified during the initial assessment, as well as helping to identify any additional ferrous features of archaeological potential within the offshore development area. Further investigations mean that anomalies can either have their archaeological value removed, if they prove to be of non-anthropogenic nature or modern, or their value as archaeological assets confirmed. If their value is confirmed, mitigation in the form of either avoidance (which may be enacted by the implementation of an AEZ) or through remedying or offsetting measures including a Protocol for Archaeological Discoveries (PAD) is recommended.				
C25	Additional	With regards to Palaeogeography, should further ground investigation work be undertaken within the study area to inform the final alignment, it is recommended that the archaeological contractor be consulted to advise on potential samples to be acquired for archaeological purposes, particularly from the fine-grained deposits 75015, and other identified units of archaeological interest identified within the data. It is also recommended that any geotechnical logs from within the study area be made available for geoarchaeological assessment by a suitably qualified archaeological contractor. Furthermore, it is recommended that any samples acquired containing material of archaeological potential, particularly those within the channel features 75011, 75014, 75016, 75020, 75021 and 75025 or fine-grained deposit 75015, be made available for geoarchaeological assessment	Construction	All offshore infrastructure	14	EIAR Chapter 14 Marine Archaeology & Cultural Heritage
C26	Additional	A Protocol for Archaeological Discoveries (PAD) will be in place for the CWP Project. A PAD is proposed for reporting	Construction Operation	All offshore infrastructure	14	EIAR Chapter 14 Marine

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		and investigating unexpected archaeological discoveries encountered during the different phases of the project, with a Retained Archaeologist providing guidance and advising industry staff on the implementation of the PAD. The PAD also makes provision for the implementation of temporary exclusion zones around areas of possible archaeological interest, for prompt archaeological advice, and, if necessary, for archaeological inspection of important features prior to further activities in the vicinity. The PAD provides a mechanism to comply with the Irish legislation, including notification to the UAU, and accords with the Code of Practice for Seabed Developers (JNAPC, 2006).	Decommissioning			Archaeology & Cultural Heritage
C27	Additional	With regards to intertidal heritage assets, a targeted archaeological walkover survey shall be undertaken along the final offshore export cable alignments within the OECC. This will enable the identification of any further cultural heritage receptors with surface expression along the proposed cable routes leading up to the landfall. Furthermore, a metal detection survey, including excavation of identified targets is recommended to identify any material of archaeological potential located along the proposed cable alignments. For the one known intertidal heritage receptor (1001–1003) it is recommended that the site is re-established to verify the feature and an archaeological recording is undertaken prior to construction works. This would entail a photographic record, drawing record and assessment, following current best practice and guidance outlined in the Framework and Principles for the Protection of the Archaeological Heritage (1999) and Policy and Guidelines on Archaeological Excavation (1999) Mitigation in the form of avoidance (which may be enacted by the implementation of an AEZ) shall be prioritised for all material of archaeological potential within the intertidal area.	Construction Decommissioning	Landfall	14	EIAR Chapter 14 Marine Archaeology & Cultural Heritage Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C28	Primary	A Lighting and Marking Plan (LMP) has been prepared to capture construction and O&M phase lighting requirements for the offshore infrastructure and demarcation of the offshore development area such as construction buoy requirements. The LMP includes details of: • Marking and lighting of the array site in agreement with Irish Lights and in line with IALA G1162 (IALA, 2021a); • Buoyed construction area around the array in agreement with Irish Lights; and • Specific requirements in terms of aviation lighting to be installed on the turbines. The LMP will be prepared in consultation with the IAA, DoD and IRCG. It will take into account DoD's requirement for WTGs to be observable to night vision equipment. The LMP will ensure appropriate lighting is in place to facilitate aeronautical safety. The LMP will be implemented by the Applicant and its appointed contractor(s) and will be secured through conditions of the development consent. It will be a live document which will be updated and submitted to the relevant authority, prior to the start of construction.	Construction Operation	WTGs OSSs	16, 17	Lighting and Marking Plan
C29	Primary	An Emergency Response Cooperation Plan (ERCoP) will be in place for the CWP Project. The ERCoP will detail liaison with SAR resources including the IRCG to ensure suitable emergency response plans and procedures are in place. The ERCoP will refer to the marking and lighting of the WTGs and will consider helicopters undertaking SAR operations when rendering assistance to vessels and persons in the vicinity of the offshore development area. This will ensure appropriate lighting is in place to facilitate aeronautical safety during SAR operations.	Construction Operation	WTGs OSSs	16, 17	EIAR Chapter 16 Shipping and Navigation EIAR Chapter 17 Aviation, Military and Radar

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C30	Primary	The IAA will be informed of the locations, heights and lighting status of the wind turbines, including estimated and actual dates of construction and the maximum heights of any construction equipment to be used, prior to the start of construction, to allow inclusion on aviation charts and in the IAA IAIP. This will comply with OREDP (DCCAE, 2014) which requires the IAA to be notified of the construction and location of wind turbines.	Construction Operation	WTGs OSSs	17	Chapter 17 Aviation, Military and Radar
C31	Primary	All structures > 90 m amsl in height will be charted on aeronautical charts and reported to the IAA at least three months prior to construction, for input into the IAA's database of tall structures in Ireland. An object which is higher than 90 m in height is considered to have significance for the en-route operation of aircraft in Irish airspace.	Construction Operation	WTGs OSSs	17	Chapter 17 Aviation, Military and Radar
C32	Primary	During the operational phase, the operator of the CWP Project will issue, as necessary, requests to the IAA to submit Aeronautical Information Circulars (AIC) in the event of any failure of aviation lighting. Any light which fails shall be repaired or replaced as soon as is reasonably practicable. An alerting system for light failure will be put in place, such as remote monitoring or other suitable method agreeable to the IAA. This will comply with IAA ASAM No.18 which contains the policy on actions in the event of the failure of aviation warning lights on offshore wind turbines listed in the IAA IAIP.	Operation	WTGs OSSs	17	Chapter 17 Aviation, Military and Radar
C33	Primary	For the consideration of potential array sites on the east coast of Ireland, a thorough site selection process was developed that considered all aspects of the site that would have a bearing on the economic viability and the technical and environmental acceptability of an eventual OWF development in that area. This included an analysis of existing underwater pipelines and cables. As a result of this constraints analysis the array site boundary has been selected to avoid active	Construction Operation	All offshore infrastructure	18	EIAR Chapter 3 Site Selection and Consideration of Alternatives

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		utility assets such as underwater pipelines and cables. Likewise, the route selection for the OECC has been informed by the location of existing seabed infrastructure. The OECC has sought to take into account known subsea obstructions including cables and pipelines by enabling perpendicular crossings where possible.				
C34	Primary	A pre-construction geopysical survey will be undertaken to verify the location of existing subsea infrastructure.	Construction Decommissioning	All offshore infrastructure	18	EIAR Chapter 4 Project Description Chapter 18 Material Assets: Marine Infrastructure
C35	Primary	Consultation and liaison will be undertaken with asset owners and other energy infrastructure operators, as required. This is proposed to promote and maximise cooperation between parties and minimise spatial and temporal interactions between simultaneous activities.	Construction Operation Decommissioning	All offshore infrastructure	18	EIAR Chapter 18 Material Assets: Marine Infrastructure
C36	Additional	The CWP Project offshore export cables will cross a number of existing assets. Where the existing assets depth of burial is sufficiently deep, the offshore export cable will be laid directly on the seabed. However, where the existing asset is too shallow, additional protection will be required to protect both the existing asset and the CWP Project offshore export cables. It is likely that concrete mattress will be placed over the existing asset, which is known as a separation layer. The offshore export cable will then be laid across this at an angle as close to 90 degrees as possible. The export cable will then be covered by a second mattress to secure the cables in place and ensure that they remain protected. The design and methodology of these crossings will be confirmed in agreement with the asset owners. Furthermore,	Construction	Offshore cables	18	EIAR Chapter 4 Project Description Chapter 18 Material Assets: Marine Infrastructure

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		the cable protection at cable crossings will be inspected during the life of the project and may need to be replenished with additional protection, depending on their condition.				
C37	Additional	Consultation with existing cable operators, approval of cable crossing agreements prior to decommissioning and adherence with relevant legislation and guidance at the time of decommissioning will be required to ensure that cable crossings are appropriately designed to mitigate environmental effects and damage to existing operational cables.	Decommissioning	Offshore cables	18	Chapter 18 Material Assets: Marine Infrastructure
C38	Additional	Where possible, vegetation clearance will be kept to a minimum. The proposed construction work areas will be demarcated prior to the construction works commencing. No clearance of vegetation will be undertaken outside of the demarcated areas. Construction vehicles will be restricted to designated areas and access tracks to avoid impacting adjacent habitats, and to ensure that soil compaction is restricted to these tracks. All disturbed ground will be fully reinstated following the completion of the works.	Construction Decommissioning	Landfall All onshore infrastructure	10, 21, 23	Construction Environmental Management Plan
C39	Primary	A Rehabilitation Schedule is provided as part of the planning application. This has been prepared in accordance with the MAP Act (as amended by the Maritime and Valuation (Amendment) Act 2022) to provide preliminary information on the approaches to decommissioning the offshore and onshore components of the CWP Project. A final Rehabilitation Schedule will require approval from the statutory consultees prior to the undertaking of decommissioning works. This will reflect discussions held with stakeholders and regulators to determine the exact methodology for decommissioning, taking into account available methods, best practice and likely environmental effects.	Decommissioning	All offshore infrastructure All onshore infrastructure	6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31	Rehabilitation Schedule

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C40	Primary	To reduce the potential effects on seascape, landscape and visual receptors, a minimum distance of 5 km from the high water mark (HWM) was defined for the initial identification of potential array sites. The key advantages of Codling Bank in relation to potential impacts on seascape, landscape and visual receptors are listed below: • Firstly, the distance of the site from the coastline (13 – 22 km) presents the advantage of reducing the magnitude of visual impact when viewed from the shoreline when compared to other potential sites located closer to the shoreline; and • Secondly, as the Codling Bank is significantly larger than the other banks in the area, it allows the design of the array site to be in a layout extending away from the coastline, rather than confined to a long strip of turbines running parallel to the coastline, reducing the degree and magnitude of visual impact from the coastline.	Operation	WTGs OSSs	15	EIAR Chapter 3 Site Selection and Consideration of Alternatives
C41	Primary	Regarding the potential effects upon seascape, landscape and visual receptors the Applicant has sought to reduce the number of turbines as far as possible. This is evident in the proposed reduction in the number of WTGs from up to 140 (at EIA Scoping) to 75 (Option A) or 60 (Option B).	Operation	WTGs	15	EIAR Chapter 3 Site Selection and Consideration of Alternatives
C42	Primary	Regarding the potential effects upon seascape, landscape and visual receptors, whilst technical and safety requirements take precedence, the Applicant has sought to produce a visually balanced and coherent layout of turbines when seen from key viewpoints, demonstrating a consistent rhythm and spacing. For both Option A and Option B a grid layout is proposed with Search and Rescue (SAR) lanes in two lines of orientation.	Operation	WTGs	15	EIAR Chapter 3 Site Selection and Consideration of Alternatives

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		Furthermore, for both options, whilst outliers are present, there are no outlying WTGs that appear significantly detached from the rest of the array. Variation in WTG spacing arising from optimising output and foundation requirements have introduced a degree of irregularity, creating a more organic appearance that helps to reduce the clustering and stacking of WTGs, albeit from some locations the array will appear less coherent. It is inevitable, given the effect of perspective, the balance and coherence of the turbines in views will vary from one viewpoint to another, these differences are considered in the assessment.				
C43	Primary	Regarding the potential effects upon seascape, landscape and visual receptors the Applicant has sought to reduce the number of OSSs as far as practicable. This is evident in the proposed reduction in the total number of OSSs from up to five (at EIA Scoping) to 3 (for Option A and B).	Operation	OSSs	15	EIAR Chapter 3 Site Selection and Consideration of Alternatives
C44	Primary	To ensure compliance with SAR requirements and to reduce the potential effects on seascape, landscape and visual receptors, the Applicant has sought to align the OSSs as closely as possible with the rows of WTGs, with a consistent spacing.	Operation	OSSs	15	EIAR Chapter 3 Site Selection and Consideration of Alternatives
C45	Primary	The Applicant has sought to reduce the extent of lighting associated with the array to reduce night-time effects. Aviation lighting was initially proposed for all WTGs; however, it was agreed that such lighting would only be introduced on each WTG around the edge of the array site. Lighting associated with WTG numbers will be hooded to reduce light spill. To minimise light pollution further, OSSs will be unlit whilst they are unmanned.	Operation	WTGs OSSs	15	EIAR Chapter 3 Site Selection and Consideration of Alternatives

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C46	Additional	Piling works along the River Liffey Channel will not be permitted between March and May to avoid noise impact during the smolt run.	Construction	Onshore substation	9	Construction Environmental Management Plan
C47	Primary and Additional	A Marine Mammal Mitigation Protocol (MMMP) has been prepared to outline the mitigation requirements for minimising the impacts on marine mammals during the construction of the CWP Project. The MMMP will be implemented by the Applicant and its appointed contractor(s) and will be secured through conditions of the development consent. It will be a live document which will be updated and submitted to the relevant authority, prior to the start of construction. Primary mitigation measures in the WTG/OSS Piling MMMP (section 8 of the MMMP) and the Onshore Substation Piling MMMP (section 9 of the MMMP): • Pre-piling visual watch by an MMO; and • Pre-piling PAM (if required to supplement to visual observations).	Construction	WTGs OSSs	11	Marine Mammal Mitigation Protocol
C48	Additional	The following mitigation measures will be implemented to mitigate potentially significant effects associated the installation of the export cables and onshore infrastructure within the nearshore (<500m from MLWS), intertidal, and landfall. • During the period September to March, inclusive, the following restrictions will apply to the proposed CWP Project construction: • Cable route installation or associated activities, including preparatory works, will not be undertaken within the OECC between MLWS and MHWS. • Vessel activities will not occur within 300m of the MLWS datum.	Construction	Landfall	10	EIAR Chapter 10 Ornithology

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		• Construction activities relating to cofferdam installation will not be undertaken. • Construction activities relating to open cut trenching at landfall will not be undertaken. • Piling activities associated with TJB construction, where required, will not be undertaken. • 2.6m localised screening will be erected around noisy plant sources associated with the open cut excavation including piling works at the temporary cofferdam, tunnel excavation works (within the Compound A) and the HDD installation of the ESBN networks cables; and • 2.6m hoarding will be erected around the perimeter of the temporary tunnel compound, located in Compound A and the temporary HDD compound located in Compound C. • 2.6m high perimeter hoarding will also be erected around the boundaries of Compound A and Compound C With the exception of notifiable events, for which notification of stakeholders will be required prior to works, the same restrictions will apply between one hour prior to sunset and the following sunrise during the period 15th July – 31st August, inclusive.				
C49	Additional	Appropriately sized exclusion nets will be installed over the harbour wall prior to the Sand Martin breeding season (April to September) to exclude birds from the nesting holes, should it not be possible to avoid works on the harbour wall or reclamation work for the harbour wall during this period. In addition, prior to any works a suitably qualified ecologist will ensure there are no active sand martin nests. The net will be approximately 80 m in length	Construction	Onshore substation	10	EIAR Chapter 10 Ornithology

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C50	Additional	Appropriately sized exclusion nets will be installed over the harbour wall prior to the black guillemot breeding season (April to September) to exclude birds from the nesting holes, should it not be possible to avoid works on the harbour wall or reclamation work for the harbour wall during this period. In addition, prior to any works a suitably qualified ecologist will ensure there are no active Black Guillemot nests. The net will be approximately 80 m in length.	Construction	Onshore substation	10	EIAR Chapter 10 Ornithology
C51	Additional	MSO and Irish Lights will be consulted on the final cable alignments to inform any areas where there is a reduction in water depth >5%.	Construction	Offshore cables	16	Chapter 16 Shipping and Navigation
C52	Additional	IRCG will be consulted on the final WTG / OSS layout to inform IRCG where LoD has been implemented.	Construction	OSSs	16	Chapter 16 Shipping and Navigation
C53	Additional	The Applicant's contractors will adopt specific measures relevant to the prevention of contaminant supply to water bodies. These are secured in the Construction Environmental Management Plan (CEMP), submitted as part of the planning application, and will prevent immediate discharge of contaminated water and sediment from the onshore construction works. These measures include: • Situating concrete and cement mixing and washing areas at least 10 m away from the nearest water body. These areas will incorporate settlement and recirculation systems to allow water to be reused. All washing out of equipment would take place in a contained area and the water collected for disposal offsite. • Storing all fuels, oils, lubricants and other chemicals in impermeable bunds with at least 110 % of the stored capacity, with any damaged containers being removed from site. Refuelling would take place in a dedicated	Construction Decommissioning	All onshore infrastructure	7, 8, 9, 11, 19, 20, 21	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		impermeable area, using a bunded bowser, located at least 10 m away from the nearest water body, where practicable to do so. • Ensuring that spill kits are available on site at all times as well as sandbags and stop logs for deployment on the outlets from the site drainage system in case of emergency spillages. • Foul drainage (e.g., from construction welfare facilities) will be collected through mains connection to an existing mains sewer (if such a connection is available) or collected in an alarmed holding tank located within the planning application boundary and transported off site for disposal at a licensed facility with appropriate treatment capacity within its existing permit. In the event of a widespread leak or spill, the following measures shall be implemented in addition to the most up to date standard practices at the time of the event: • The source of the leak or spill shall be cut off as soon as possible; • The material shall be bunded immediately to prevent further spread; • The relevant authorities shall be contacted, including those who will be able to assist in the clean-up of the leak or spill; and • A remediation plan shall be implemented to monitor and remediate the leak or spill. Measures specific to the control of drilling fluids (i.e., bentonite) during the tunnel and HDD installation are listed below:				

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		• The drilling fluid / bentonite will be non-toxic and naturally biodegradable (i.e., Clear Bore Drilling Fluid or similar will be used); • The area around the bentonite batching, pumping and recycling plant will be bunded using terram and sandbags in order to contain any spillages; • Drilling fluid returns will be contained within a sealed tank / sump to prevent migration from the works area; • The drilling process / pressure will be constantly monitored to detect any possible leaks or breakouts into the surrounding environment. This will be gauged by observation and by monitoring the pumping rates and pressures. If any signs of breakout occur, then drilling will be immediately stopped; • Spills of drilling fluid will be cleaned up immediately and stored in an adequately sized skip before being taken off site; • Daily monitoring of the works area and the water treatment and pumping system, will be completed by a suitably qualified person during the construction phase. All necessary preventative measures will be implemented to ensure no entrained sediment is discharged.				
C54	Additional	It is currently assumed that the excavated material at the landfall and onshore substation site will not be suitable for re-use and will therefore be taken off-site for disposal. However, during the detailed design stage, maximising beneficial re-use of the excavated material on site will be prioritised over off-site disposal. The re-use of material will be subject to testing to confirm suitability in terms of composition and characteristics for heat dissipation. Additionally, where feasible, classification for reuse as a by-	Construction	Landfall Onshore substation	19, 27, 31	Construction & Demolition Waste Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		product, on other construction site(s), under Article 27 will be considered.				
C55	Additional	A Construction Demolition Waste Management Plan has been prepared in accordance with the Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects, published by the EPA in November 2021. The CDWMP outlines the approach for on-site and offsite waste management during the construction phase of the CWP Project. The scope of the CDWMP includes principles of waste management that can be applied to most wastes that would be created during the construction phase. These are: • Where waste generation cannot be avoided, waste disposal will be minimised; • Opportunities for reuse of materials and wastes will be sought throughout the construction phase; • Adhere to waste legislation for storage and handling on-site; and ensure that the relevant regulatory controls have been applied to the reuse, recycling, or recovery of waste on-site; • No waste from the CWP project shall be deposited outside the planning application boundary unless it is at a facility that holds a valid environmental permit or suitable authorised exemption. Offsite waste management facilities are legally obliged to operate under an environmental permit (or an authorised exemption), which is in place to ensure that the site is operated in a manner to prevent emissions causing harm to human health or the environment; • Ensure that excavated material proposed for recovery/disposal offsite will be subject to contamination	Construction	All onshore infrastructure	31	Construction & Demolition Waste Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		testing, to confirm it meets the acceptance criteria for an appropriate waste management facility; • Ensure that those who remove waste from site have the appropriate authorisation (i.e. are registered waste carriers); and those facilities that receive waste from the site hold a valid environmental permit or authorised exemption; • Allocate space on site for the storage of waste materials and ensure that storage areas and containers are clearly labelled (appropriate signage) so site workers know which wastes should be put there. Paved areas/impermeable surfaces may be required, as deemed necessary, to prevent direct contact with the ground; • Hazardous waste must be stored separately from non-hazardous wastes to avoid contamination; • Provide separate containers for dry recyclables, such as paper and cardboard, plastic, glass, wood, and metal at welfare facilities within temporary works areas. This would encourage recycling and increase the potential value of the recyclable items by avoiding contamination; • Monitor the actual quantities of wastes produced during construction and update the CDWMP to allow comparison with waste arisings estimated prior to construction. Record the proposed waste management option (e.g. reuse on site, recycle offsite, or dispose offsite) for each waste produced; • Avoid oversupply of incoming construction materials which have the potential to become waste; • All wastes that are removed off site would be described on a waste transfer note or hazardous waste consignment note (as appropriate) that tracks the				

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		movement of the waste to the specified disposal or recovery facility; • Should any asbestos containing materials be encountered, these will be removed by a specialist asbestos removal contractor and disposed of as asbestos waste. All asbestos removal work must be carried out in accordance with the Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations, 2006 (S.I. No. 386 of 2006) and Safety, Health and Welfare at Work (Exposure to Asbestos) (Amendment) Regulations 2010 (S.I. No. 589/2010); • The appointed contractors should identify appropriate staff that are responsible for waste management; and ensure that all contractor staff are aware of the appropriate reuse, recovery, or disposal routes for each waste. These measures would promote sustainable waste management practices by maximising waste prevention, re-use, recycling, and recovery opportunities for material destined for offsite waste management. The target set for C&D waste management for the CWP Project is to exceed the national target of preparing for reuse, recovery and recycling of 70% of non-hazardous C&D waste (excluding soil and stone). The main contractor will be made aware of this project target and will be required to engage suitably permitted/licenced waste contractors that will be able to provide a commitment to achieving, or exceeding, this target.				
C56	Primary	For installation of the onshore export cables, a flooded or wet caisson will be utilised during the excavation of the three tunnel shafts, to limit the generation of brackish groundwater. The objective of the wet caisson is to excavate in permeable ground while limiting the generation of groundwater requiring treatment and disposal. Groundwater levels in the caisson will	Construction	Onshore cables	7, 20	EIAR Chapter 4 Project Description

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		be maintained at the existing groundwater levels. The wet caisson will progress through the sand and gravels and be completed within the underlying low permeability clay. A concrete plug will provide a sealed working base for each tunnel drive to allow safe pipe jacking operations				
C57	Primary	An Onshore Substation Site Drainage and Water Supply Design Report has been prepared to summarise the storm water and foul water drainage proposals for the CWP Project during the O&M phase, as well as the proposed potable water supply proposals. The Onshore Substation Site Drainage and Water Supply Design Report includes details of: • Storm water network design • Storm water collection and disposal systems • Foul water collection and disposal systems • Estimated potable water demand The Onshore Substation Site Drainage and Water Supply Design Report will be implemented by the Applicant and its appointed contractor(s) and will be secured through conditions of the development consent.	Operation	All onshore infrastructure	7, 20	Onshore Substation Site Drainage and Water Supply Design Report
C58	Additional	Installation of the landfall cable ducts using open cut methods will require the excavation of a single swathe with three cable trenches between the TJBs and the intertidal area, within which cable ducts for each of the three cable circuits will be laid and buried. Prior to the commencement of open cut cable duct installation, a temporary cofferdam will be installed to act as a barrier to tidal inundation whilst the existing stone covered foreshore is temporarily removed, and the ducts installed. The type of cofferdam that is used will be determined post consent once a cable installation contractor has been appointed, however a water or sand filled cofferdam is likely to be a viable option, taking into account the low tidal	Construction	Landfall	7, 8, 9, 20	Construction Environmental Management Plan EIAR Chapter 4 Project Description

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		pressures. Other options include a berm created using existing sediment or temporary sheet piling. The cofferdam will be installed in such a way as to permit open cut trenching from the onshore area to the intertidal area, allowing a dry working area below the HWM. As well as providing a temporary flood defence structure, the cofferdam will act as a a barrier to prevent the transport of sediment and any associated contaminants from the onshore works area into the marine environment. After installation of the temporary cofferdam, open cut trenching and cable duct installation will commence between the repositioned footpath and the intertidal area (within the cofferdam). A trench for each of the 3 No. circuits (up to 3 m in depth) will be excavated using a backhoe and / or 360° excavator, with access provided via the haul road. Based on water level monitoring, groundwater levels are c.3.5 to 4m bgl, therefore limited groundwater is expected to be encountered during the excavation. However, any water encountered within the open trenching will be collected at sumps, treated on site and discharged to the existing sewerage network. There will be no discharge of surface water or groundwater to the intertidal area.				
C59	Additional	Dewatering may be required from excavations where groundwater is encountered. The groundwater will be pumped and tankered off-site for discharge under licence, at a licensed facility. Dewatering will be undertaken in accordance with CIRIA C750 'Groundwater control – design and practice' 2nd Ed (CIRIA, 2016).	Construction Decommissioning	All onshore infrastructure	7, 20	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C60	Additional	The replanting of vegetation (ca. 7,856 m2) will be undertaken within the onshore development area following the completion of the works. The replanting will include the planting of native woodland (ca. 4098 m2), native shrub (ca. 2,708 m2) and wildflower beds (ca. 1,050 m2) at the landfall site, along Shellybanks Road and Pigeon House Road (refer to Figures 23.7, 23.8 and 23.9 in Chapter 23 Landscape and Visual Impact). All planted species will be certified native stock and from an approved supplier of the Green, Low-Carbon Agri-Environmental Scheme (GLAS). Further details are provided in the Landfall Landscape Reinstatement Plan contained in Figure 23.7, 23.8 and 23.9 of Chapter 23 Landscape and Visual Impact. The replanting will include a variety of plant species which will increase the species diversity, particularly at the landfall site, which currently comprises dense bramble and invasive plant species.	Operation	Landfall	10, 21, 23	EIAR Chapter 23 Landscape and Visual Impact Assessment
C61	Additional	Although they are not protected, the bee and pyramidal orchids which were recorded at the onshore substation site and in Compound B will be carefully dug out and transplanted to a designated translocation site within the CWP Project site boundary, prior to the construction works commencing. The orchids will be translocated in June or July (as they are easily identified then) and a deep soil profile is excavated with the orchids to ensure that enough soil, containing mycorrhizal soil fungi, essential to orchid survival, is transferred along with the plants themselves. The orchids will then be replanted within the designated translocation area in either autumn or early spring.	Construction	Construction compounds	10, 21	Construction Environmental Management Plan
C62	Additional	To avoid significant effects and to comply with Regulations 49 and 50 of the European Communities (Birds and Natural Habitat) Regulations (2011), the INNS located within the onshore development area, which will be directly impacted, will be removed prior to the construction works commencing.	Construction Decommissioning	All onshore infrastructure	10, 21	Onshore Invasive Species Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		An Onshore Invasive Species Management Plan (Onshore ISMP) has been prepared and is included within the Planning Application. The ISMP outlines control measures which will be put in place in order to control and manage the INNS. The Onshore ISMP includes details of: • Survey observations and photographs illustrating invasive species infestation; • Control, treatment and management options for each type of invasive species identified; and • Biosecurity standard operating procedures for personnel and equipment. The Onshore ISMP be implemented by the Applicant and its appointed contractor(s) and will be secured through conditions of the development consent. It will be a live document which will be updated and submitted to the relevant authority, prior to the start of construction.				
C63	Additional	Measures to avoid or otherwise minimise disturbance to ecological receptors are described in the Construction Environmental Management Plan (CEMP). Measures included in the CEMP that are specific to the protection of badger are detailed below: • No construction works will occur outside the CWP Project planning application boundary. • All construction site personnel will be made aware of the location of the artificial sett to ensure there is no accidental damage to the sett during the construction phase. • To further reduce the potential for disturbance to the artificial sett, the following will be undertaken: ○ 2.6 m localised screening will be erected around noisy plant sources associated with the open cut	Construction Decommissioning	All onshore infrastructure	21	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		excavation including piling works at the temporary cofferdam, tunnel excavation works (within the Compound A) and the HDD installation of the ESBN networks cables; and ○ 2.6 m hoarding will be erected around the perimeter of the temporary tunnel compound, located in Compound A and the temporary HDD compound located in Compound C. ○ These screening proposals will reduce predicted construction noise levels at the sett, to within 39–58 db. These levels are below and within existing baseline levels of the surrounding area. • It is noted that 2.6 m high perimeter hoarding will also be erected around the boundaries of Compound A and Compound C. • Large excavations, particularly those associated with the tunnel works, HDD works and cable duct installation, will either be covered (with plywood), fenced or have an escape ramp installed overnight to prevent badgers, or other wildlife, from falling into them and becoming trapped. • All temporary lighting used during the construction works will be cowled and directed away from the existing artificial sett and away from foraging sites (areas of scrub, grasslands and woodlands). • The artificial sett will be monitored by the ECoW when constructions works are being undertaken at the landfall and for tunnelling works at the southern section of the onshore export cable, to ensure the sett is not being disturbed. The sett will be monitored using trail cameras (under licence) and visual inspections. In the event the badger sett is being disturbed by the construction works,				

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		all works will be temporarily halted until alternative, sufficient protective measures are put in place. In the event that the construction phase of the CWP Project is delayed more than 12 months after the initial baseline surveys, pre-construction badger surveys will be undertaken prior to the construction works commencing, to establish whether there have been any changes to the receiving environment, particularly in relation to the establishment of new badger setts. The pre-construction survey will be undertaken by an experienced and qualified Ecologist and will take place no more than 10 to 12 months in advance of construction works commencing as per the NRA (2005) guidelines. The pre-construction survey will assess the status of the existing artificial badger sett and identify any newly established setts.				
C64	Additional	In the event that the construction phase of the CWP Project is delayed more than 12 months after the initial baseline surveys, pre-construction badger surveys will be undertaken prior to the construction works commencing to establish whether there has been any change to the receiving environment, particularly in relation to the establishment of new badger setts. The pre-construction surveys will be undertaken by an experienced and qualified Ecologist and will take place no more than 10 to 12 months in advance of construction works commencing as per the NRA (2005) guidelines. The pre-construction survey will assess the status of the existing artificial badger sett and identify any newly established setts in advance of the construction works commencing. In the event a new badger sett is identified during the pre-construction surveys, within the ZoI of the OTI and landfall, the appointed contractor(s) will follow the guidelines outlined	Construction Decommissioning	All onshore infrastructure	21	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		within the NRA (2005) document, and ensure appropriate measures are implemented. In the event a new badger sett is identified within the ZoI of the OTI, the appointed Contractor will implement the following measures, as outlined within the NRA (2005) guidance: • Camera traps will be installed at the sett to establish the level of activity. • If required, a one-way badger gate will be fitted over each entrance. • Gates will be closed after three days and will be monitored every three days for 21 • days in total before the sett is then deemed inactive. • Monthly monitoring of the closed sett will be undertaken to ensure there has been no interference with the closure and no mammals have attempted to dig back into the sett. • Once the sett has been confirmed to be inactive, the sett will be destroyed. • Sett exclusion / sett closure works will be undertaken prior to the commencement of the badger breeding season (December to June). • No sett interference will therefore occur between December and June inclusive when dependant young could be present. Replanting of the berm at the landfall will increase plant diversity in that area and likely provide new foraging habitat for the local badger population.				
C65	Additional	In the event that the construction phase of the development CWP Project is delayed more than 12 months after the initial baseline surveys, a pre-construction otter survey will be	Construction Decommissioning	All onshore infrastructure	21	Construction Environmental

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		undertaken within suitable habitat within ZoI of the onshore development area. The pre-construction survey will be conducted no more than 10 to 12 months in advance of the construction works as per the NRA (2006) guidelines. In the event that a new holt is identified within the ZoI of the proposed works, a derogation licence will be sought from NPWS, and appropriate measures will be implemented.				Management Plan
C66	Additional	The berm will be reinstated once the construction works are completed. A mix of native tree species will be planted at the landfall location. The mix of native trees species will include bat-friendly scented species such as dog rose (Rosa canina), guilder rose (Viburnum opulus) and hazel (Corylus avellana), which will attract and benefit bat species (refer to Figure 23.7 in Chapter 23 Landscape and Visual Impact Assessment). Four bat boxes (Schwegler Woodcrete 1FF bat box or equivalent) will be erected on mature trees or poles at the landfall site. The bat boxes will be erected prior to the construction works commencing and the exact siting of the bat boxes will be undertaken in consultation with a bat specialist. The bat boxes will be installed in line with the following guidelines: • Straight limb trees (or telegraph pole) with no crowding branches or other obstructions for at least 1 m above and below position of bat box. The diameter of tree should be wide and strong enough to hold the required number of boxes. • The bat boxes will be installed in areas where bats are known to forage or adjacent to suitable foraging habitats. • The bat boxes must be installed in locations sheltered from prevailing winds.	Operation	Landfall	21	Chapter 21 Onshore Biodiversity Chapter 23 Landscape and Visual Impact Assessment

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		• The bat boxes will be erected at a height of 4–5 m, to avoid predation and vandalism.				
C67	Additional	Measures to avoid or otherwise minimise disturbance to ecological receptors are included in the Construction Environmental Management Plan (CEMP). With regards to the protection of bats, to reduce disturbance, all temporary lighting associated with the onshore construction works will be placed strategically by the appointed contractor following consultation with the appointed ECoW to ensure that illumination beyond the works area is controlled. Lighting will be cowled and directional to reduce significant light splay. No light will be directed toward the vegetated berm at the landfall site.	Construction Decommissioning	All onshore infrastructure	21	Construction Environmental Management Plan
C68	Additional	Measures to avoid or otherwise minimise disturbance to ecological receptors are included in the Construction Environmental Management Plan (CEMP). With regards to the protection of other mammal species, to reduce disturbance, all temporary lighting associated with the onshore construction works will be placed strategically by the appointed contractor following consultation with the appointed ECoW to ensure that illumination beyond the works area is controlled. Lighting will be cowled and directional to reduce significant light splay. No light will be directed toward the vegetated berm at the landfall site.	Construction Decommissioning	All onshore infrastructure	21	Construction Environmental Management Plan
C69	Additional	Measures to avoid or otherwise minimise disturbance to both human and ecological receptors are included in the Construction Environmental Management Plan (CEMP). The CEMP outlines a series of noise abatement measures that will be adopted by the Applicants contractors in accordance with British Standard BS 5228 1:2009 to reduce the level of noise during the construction phase.	Construction Decommissioning	All onshore infrastructure	21, 30	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C70	Additional	All new lighting at the onshore substation site will be designed following regard of the Bat Conservation Trust Guidelines (2018) and will include the following: • All luminaires used will lack UV/IR elements. • LED luminaires will be used due to the fact that they are highly directional, lower intensity, good colour rendition and have dimming capability. • A warm white spectrum (<2700 Kelvins, i.e. 2200 Kelvins) will be used to reduce the blue light component of the LED spectrum). • Luminaires will feature peak wavelengths higher than 550 nm to avoid the component of light most disturbing to bats. • Column heights will be carefully considered to minimise light spill and the shortest column height allowed should be used where possible. • Only luminaires with an upward light ratio of 0% and with good optical control will be used. • Luminaires will be mounted on the horizontal, i.e. no upward tilt. • Any external security lighting will be set on motion-sensors and short (1 min) timers. • As a last resort, accessories such as baffles, hoods or louvres will be used to reduce light spill and direct it only to where it is needed.	Operation	Onshore substation	21	Construction Environmental Management Plan
C71	Primary	The onshore export cable and ESBN network cable installation methods (i.e. underground tunnelling and HDD) have been selected / designed in order to mitigate by avoidance impacts on existing below ground infrastructure identified within the onshore development area.	Construction	All onshore infrastructure	26	EIAR Chapter 3 Site Selection and Consideration of Alternatives

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C72	Additional	Appropriate decommissioning methodologies will be selected / designed in order to mitigate by avoidance any impacts on infrastructure identified within the onshore development area. Consultation with existing utility asset owners, approval of crossing / diversions agreements prior to decommissioning and adherence with relevant legislation and guidance at the time of decommissioning will be required.	Decommissioning	All onshore infrastructure	26	EIAR Chapter 26 Material Assets – Built Services
C73	Additional	Measures to avoid or otherwise minimise impacts to existing utility asset owners / services providers within the onshore development area are described in the Construction Environmental Management Plan (CEMP): • Prior to the commencement of the project and construction phase, there will be engagement with all utility asset owners / service providers; • Utility assets / services (underground and overhead) will be identified and clearly marked prior to any pre-construction (site clearance) / construction / demolition activity occurring; • Any proposed building works will require a minimum clearance distance of 1 m either side of electrical cables; • No excavations will take place without prior consultation with relevant utility asset owners / service providers; • Prior to any mechanical excavation taking place ESBN will be consulted with and the exact locations of all underground electricity cables established and verified; • All works undertaken in the vicinity of underground assets will be carried out in accordance with current HSA guidance, namely the HSA 'Code of Practice for Avoiding Danger from Underground Services'; • All works will be undertaken with in accordance with the exclusion and safe operating distances around electricity	Construction Decommissioning	All onshore infrastructure	26	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		infrastructure as set out in the ESB Code of Practice, as well as HSA guidance including the 'Code of Practice for Avoiding Danger from Overhead Electricity Lines'; • Liaison with asset owners / service providers will continue / be ongoing as required throughout the construction phase. The following mitigation applies to HDD installation methods along the ESBN network cables: • Excavation works and activities shall be monitored and engineered to take account of soil properties in order to ensure any slopes will remain stable; • Works which may have an impact on the stability of the soils in the area will also be taken into account (e.g., removal of contaminated soil, the use of imported soils and the subsequent changes to soil properties); and • A Method Statement will detail the proposed method of construction to ensure the safety and stability of neighbouring properties/structures and land throughout the installation phase. • • Monitoring of adjacent buildings/structures and land will be undertaken during construction.				
C74	Primary	The construction methodology for the landfall infrastructure will ensure that there is a clear, safe access path maintained between Irishtown Nature Park and Sean Moore Park. While the existing path may be temporarily closed for landfall cable duct installation by open cut trenching, an alternative route will be maintained such that through access is always maintained.	Construction Decommissioning	Landfall	23, 29	EIAR Chapter 4 Project Description
C75	Primary	The installation method for the onshore export cables between the landfall and the onshore substation site (i.e. underground tunnelling) will ensure that open cut trenching is	Construction	Onshore export cables	27, 29	EIAR Chapter 3 Site Selection and

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		not required across Pigeon House Road. This will ensure that Pigeon House Road does not need to be closed during the onshore export cable installation works and will maintain access for the local population to the Great South Wall and the Poolbeg Lighthouse during the construction phase				Consideration of Alternatives
C76	Primary	Offshore export cable ducts will be installed beneath the seabed in the intertidal area in Dublin Bay. Therefore no impacts to recreational users of Dublin Bay shall be experienced during the O&M phase of the CWP Project.	Operation	Landfall	23, 29	EIAR Chapter 4 Project Description
C77	Primary	Compound C at the former Pigeon House Hotel: Compound C will be established away and to the southwest of the upstanding hotel structure and adjacent stone footings identified during the field inspection (likely to represent the remains of a barrack building). The compound will be hoarded during construction works.	Construction	Construction compounds	22	EIAR Chapter 22 Archaeological, Architectural and Cultural Heritage
C78	Primary	Tunnelling of the onshore export cable beneath the Ballast Wall and Harbour Wall: The tunnel invert level for the onshore export cable (-25.3 m OD) has been designed to avoid direct impacts to the Ballast Wall (under the Pigeon House Road) and Pigeon House harbour wall.	Construction	Onshore export cables	22	EIAR Chapter 22 Archaeological, Architectural and Cultural Heritage
C79	Additional	All ground works within the zone of archaeological potential associated with the block house and fort (RMP DU019-027) will be subject to archaeological monitoring under licence from the National Monuments Service of the DoHLGH. This involves an archaeologist being present for the entirety of ground excavations. A licence for the works will take 3–4 weeks to process and the methodology will also require approval from the Dublin City Archaeologist. If archaeological remains are identified	Construction	Onshore substation Construction compounds ESBN network cables	22	EIAR Chapter 22 Archaeological, Architectural and Cultural Heritage

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		during the course of works, further mitigation will be required, such as preservation in-situ or by record. Preservation in-situ means that the identified remains will be avoided by any further works and retained within their original contexts. Preservation by record will require the archaeological excavation of the identified remains. Further mitigation will require additional methodologies to be agreed by the DoHLGH and Dublin City Archaeologist.				
C80	Additional	All ground works within the zone of archaeological potential associated with the Ballast Wall and at Pigeon House Harbour (RMP DU018-066/DU019-029, RPS 6797) will be subject to archaeological monitoring under licence from the National Monuments Service of the DoHLGH. Monitoring involves an archaeologist being present for the entirety of ground excavations. A licence for the works will take 3–4 weeks to process and the methodology will also require approval from the Dublin City Archaeologist. If archaeological remains are identified during the course of works, further mitigation will be required, such as preservation in-situ or by record. Preservation in-situ means that the identified remains will be avoided by any further works and retained within their original contexts, Preservation by record will require the archaeological excavation of the identified remains. Further mitigation will require additional methodologies to be agreed by the DoHLGH and Dublin City Archaeologist. As detailed in Chapter 24 Noise and Vibration, potential vibration impacts on the Pigeon House harbour wall will be mitigated with an initial pre-construction survey, followed by monitoring during piling works.	Construction	Onshore export cables Onshore substation Construction compounds ESBN network cables	22	EIAR Chapter 22 Archaeological, Architectural and Cultural Heritage
C81	Additional	All ground excavation works will be subject to archaeological monitoring under licence from the National Monuments	Construction	All onshore infrastructure	22	EIAR Chapter 22

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		Service of the DoHLGH. Monitoring involves an archaeologist being present for the entirety of ground excavations. A licence for the works will take 3–4 weeks to process and the methodology will also require approval from the Dublin City Archaeologist. If archaeological remains are identified during the course of works, further mitigation will be required, such as preservation in-situ or by record. Preservation in-situ means that the identified remains will be avoided by any further works and retained within their original contexts, Preservation by record will require the archaeological excavation of the identified remains. Further mitigation will require additional methodologies to be agreed by the DoHLGH and Dublin City Archaeologist.				Archaeological, Architectural and Cultural Heritage
C82	Primary	As part of the Flood Risk Assessment (FRA) for the onshore substation site it has been determined that the 0.1% annual exceedance probability (AEP) (1:1,000-year return period) high-end future scenario (HEFS) flood level is +4.34m ordnance datum (OD). Therefore, in order to protect the site from fluvial flood risk, a minimum freeboard of 300 mm is to be provided resulting in a minimum site level of +4.64 mOD. The minimum site level will grade upwards from +4.64 mOD to a typical site platform level of +5.00 mOD to allow for local drainage gradients on site. Furthermore, to protect the site against overtopping due to wave surge, the perimeter levels of the site shall be locally raised to +5.24mOD.	Operation	Onshore substation	20	EIAR Chapter 4 Project Description
C83	Additional	The Traffic Management Plan (Appendix 27.2 of EIAR Chapter 27 Traffic and Transport) contains the control measures and monitoring procedures for managing the potential traffic and transport impacts of constructing the CWP Project. The TMP alongside the CEMP include the following measures that seek to minimise the CWP Project's impact on climate due to GHG emissions from construction phase traffic:	Construction Decommissioning	All onshore infrastructure	28	EIAR Chapter 27 Traffic and Transport

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		• Implement a policy which prevents idling of vehicles both on and off-site including HGV holding sites; • Construction phase traffic shall be monitored to ensure construction vehicles are using the designated haul routes; • All plant and machinery will be maintained and serviced regularly; • Efficient scheduling of deliveries will be undertaken to minimise emissions; and • Construction vehicles shall conform to the latest EU emissions standards and where reasonably practicable, their emissions should meet upcoming standards prior to the legal requirement date for the new standard. This will ensure emissions on haul routes are minimised.				
C84	Primary	The site selection and consideration of alternatives process for the CWP Project (see EIAR Chapter 3 Site Selection and Consideration of Alternatives) considered a number of alternative locations for the onshore substation site. The process evaluated alternative sites using a multi-criteria assessment, which included a consideration of likely environmental effects. The main reasons for selecting the preferred onshore substation site included it's proximity to the grid connection point and within a heavily industrialised area. It is also located away from residential properties and areas of recreational amenity. The selection of the site is therefore considered a key driver for mitigation by avoidance.	Operation	Onshore substation	23, 24, 25, 27, 29, 30	EIAR Chapter 3 Site Selection and Consideration of Alternatives
C85	Primary	In general, the CWP Project has sought to specify the location, scale and extents of permanent and temporary infrastructure, however in some cases a degree of locational flexibility is required. Locational flexibility of permanent infrastructure is described as a Limit of Deviation (LoD) from a specific point or alignment. LoDs, described in Chapter 4	Construction Operation	All onshore infrastructure Landfall	19, 21, 22, 26	EIAR Chapter 4 Project Description

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		Project Description, are required to take account of additional ground condition data acquired during pre-construction site investigation surveys and results from pre-construction surveys.				
C86	Primary	The design of the onshore substation has been developed to reduce the visual impact of the buildings where possible. It takes into account the need for the onshore substation buildings to achieve necessary engineering standards, whilst also recognising the importance of the surrounding buildings in the Poolbeg Peninsula. Key considerations included: • Material selection: The building facades have been designed to incorporate the architectural narrative of the past, present and future of the Poolbeg Peninsula, giving regard to the materials that currently surround the site; those being brick, stone and industrial metal. • Visual massing: The massing of the buildings has been broken up by utilising two materials across the facade, creating an upper and lower layer. These layers are made up of a grey masonry base and metal clad top layer. The layers allow the onshore substation buildings to sit between and stitch together existing buildings in the Peninsula, from a historical and contemporary context. • Colour selection: The selection of the grey colour was found to be less impactful to other colours and sits well with the blue-grey tones of the water frontage and Dublin sky.	Operation	Onshore substation	22, 23	EIAR Chapter 4 Project Description
C87	Additional	In order to ensure that no dust nuisance occurs a series of measures will be implemented, drawing on best practice guidance from the IAQM Guidance on the Assessment of Dust from Demolition and Construction (IAQM, 2024). The proposed dust control measures are described in detail	Construction Decommissioning	All onshore infrastructure Landfall	21, 25, 30	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		Chapter 25 Air Quality and Climate and also captured within the Construction Environmental Management Plan (CEMP).				
C88	Additional	Site management (dust control mitigation): The aim is to ensure good site management by avoiding dust becoming airborne at source. This will be done through good design and effective control strategies. Good site management will include the ability to respond to adverse weather conditions by either restricting operations on-site or quickly implementing effective control measures before the potential for nuisance occurs. When rainfall is greater than 0.2 mm/day, dust generation is generally suppressed (IAQM, 2023; UK ODPM, 2002). The potential for significant dust generation is also reliant on threshold wind speeds of greater than 10 m/s (19.4 knots) (at 7m above ground) to release loose material from storage piles and other exposed materials (USEPA, 1997). Particular care should be taken during periods of high winds (gales) as these are periods where the potential for significant dust emissions are highest. The prevailing meteorological conditions (wind speed and rainfall, as described in Chapter 25 Air Quality) in the vicinity of the site are favourable in general for the suppression of dust for a significant period of the year. Nevertheless, there will be infrequent periods where care will be needed to ensure that dust nuisance does not occur. The dust minimisation measures shall be reviewed during the works, in tandem with the daily site inspections (recommended below), to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practice and procedures. In the event of dust nuisance occurring outside the site boundary, site activities will be reviewed and satisfactory procedures implemented to rectify the problem. Specific dust control measures to be employed are described below.	Construction Decommissioning	All onshore infrastructure Landfall	25	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		• The name and contact details of a person to contact regarding air quality and dust issues shall be displayed on the site boundary, this notice board should also include head/regional office contact details. • It is recommended that community engagement be undertaken before works commence on site explaining the nature and duration of the works to local residents and businesses. • A complaints register will be kept on site detailing all telephone calls and letters of complaint received in connection with dust nuisance or air quality concerns, together with details of any remedial actions carried out. • It is recommended that regular liaison meetings with other high risk construction sites within 500 m of the site boundary be held, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/ deliveries which might be using the same strategic road network routes. • The Principal Contractor or equivalent will monitor the contractors' performance to ensure that the proposed mitigation measures are implemented and that dust impacts and nuisance are minimised. It is the responsibility of the contractor at all times to demonstrate full compliance with the dust control conditions herein.				
C89	Additional	Preparing and maintaining site (dust control mitigation): • Plan site layout so that machinery and dust-causing activities are located away from receptors, as identified in Chapter 25 Air Quality , as far as is possible. • Erect screens or barriers (i.e., hoarding) around the site boundary or location of dusty activities (these include but are not limited to large excavations of dry material and	Construction Decommissioning	All onshore infrastructure Landfall	25	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		movement of dusty material, such as dry sand or cement from stockpiles) that are at least as high as any stockpiles on site, if feasible. • Avoid site runoff of water or mud. • Keep site fencing, barriers and scaffolding clean using wet methods. • Remove materials that have a potential to produce dust from site as soon as possible, unless being reused on site. If they are being reused onsite, cover the materials. • Cover, seed or fence stockpiles to prevent wind whipping, where practicable.				
C90	Additional	Operating vehicles / machinery (dust control mitigation): • Ensure all vehicles switch off engines when stationary – no idling vehicles, where most practicable and efficient. • Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery-powered equipment where practicable. • Impose and signpost a maximum speed limit of 30 kph on surfaced and 20 kph on unsurfaced haul roads and work areas. • Produce a Construction Traffic Management Plan (Appendix 27.2 of EIAR Chapter 27 Traffic and Transport) to manage the sustainable delivery of goods and materials. • A travel plan for construction workers will be implemented as part of the final Construction Traffic Management Plan (Appendix 27.2 of EIAR Chapter 27 Traffic and Transport) and will support and encourage sustainable travel (public transport, cycling, walking and car sharing).	Construction Decommissioning	All onshore infrastructure Landfall	25	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C91	Additional	Operations (dust control mitigation): • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems. • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. • Use enclosed chutes and conveyors and covered skips. • Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. • Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	Construction Decommissioning	All onshore infrastructure Landfall	25	Construction Environmental Management Plan
C92	Additional	Earthworks (dust control mitigation): • Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. • Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. • Only remove the cover in small areas during work and not all at once, where practicable to do so.	Construction Decommissioning	All onshore infrastructure Landfall	25	Construction Environmental Management Plan
C93	Additional	Construction (dust control mitigation): • Avoid scabbling (roughening of concrete surfaces) if possible.	Construction Decommissioning	All onshore infrastructure Landfall	25	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		• Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place. • Ensure bulk cement and other fine powder materials, if used, are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. • For smaller supplies of fine power materials, ensure bags are sealed after use and stored appropriately to prevent dust.				
C94	Additional	Trackout measures (dust control mitigation): • Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. • Avoid dry sweeping of large areas. • Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport. • Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. • Record all inspections of haul routes and any subsequent action in a site log book. • Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). • Access gates to be located at least 10 m from receptors where possible.	Construction Decommissioning	All onshore infrastructure Landfall	25	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C95	Additional	Monitoring (dust control mitigation): • At all times, the procedures put in place will be strictly monitored and assessed. • During working hours, dust control methods will be monitored as appropriate, depending on the prevailing meteorological conditions. • Undertake weekly on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results and make the log available to the local authority when asked. This should include regular dust-soiling checks of surfaces such as any street furniture, cars and windowsills within 100 m of site boundary. If any issues are identified, additional mitigation measures will be developed in consultation with stakeholders. • Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. • Any additional monitoring requirements will be determined prior to construction, in consultation with Dublin City Council (DCC).	Construction Decommissioning	All onshore infrastructure Landfall	25	Construction Environmental Management Plan
C96	Primary	DCC 5x Axle Cordon / Heavy Goods Vehicle Management Strategy: The CWP Project will comply with the five-axle cordon and Heavy Goods Vehicle Management Strategy which is implemented by DCC in the vicinity of the onshore development area. On this basis, the assessed haul routes for the construction HV movements will be from M50 and Dublin Tunnel to the onshore development area	Construction Decommissioning	All onshore infrastructure Landfall	27	EIAR Chapter 27 Traffic and Transport

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C97	Additional	The appointed contractor for the tunnel installation works will produce risk assessments to address ground gas during construction, for approval with the Applicant. The appointed contractor will also ensure that any necessary PPE is in place to avoid the exposure of construction workers to ground gases in the tunnel shafts. This may include monitoring of gas levels within tunnel shafts and the use of portable gas analysers.	Construction Decommissioning	All onshore infrastructure Landfall	19, 30	Construction Environmental Management Plan
C98	Additional	Prior to construction, the Appendix 19.5 CRA and any subsequent information from SI's and ground gas/groundwater monitoring will be used to inform detailed risk assessments and the selection of appropriate construction procedures for the OTI. These risk assessments will also be used to inform the materials management strategy for the OTI (refer to the CDWMP provided with this planning application) During excavation works, a watching brief will be implemented to identify the potential presence of previously unidentified contamination. Personnel appointed by the appointed contractor will be appropriately trained for these activities. Any instances of previously unidentified contamination will be recorded, and appropriate measures developed to manage the identified risks as appropriate. The risk to construction workers from asbestos fibres is considered low. The appropriate use of personal protection equipment (PPE) and the during earthworks dust suppression measures will mitigate this risk to construction workers. Refer to Chapter 25 Air Quality for dust suppression mitigation measures.	Construction	All onshore infrastructure Landfall	19	Construction Environmental Management Plan
C99	Primary	The construction of the tunnel and shafts may lead to some settlement of the ground above the tunnel. The following	Construction	Onshore export cables	19, 26	Construction Environmental

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		measures will be implemented as part of the installation works: • Specialist tunnelling contractors with a proven track record in delivering work of the scope required by the works will be appointed. • In advance of construction, further ground investigations will take place for the length of the tunnel. This will further inform existing ground information and ground models for the area. • The appointed contractor will implement good tunnelling practice to mitigate the potential for settlement impacts. These would include continuous working once the tunnelling operations commence, management of tunnel face pressure, groundwater control, spoil volume control and monitoring of ground levels above the tunnel throughout the tunnelling operation. • Assessments to address the potential sensitivity of services in proximity to the tunnel will be undertaken in advance of the tunnel construction commencing. Any required measures to support built services during tunnelling will be consulted on and agreed with the relevant utility service providers.				Management Plan
C100	Additional	The contractor will ensure that excavations are carried out in accordance with recognised good practice guidelines (i.e., HSA – Health and Safety in Excavations and CIRIA Publication R97 – Trenching Practice).	Construction	All onshore infrastructure Landfall	19	Construction Environmental Management Plan
C101	Additional	Dewatering may be required from excavations where groundwater is encountered. The groundwater will be pumped and tankered off-site for discharge under licence, at a licensed facility. Dewatering will be undertaken in	Construction Decommissioning	Construction compounds	20	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		accordance with CIRIA C750 'Groundwater control – design and practice' 2nd Ed (CIRIA, 2016).				
C102	Additional	Cable trenches can act as preferential pathways which could allow groundwater to migrate to the foreshore i.e. within the landfall cable ducts. While material on the peninsula at the landfall is permeable, it is proposed to limit the potential for preferential pathways along these cable trenches by using lower permeability backfill material between the TJBs and foreshore (i.e., material with lower permeability than that surrounding the cable trenches). This will prevent unintended longitudinal drainage along the trench.	Operation	Landfall	20	Construction Environmental Management Plan
C103	Additional	The appointed contractor will be required to take specific noise abatement measures to the extent required and comply with the recommendations of BS 5228–1 (BSI 2009 +A1 2014a) and European Communities Noise Emissions by Equipment for Use Outdoors (Amendment) Regulations 2006 (S.I. No 241/2006). The mitigation measures outlined below for the construction phase are also recorded within the Construction and Environmental Management Plan. BS 5228–1 (BSI 2014a) includes guidance on several aspects of construction site practices, which include, but are not limited to: • Noise control at source, specifically for piling rigs during Impact 1, Scenario 1 (Open cut and cofferdam piling); • Site compound hoarding; • Localised screening; • Hours of work; • Liaison with the public; and • Monitoring.	Construction Decommissioning	All onshore infrastructure Landfall	24	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		Further detail is provided these items in the following paragraphs. The contractor will put in place the most appropriate noise control measures depending on the level of noise reduction required at individual working areas. These measures will ensure that: • During the construction phase, the appointed contractor will be required to manage the works to comply with the limits detailed in Chapter 24 Noise and Vibration using methods outlined in BS 5228–1 (BSI 2009 +A1 2014a); and • Minimisation of noise is achieved by best means practicable, including proper maintenance of plant and equipment. • The mitigation measures proposed are in line with the DCC GPG for high risk sites, as presented in Appendix 24.7 of Chapter 24 Noise and Vibration.				
C104	Additional	Noise control at source (noise control mitigation): The following measures will be implemented by the contractor to control noise at source in order to remain below the threshold values for noise set out in Table 24-4 of Chapter 24 Noise and Vibration, which relates to specific vibratory piling site considerations in Impact 1, Scenario 1 (Open cut and cofferdam piling): • On typical piling sites the major sources of noise are essentially mobile and the noise received at any control points will therefore vary from day to day as work proceeds. The duration of piling works is usually short in relation to the length of construction work as a whole, and the amount of time spent working near to noise sensitive areas can represent only a part of the piling period.	Construction Decommissioning	All onshore infrastructure Landfall	24	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		• Piling programmes should be arranged so as to control the amount of disturbance in noise and vibration sensitive areas at times that are considered of greatest sensitivity. If piling works are in progress on a site at the same time as other works of construction that themselves may generate significant noise and vibration, the working programme should be phased so as to prevent unacceptable disturbance at any time. • The piling contractor should evaluate any practicable, less impactful alternatives that would, in the given ground conditions, achieve equivalent results. • A decision regarding the type of pile to be used on a site will normally be governed by such criteria as loads to be carried, strata to be penetrated and the economics of the system, for example the time it will take to complete the installation and other associated operations such as soil removal. It may not be possible for technical reasons to replace a noisy process by one of the 'quieter piling' alternatives. Even if it is possible, the adoption of a quieter method may prolong the piling operation; the net result being that the overall disturbance to the community will not necessarily be reduced. • Noise reduction can be achieved by enclosing the driving system in an acoustic shroud. For steady continuous noise, such as that generated by diesel engines, it may be possible to reduce the noise emitted by fitting a more effective exhaust silencer system or utilising an acoustic canopy to replace the normal engine cover. • Screening by barriers and hoardings is less effective than total enclosure but can be a useful adjunct to other noise control measures. For maximum benefit, screens should be close either to the source of noise (as with stationary plant) or to the listener. Removal of a direct				

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		line of sight between source and listener can be advantageous both physically and psychologically. In certain types of piling works there will be ancillary mechanical plant and equipment that may be stationary, in which case, care should be taken in location, having due regard also for access routes. When appropriate, screens or enclosures should be provided for such equipment. • Contributions to the total site noise can also be anticipated from mobile ancillary equipment, such as handling cranes, dumpers, front end loaders etc. These machines may only have to work intermittently, and when safety permits, their engines should be switched off (or during short breaks from duty reduced to idling speed) when not in use. • All mechanical plant should be well maintained throughout the duration of the piling works.				
C105	Additional	Site compound hoarding (noise control mitigation): • The contractor will provide a site hoarding of 2.4m height at a minimum along noise sensitive boundaries to the west of Compound A where piling or tunnelling activities occur. The length of the screen should in practice be at least five times the height, however, if shorter sections are necessary then the ends of the screen will be wrapped around the source. • In most practical situations the effectiveness of the screen is limited by the sound transmission over the top of the barrier rather than the transmission through the barrier itself. In practice, screens constructed of materials with a mass per unit of surface area greater than 10kg/m2 will give adequate sound insulation performance. The use of a standard 2.4m high	Construction Decommissioning	All onshore infrastructure Landfall	24	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		construction site hoarding will provide a sufficient level of noise screening once it is installed at a suitable position between the source and receiver. • In addition, careful planning of the construction site layout will also be considered. Within the construction compound, the placement of site buildings such as offices and stores between the site and NSLs can provide a good level of noise screening.				
C106	Additional	Hours of work (noise control mitigation): • Construction activity will mostly take place during daytime hours, Monday to Friday, and a half day on Saturdays. • Evening, night-time, and Sunday working will be required during certain periods to facilitate piling works at low tide, tunnelling, and HDD activities. The planning of such works will take consideration of sensitive receptors, in particular any nearby residential areas. • Construction activities will be scheduled in a manner that reflects the location of the site and the nature of neighbouring properties. Construction activities / plant items will be considered with respect to their potential to exceed CNTs at NSLs and will be scheduled according to their noise level, proximity to NSLs, and possible options for noise control. In situations where an activity with the potential to exceed CNT is scheduled, other construction activities will be scheduled to not result in significant cumulative noise levels.	Construction Decommissioning	All onshore infrastructure Landfall	24	Construction Environmental Management Plan
C107	Additional	Liaison with the Public (noise control mitigation): • For the CWP Project, the major sources of noise are essentially mobile and the noise received at any NSL will therefore vary from day to day as the work proceeds.	Construction Decommissioning	All onshore infrastructure Landfall	24	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		The duration of piling and excavation at one location etc is usually short in relation to the length of construction work as a whole and the amount of time spent working near to sensitive areas can represent only a part of the overall period. • For night-time works the residents at NSL29 should be notified of planned works in advance of the works progressing. The notification should include a description of the works, the expected duration of activities likely to generate noise that is potentially significant as set out in Chapter 24 Noise and Vibration and details of how to contact the contractor to log complaints.				
C108	Additional	Noise monitoring (noise control mitigation): During the construction phase the appointed contractor will carry out noise monitoring at representative NSLs to evaluate and inform the requirement and/ or implementation of noise management measures. Noise monitoring will be conducted in accordance with ISO 1996–1 (ISO 2016) and ISO 1996–2 (ISO 2017). The selection of monitoring locations will be based on the closest NSLs to the proposed works which have the potential to exceed the CNT i.e. at NSL29 to the west of construction compound A. Any Noise Monitoring Terminal (NMT) (number and locations to be agreed post consent with DCC), to be installed with the following specifications (or similar approved): • Logging of two concurrent periods, e.g. 15-minute & hourly. • Daily automated Charge Injection Calibration (CIC). • E-mail alert on threshold exceedance. • E-mail alert on low battery and low memory.	Construction Decommissioning	All onshore infrastructure Landfall	24	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		• Remote access to measured data. • Live display of noise levels. In addition, it is recommended that spot check noise measurements are conducted on a monthly basis. These spot checks can be organised to coincide with works that have potential to generate high levels of noise on site in order to confirm the potential extent of effects. A monthly noise monitoring report should be prepared by the contractor. Reports should identify any exceedances above nominal limit values and attempts to clarify the causes etc. Where remedial measures are required and identifiable, these should also be clearly stated.				
C109	Additional	Vibration from construction activities will be limited to the values set out in Chapter 24 Noise and Vibration to avoid any form of potential cosmetic damage to buildings and structures. In the case of vibration levels giving rise to human discomfort, in order to minimise such impacts, the following measures shall be implemented during the construction period: • A clear communication programme will be established by the client to inform adjacent building occupants in advance of any potential intrusive works which may give rise to vibration levels likely to result in significant effects. The nature and duration of the works will be clearly set out in all communication circulars as necessary; • Activities capable of generating significant vibration effects with respect to human response will be restricted to daytime hours only, as far as practicable; and • Appropriate vibration isolation shall be applied to plant (such as resilient mounts to pumps and generators), where required and where feasible.	Construction Decommissioning	All onshore infrastructure Landfall	24	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		Where the piling works take place within 10m of the Pigeon House harbour wall heritage structure (Impact 10, Scenario 10 of Chapter 24 Noise and Vibration) or any HDD vibration works are proposed within 50m of vibration sensitive locations (VSLs) (Impact 11, Scenario 11 of Chapter 24 Noise and Vibration), vibration monitoring shall be installed, with the number and locations to be agreed with DCC. Vibration monitoring stations should continually log vibration levels using the Peak Particle Velocity parameter (PPV, mm/s) in the X, Y and Z directions, in accordance with BS ISO 4866: 2010: Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures. The mounting of the transducer to the vibrating structure will need to comply with BS ISO 5348: 2021: Mechanical vibration and shock – Mechanical mounting of accelerometers. In summary, the following ideal mounting conditions apply: • The transducer and its mountings should be as rigid as possible. • The mounting surfaces should be as clean and flat as possible. • Simple symmetric mountings are best. • The mass of the mounting should be small in comparison to that of the structure under test. • The monitoring equipment should be set to monitor vibration in 5 minute periods. • E-mail alert on threshold exceedance. • E-mail alert on low battery and low memory. • Remote access to measured data.				

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		• Live display of vibration levels. In addition, it is recommended that spot check vibration measurements are conducted on a monthly basis. These spot checks can be organised to coincide with works that have potential to generate high levels of vibration on site in order to confirm the potential extent of effects. A monthly vibration monitoring report should be prepared by the contractor. Reports should identify any exceedances above nominal limit values and attempts to clarify the causes etc. Where remedial measures are required and identifiable, these should also be clearly stated. The Pigeon House harbour wall heritage structure will be subject to a condition survey in advance of the commencement of construction works.				
C110	Additional	During the detailed design of the onshore substation, the selection and location of mechanical and electrical plant will be undertaken in order to ensure the relevant noise emission limits set out in Chapter 24 Noise and Vibration are not exceeded. Based on the baseline noise data collected, the limit set is 45 dB LAeq,15min during daytime periods and 40 dB LAeq,15min at night at the nearest NSLs, which is also aligned with BS 8233 criteria outlined in Table 24-11 of Chapter 24 Noise and Vibration. This limit is set in order to achieve acceptable internal noise levels within NSLs based on prevailing noise levels in the area. In addition to selecting plant with suitable noise levels, the following best practice measures are recommended for all plant items in order to minimise potential noise disturbance for adjacent buildings: • Where ventilation is required for plant rooms, consideration will be given to acoustic louvers or	Construction Decommissioning	All onshore infrastructure Landfall	24	Construction Environmental Management Plan

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		attenuated acoustic vents, where required to reduce noise breakout. • Ventilation plant serving plant rooms will be fitted with effective acoustic attenuators to reduce noise emissions to the external environment. • The use of attenuators or silencers will be installed on external air handling plant. • All mechanical plant items e.g. fans, pumps etc. shall be regularly maintained to ensure that excessive noise generated any worn or rattling components is minimised. • Any new or replacement mechanical plant items, including plant located inside new or existing buildings, shall be designed so that all noise emissions from site do not exceed the noise limits outlined in this document. • Installed plant will have no tonal or impulsive characteristics when in operation.				
C111	Primary	A Marine Mammal Mitigation Protocol (MMMP) has been prepared to outline the mitigation requirements for minimising the impacts on marine mammals during the decommissioning of the CWP Project. The Decommissioning MMMP (section 11 of the MMMP) will be implemented by the Applicant and its appointed contractor(s) and will be secured through conditions of the development consent. It will be a live document which will be updated and submitted to the relevant authority, prior to the start of decommissioning. As a minimum, it is expected that an MMO watch and a PAM watch (to supplement the MMO) will likely be required for any underwater noise generating activity that has predicted the potential for auditory injury to marine mammals.	Decommissioning	All offshore infrastructure	9, 10, 11	Marine Mammal Mitigation Protocol

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C112	Primary	In terms of the open cut trenching for the ESBN network cables, the following options will be implemented where utilities are present: • Locate below the existing utility service; The ESBN network cables would be positioned below the existing utility service, keeping minimum allowed spacing between both, as determined by the utility service provider; • Located above the existing utility service: The ESBN network cables would be positioned above the existing utility service. Furthermore, the depth to the top of the cable ducts could be reduced to a minimum of 450 mm below surface level as per the Health and Safety Authority's paper entitled, 'Code of Practice for Avoiding Danger from Underground Services'. This depth would accommodate the required separation from the service being crossed and would provide sufficient mechanical protection to the cable; and/or • Diversion of the existing utility service: An existing utility could be diverted to facilitate the installation of the ESBN network cables.	Construction	ESBN network cables	26	EIAR Chapter 26 Material Assets - Built Services
C113	Additional	Regular liaison with Dún Laoghaire Harbour and Dublin Port Company (DPC) during construction and maintenance phases, in particular during cable installation and maintenance works	Construction and operation	All offshore infrastructure	16	EIAR Chapter 16 Shipping and Navigation
C114	Additional	All CWP vessels to broadcast AIS.	Construction and operation	All offshore infrastructure	16	EIAR Chapter 16 Shipping and Navigation
C115	Additional	In the approaches to Dún Laoghaire Harbour all CWP cable infrastructure will be buried.	Construction and operation	All offshore infrastructure	16	EIAR Chapter 16 Shipping and Navigation

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C116	Primary	Zonation of the WTG pile driving parameters to minimise potential impacts. In the southeast zone (represented by SE model location), only Piling Scenario 1 (most restrictive) will be conducted. In the central zone (represented by SW & NE modelling locations), only piling using Piling Scenario 2 (less restrictive) will be conducted. Piling Scenario 3 will only be conducted in the northwest zone (represented by NW modelling location).	Construction	WTGs and OSSs	11	EIAR Chapter 11 Marine Mammals
C117	Additional	• Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust). • Ensure effective water suppression is used during demolition operations. Hand-held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high-volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground. • Bag and remove any biological debris or damp down such material before demolition. • Re-vegetate earthworks and exposed areas / soil stockpiles to stabilise surfaces as soon as practicable. Use hessian, mulches or trackifiers where it is not possible to revegetate or cover with topsoil, as soon as practicable. • Only remove the cover in small areas during work and not all at once.	Decommissioning	Onshore substation	25	EIAR Chapter 25 Air Quality
C118	Primary	Construction phase – Construction works associated with the landfall and works within Compound A: • To minimise the potential for disturbance to the artificial badger sett located within the Irishtown Nature Park,	Construction	Construction compounds	21	EIAR Chapter 21 Onshore Biodiversity

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		construction phase activities along the eastern boundary of Compound A will be limited and will predominantly include the laydown / storage of material and the movement and parking of vehicles.				
C119	Primary	Ecological Clerk of Works (ECoW): • A suitably qualified and experienced ECoW will be appointed by the Contractor. The ECoW will oversee all construction works and monitor any possible sources of impacts for the duration of the construction programme.	Construction	All onshore infrastructure Landfall	21	EIAR Chapter 21 Onshore Biodiversity
C120	Additional	The maximum tonal penalty of + 6 dB, applied in line with the BS4142 assessment was considered a conservative figure in the absence of octave band data for the onshore substation. During the detailed design stage, when the exact sound power specification is known for the plant items, a revised model and prediction can be carried out to demonstrate that the noise criteria set in the operational phase assessment are not exceeded.	Operation	Onshore substation	24	EIAR Chapter 24 Noise and Vibration
C121	Primary	The risk of coastal flooding was reviewed for the onshore substation site. The predicted coastal flood level during a 0.1% (1000-yr) coastal flood event is 3.34m OD as part of the Eastern Catchment Flood Risk Assessment and Management (CFRAM) study in the vicinity of the site. The proposed finished floor level of the onshore substation site accounts for: • A tidal climate change allowance (increase in sea level) of 1.0m (High End Future Scenario (HEFS)), which complies with Section 4.9 of the DCC Strategic Flood Risk Assessment (SFRA). This also accounts for the onshore substation as a 'Critical' or 'extremely vulnerable' development. • A 300 mm freeboard, which complies with Table 4-2, Ground Levels, Floor Levels and Building of the DCC	Operation	Onshore substation	28	EIAR Chapter 28 Climate - Carbon Balance Assessment EIAR Appendix 20.2 SSFRA

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		SFRA and which sets out recommended minimum finished floor levels for different scenarios. On this basis, the proposed finished floor level of the substation site was a minimum of 4.64m OD (0.1% AEP HEFS + 300mm freeboard). The minimum site level for the onshore substation site, will grade upwards from +4.64 mOD to a typical site platform level of +5.00 mOD. This will allow for local drainage gradients on site. An assessment of wave action was undertaken for the onshore substation site, resulting in a conservative allowance of 0.6 m. This resulted in the combi-wall capping beam and revetment at the perimeter of the onshore substation site being provided at a level of +5.24mOD. With a level of +5.24mOD, the overall total freeboard to the capping beam above the 0.1% AEP HEFS flood level is 0.9m (4.34mOD + 0.9m= 5.24mOD). This is described in detail in Chapter 20 Hydrology and Hydrogeology and Appendix 20.2 SSFRA. This is described in detail in Chapter 20 Hydrology and Hydrogeology and Appendix 20.2 SSFRA.				
C122	Primary	CCRA (Flood Risk): For the O&M phase, the onshore substation will incorporate a sustainable drainage system (SuDS) to manage storm water. This is described in detail in Onshore Substation Site Drainage and Water Supply Report, submitted with the planning application.	Operation	Onshore substation	28	EIAR Chapter 28 Climate - Carbon Balance Assessment Onshore Substation Site Drainage and Water Supply Report,

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C123	Primary	CCRA (extreme temperature risk): The OTI will be designed in accordance with the applicable design standards, which will take into account extreme temperature ranges.	Operation	Onshore infrastructure	28	EIAR Chapter 28 Climate - Carbon Balance Assessment EIAR Chapter 4 Project Description
C124	Primary	CCRA (lightning risk): • For the O&M phase, lightning rods will be provided on top of each of the buildings at the onshore substation. • These will protect the buildings from potential lightning strikes during the operational and maintenance phase.	Operation	Onshore substation	28	EIAR Chapter 28 Climate - Carbon Balance Assessment EIAR Chapter 4 Project Description
C125	Primary	CCRA (wind risk): The WTGs will be designed to withstand severe wind loads in accordance with the applicable standards. A monitoring and control system in each wind turbine will enable it to reduce load or cease operation in response to high wind speeds.	Operation	WTGs	28	EIAR Chapter 28 Climate - Carbon Balance Assessment EIAR Chapter 4 Project Description
C126	Primary	CCRA (lightning risk): Lightning protection systems are embedded into the design of the OSSs and all WTG models under consideration and, in the event of a fire occurring at the turbines or OSSs, there will be measures in place to reduce the risk of personnel injury or to the environment. These measures would include:	Operation	WTGs	28	EIAR Chapter 28 Climate - Carbon Balance Assessment

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		1. The incorporation of fire detection / alarm systems on the turbines and OSSs. 2. The OSSs will be installed with fire suppression equipment. 3. The implementation of emergency response procedures for each phase of the project.				EIAR Chapter 4 Project Description
C127	Primary	CCRA (coastal erosion risk (inc. seabed erosion)): Scour protection is required to ensure that erosion of the seabed around the monopile foundation does not affect the stability or integrity of the structure. Scour around foundations is mitigated by the use of scour protection measures, described in Chapter 4 Project Description.	Operation	WTGs	28	EIAR Chapter 28 Climate - Carbon Balance Assessment
C128	Additional	During the O&M phase of the CWP Project, the works on site will be limited to inspections, repairs and maintenance. Although the intensity of activity will be only a small fraction of the O&M phase, all employees and contractors that are on site will ensure that machinery used is properly maintained and is switched off when not in use to avoid unnecessary exhaust emissions from maintenance machinery / traffic.	Operation	Onshore substation	28	EIAR Chapter 28 Climate - Carbon Balance Assessment
C129	Primary	Onshore substation: Pigeon House Harbour Wall: • Prior to reclamation, the exposed portions of the harbour wall will be covered in a geotextile membrane to create a visual barrier between the reclamation works and the harbour wall. This is in addition to the concrete render that already seals the masonry of the harbour wall. • There will be no direct foundations or structures placed on the harbour wall during works as the sheet piling required will be set back from the harbour wall by approximately 200mm and buffered with approved fabric seal.	Construction	Onshore substation	22	EIAR Chapter 22 Archaeology, Architectural and Cultural Heritage

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
C130	Additional	It is proposed to construct a sand martin wall within the vicinity of the onshore substation, the location of which can be seen in Chapter 10 Ornithology. The construction of the wall will use a precast structure with the approximate dimensions of 3000 mm x 3400 mm x 500 mm. The first row of nests will be at a height of 1.5 m or more from the ground to prevent predators (e.g., mink or fox) reaching them. The nest chambers (of which there will be 36) will be 100 mm in diameter and 225 mm long, and each tunnel is 50 mm in diameter and 350 mm long. The nests will be 250 mm apart and 300 mm between rows. The rear of the nesting chamber will be sealed with a sewer cap and lockable steel doors fitted to prevent human interference to the nests. These doors can be opened, and the sewer caps removed for nest maintenance. The wall will be located in a similar location to the existing nest sites, located close to a retaining wall near the entrance of the substation area. When construction completed and the wall is operational, a schedule of annual maintenance will be agreed with relevant stakeholders. This involves the removal of old nesting material and other remains to reduce parasite load and add more sand to the nesting chambers for the birds to excavate.	Construction	Onshore substation	10	EIAR Chapter 10 Ornithology
C131	Additional	It is proposed to install a minimum of 4 no. nest boxes for black guillemots to offset removal of nesting habitat. These will be in-built or “bolt-on” nestboxes suitable for black guillemots placed at on / within perimeter quay walls at the onshore substation. Full details of the measures proposed are provided in EIAR Chapter 10 Ornithology. With regards to disturbance / displacement effects on Black guillemot, a number of other nest sites were located to the east and southeast of the onshore substation. To avoid disturbance of these nesting areas it is proposed to install	Construction	Onshore substation	10	EIAR Chapter 10 Ornithology

Commitment Reference	Type	Mitigation Text	Phase	Project Element	Relevant EIAR Chapters	Relevant Application Documents
		hoarding / screening around the perimeter of the onshore substation.				
C132	Additional	The maximum predicted cumulative PTS impact ranges (15 km for minke whales) are beyond those that can be mitigated by 'industry standard' measures. As such, additional mitigation measures will be required if cumulative PTS is to be mitigated. The WTG/OSS piling MMMP (section 8 of the MMMP) provides an outline of the potential additional mitigation measures that could be implemented to reduce the risk of PTS to negligible levels, including: • Use of ADDs to deter marine mammals from the immediate vicinity of the pile; • Use of at source noise abatement methods; and • Use of alternative piling methods. The final MMMP with selected mitigation measures will be provided post consent once a piling contractor is in place and final detailed installation methods are known.	Construction	WTGs and OSSs	11	EIAR Chapter 11 Marine Mammals