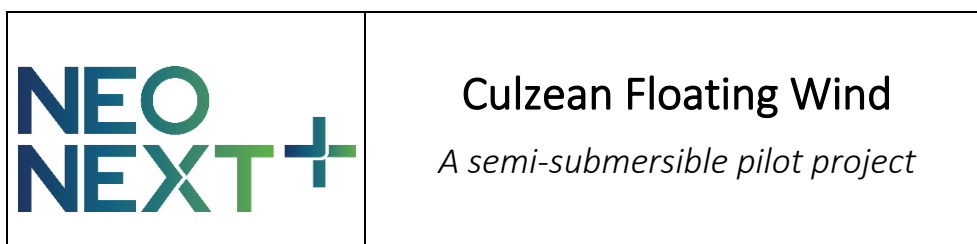


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Environmental Management Plan (EMP)

GB-CZT-00-TOTA-000007

Rev.	Date	Issued by	Checked by	Approved by
02	29/05/2026	Claire MacDonald	Maria Rowan	Charles Howorth

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TABLE OF REVISIONS

Revision	Modification
00	Draft for review
01	Revision addressing consultation comments received from MD-LOT 17/04/2025
02	Revision to update change of company name from TotalEnergies E&P North Sea UK Limited (and TEPNSUK), to NEO NEXT+ Energy E&P North Sea UK Limited (NEO NEXT+).

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DETAILED CHANGE LOG

Date	Rev. Status	References	Description of changes
06/10/2025	Resubmission to MD-LOT for review addressing consultation comments	NatureScot comments on EMP consultation	As per Comment 1 – Table 1.2 update to title to 'linkage with DSLP'
			As per Comment 3 – Section 4.4 has been updated to reference the Scottish Marine Wildlife Watching Code (SMWWC) and A Guide to the Best Practice for Watching Marine Wildlife.
			As per Comment 4 – Appendix 1 includes the Marine Pollution Contingency Plan – GB-CZT-00-TOTA-000063
			As per Comment 5 – Section 7 and Table 7 have been updated to include more information on INNS.
		Email from Amy Woodward at MD-LOT received 06/06/2025.	Update to Section 5 to include reference to the Waste Management Plan – L2-HSSE-04-010.
29/05/2026	Resubmission to MD-LOT regarding company name change		Reference to TotalEnergies E&P North Sea UK Limited (and TEPNSUK), changed to NEO NEXT+ Energy E&P North Sea UK Limited (NEO NEXT+).

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ACRONYMS, ABBREVIATIONS and DEFINITIONS

CaP	Cable Plan
CFW	Culzean Floating Wind
CMS	Construction Method Statement
CNS	Central North Sea
CPF	Central Processing Facility
DAS	Digital Aerial Surveys
DLSP	Development Specification and Layout Plan
DP	Decommissioning Plan
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
HRA	Habitats Regulations Assessment
ICES	International Council for the Exploration of the Sea
IMT	Incident Management Team
INNS	Invasive Non-Native Species
ITOPF	International Tanker Owners Pollution Federation
IUCN	International Union for Conservation of Nature
LMP	Lighting and Marking Plan
LSE	Likely Significant Effect
MARPOL	International Convention for the Prevention of Pollution from Ships
MD-LOT	Marine Directorate Licensing Operations Team
MGO Diesel	Marine Gas Oil
MPA	Marine Protection Area
OIM	Offshore Installation Manager
OPEP	Oil Pollution Emergency Plan
OSC	On-scene Commander
OSPAR	Convention for the Protection of the Marine Environment of the Northeast Atlantic
PEMP	Project Environmental Management Programme

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PLANC	Permits, Licenses, Authorisations, Notifications and Compliance
PMFs	Priority Marine Features
RIAA	Report to inform Appropriate Assessment
ROV	Remote Operated Vehicle
SAR	Search and Rescue
SOPEP	Shipboard Oil Pollution Emergency Plan
SPL	Sound Pressure Level
UKCS	UK Continental Shelf
ULQ	Utility Living Quarters
USBL	Ultra Short Baseline
WHP	Well Head Platform
WTG	Wind Turbine Generator

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1. INTRODUCTION

1.1 Purpose of the Document

This Environmental Management Plan (EMP) has been prepared by NEO NEXT+ Energy E&P North Sea UK Limited (hereafter referred to as NEO NEXT+), to satisfy conditions of the Marine License.

The overall objective of the EMP is to provide the overarching framework for environmental management and monitoring during the construction and operation of the Culzean Floating Offshore Wind Turbine Pilot Project (also known as Culzean Floating Wind).

The EMP is designed to provide practical guidance to those involved in the Project, including NEO NEXT+ personnel and contractors on the management of potential environmental impacts associated with the construction and the operation of the Culzean wind turbine generator (WTG).

All NEO NEXT+ personnel and contractors involved in the Project must comply, as a minimum, with the mitigation and management measures and procedures presented in this EMP.

This plan is owned by the Project Manager and summarises the method which NEO NEXT+ will use to achieve the critical success factors for sustainability and the environment. As far as is reasonably practicable, NEO NEXT+ aims to eliminate the risk of adverse environmental events and to undertake business in a sustainable manner.

The EMP is a live document and will be regularly reviewed and updated as the Project progresses.

1.2 Scope and Objectives of the EMP

The Environmental Management Plan (EMP) has been developed to satisfy the requirements of the Marine License and to document how NEO NEXT+ Energy E&P North Sea UK Limited manage and control the environmental aspects and potential impacts of the project during its lifespan (entire period that the licence remains in force). The EMP has been developed based on the information in the original Environmental Statement.

1.3 Consent Compliance

Table 1.1 includes reference to how and where the condition clauses have been addressed within the EMP.

Table 1.1 Consent conditions to be discharged by this EMP

Condition reference	Condition	Relevant section
3.2.7 Environmental Management Plan	The Licensee must, no later than six months prior to the Commencement of the Licensed Activity, submit an EMP, in writing, to the Licensing Authority for its written approval.	This document sets out the EMP for approval by the Scottish Ministers.
	Such approval may only be granted following consultation by the Licensing Authority with NatureScot and any such other advisors or organisations as may be required at the discretion of the Licensing Authority.	Consultation to be undertaken by the Scottish Ministers.

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	The EMP must provide the overarching framework for on-site environmental management during the phases of Works as follows: a) All construction as required to be undertaken for the Final Commissioning of the Works; and b) The operational lifespan of the Works from the Final Commissioning of the Works until the cessation of electricity generation (environmental management during decommissioning is addressed by the DP provided for by condition 3.1.18). In this condition, the term “lifespan” means the entire period that the licence remains in force.	Various sections
	The EMP must be in accordance with the Application insofar as it related to environmental management measures. The EMP must set out the roles, responsibilities and chain of command for the Licensee personnel, any contractors or sub-contractors in respect of environmental management for the protection of environmental interests during the construction and operation of the Works. It must address, but not be limited to, the following overarching requirements for environmental management during construction:	Various sections
	a) Mitigation measures to prevent significant adverse impacts to environmental interests, as identified in the Application, pre-application and pre-construction monitoring or data collection, and include reference to relevant parts of the CMS (refer to condition 3.2.5);	Section 4
	b) Marine Pollution Contingency Plan;	Section 4.6 and Appendix 1
	c) Management measures to prevent the introduction of invasive non-native marine species;	Section 7
	d) A site waste management plan (dealing with all aspects of waste produced during the construction period), including details of contingency planning in the event of accidental release of materials which could cause harm to the environment. Wherever possible the waste hierarchy of reduce, reuse and recycle should be encouraged; and	Section 5
	e) The reporting mechanisms that will be used to provide the Licensing Authority and relevant stakeholders with regular updates on construction activity, including any environmental issues that have been encountered and how these have been addressed.	Various Sections & updates to be given during monthly catch

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		up meetings with MD-LOT
	The EMP must be regularly reviewed by the Licensee at intervals agreed by the Licensing Authority. Reviews must include, but not be limited to, the reviews of updated information on construction methods and operations of the Works and updated working practices.	Section 1.6
	The EMP must be informed, so far as is reasonably practicable, by the baseline monitoring or data collection undertaken as part of the Application and the PEMP.	Various Sections
3.2.14	Prior to the Commencement of the Licensed Activity, a Fisheries Liaison Officer (“FLO”), must be appointed by the Licensee and approved, in writing, by the Licensing Authority following consultation with the SFF and any other advisors or organisations as required at the discretion of the Licensing Authority. The FLO must be appointed by the Licensee for the period from Commencement of the Licensed Activity until the Final Commissioning of the Works. The identity and credentials of the FLO must be included in the EMP (referred to in condition 3.2.7). The FLO must establish and maintain effective communications between the Licensee, any contractors or sub-contractors, fishermen and other users of the sea during the construction of the Works, and ensure compliance with best practice guidelines whilst doing so.	Section 4.1.2

1.4 Linkages with other Consent Plans

Table 1.2 lists the Consent Plans with linkages to this EMP.

Table 1.2 Consent Plans with linkages to this EMP

Other Consent Plans and Documents	Linkage with EMP
Culzean Floating Wind Cable Plan (CaP)	The CaP provides details on the cable specification, installation methods and cable protection. The detailed cable route layout is also presented in line with the cable arrangements provided within the DSLP.
Lighting and Marking Plan (LMP)	Provides details of lighting and marking of the project during construction and operation. Operational lighting requirements have been defined based upon the Culzean Floating Wind Project layout presented in the DSLP.

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Project Environmental Monitoring Programme (PEMP)	The PEMP will provide information on the environmental research initiatives for the Project to allow information to be obtained for future offshore wind farm developments.
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1.5 Plan Audience

The EMT is intended to be referred to by personnel involved in construction and operation of the Culzean Floating Offshore Wind Turbine Pilot Project, including NEO NEXT+ personnel and Contractors.

Compliance with this EMT will be monitored by the Culzean Floating Wind Project Team.

1.6 Updates and Amendments

It is acknowledged that there may be a requirement for the EMP to be revised and updated on occasion as the project progresses to ensure the information is kept up to date. Any revisions will be submitted to MD-LOT for their approval. The document is controlled via NEO NEXT+'s document control system (Prodom).

2. INTRODUCTION

2.1 Project Description

NEO NEXT+ is proposing to demonstrate the possibility of electrifying existing oil and gas assets in the North Sea via the installation of a single floating turbine, which would connect to the existing Culzean oil and gas platform. The rationale of the project is to trial the new floater technology using a readily available turbine design. The new floater technology will deliver opportunities for significant cost savings, industrialisation of larger projects, and provide valuable experience in the hybridization of assets; with the Culzean Field providing an additional opportunity to pilot the integration with an oil and gas installation for the provision of power. The pilot will ensure the validation of harsh environment experience through operational feedback prior to any further developments.

The Project is located approximately 222 km east of Aberdeen, the water depth at Culzean facilities (circa 90 m) provides an ideal environment to trial the pilot floating technology.

The Culzean Floating Wind project is located in the Central North Sea (CNS), approximately 222 kilometres (km) east of Aberdeen in the UK Continental Shelf (UKCS) Block 22/25a. The Culzean Floating Wind project will deploy one floating wind turbine generator (WTG) with a capacity of 3 MW with test floater and mooring system technologies for offshore floating wind. This is a pilot project which aims to; i) test and qualify the floater technology designed by Ocergy, and ii) perform a hybridisation showcase to demonstrate the feasibility of platform electrification in an offshore environment.

The Culzean Floating Wind project will be installed approximately 2.5 km west of the Culzean oil and gas platform, linked via an export cable to the Culzean Central Processing Facility (CPF) (Figure 2-1). The wind turbine will be connected to the plant power management system to allow the export of the produced electricity to the site. The Culzean facility is a stand-alone Culzean Floating Wind project involving three bridge linked platforms including a Wellhead Platform (WHP), Central Processing Facility (CPF) with flare tower, and separate Utility and Living Quarters Platform (ULQ).

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The Project does not require a grid connection to shore and will be entirely within the offshore region between 12 nautical miles (nm) and the Exclusive Economic Zone (EEZ) boundary.

The floating WTG will be connected to the Culzean facilities via an existing J-tube on the platform. The key components include:

- One WTG;
- One floating substructure;
- Up to six mooring lines
- Up to six drag anchors;
- One 2.5 km long Inter Array Cable (IAC) and ancillaries; and
- Associated scour and cable protection (if required).

The design life for the WTG is 10 years.

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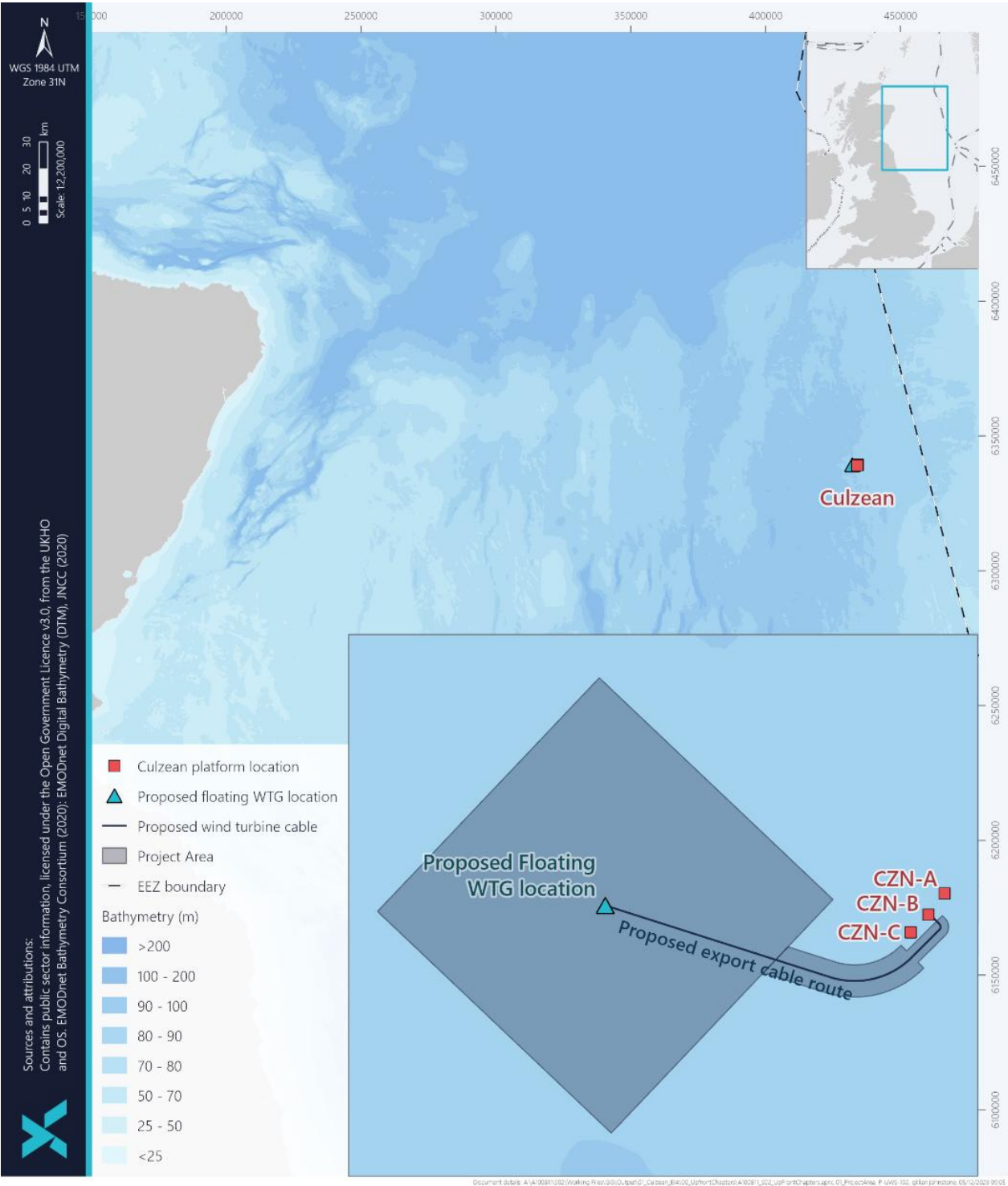


Figure 2-1 Culzean Floating Wind Project Area

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3. ENVIRONMENTAL PERMITS, LICENCES AND LEGISLATION

The Project team will ensure all relevant consents, permits and licenses are in place to carry out the work and that the conditions are met.

The conditions of the permits and licenses are documented in the PLANC (Permits, Licenses, Authorisations, Notifications and Compliance) register.

4. OFFSHORE ENVIRONMENTAL ASPECTS

4.1 Physical Environment

4.1.1 Marine Physical Processes

As summarised in the Environmental Impact Assessment Report – Non Technical Study, the Study Area specific to Marine Physical Processes where impacts are most likely, has been defined by a 5 km radius around the WTG. The bedrock geology comprises multiple geological units within the shallow geology, largely comprising Quaternary geological deposits varying presence and thicknesses across the Project Area. Above this, surface sediments are mostly classified as muddy sand. The completed geophysical surveys identified the presence of infrequent boulders across the Project Area, which were all present on the surface, and none detected below the seabed surface. The seabed is relatively featureless, although evidence of rippling on the seabed indicates bottom currents. The location of the Project offshore means that there is no interaction with the coast. Additionally, there are no protected sites designated for geological or geomorphology features within the Study Area.

Potential impacts associated with all phases of the Project, were identified. These included:

- Loss or alteration of seabed morphology;
- Increase in suspended sediments; and
- Introduction of scour.

Due to the small-scale of the Project and with embedded mitigation measures in place to lessen the impact on the seabed such as the application of scour protection, these impacts will result in effects of negligible and not significant consequence. Any potential impacts to Marine Physical Process properties from the Project will be highly localised and temporary, as such, transboundary impacts were scoped out of the EIA. The Study Area does not overlap with any other projects and therefore no cumulative effects will occur. Additionally, no significant inter-related effects were established on other receptors. Given these conclusions, no additional mitigation is required, as no significant effects were identified.

Table 4.1: Mitigation measures relevant to Marine Physical Processes

Mitigation Measure	Description
Application of scour protection	The potential scale and requirement for scour protection will be informed by ongoing inspection surveys and the selected anchor solution. Requirements outlined within the Construction Method Statement (CMS)

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Micro-siting offshore infrastructure	The Project will micro-siting the WTG and associated offshore infrastructure (including cable route) to avoid sensitive features. The final Project layout will be presented within the CaP and Development Specification and Layout Plan (DSLPL).
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4.1.2 Fisheries Liaison Officer

The details of the Fisheries Liaison Officer for the Culzean Floating Wind Project are given in Appendix 2.

The Fisheries Liaison Officer (FLO) will establish communication on behalf of the project with the fishing community and other users to ensure they are kept informed of progress during the construction to ensure they are aware of any changes and that best practices are followed.

4.2 Biological Environment

4.2.1 Benthic Ecology

As summarised in the Environmental Impact Assessment Report – Non Technical Study, Benthic Ecology encompasses the species, habitats and communities located on the seabed within the Study Area, which is defined by a 5 km radius around the WTG. The main benthic habitat classification type present in the Study Area is ‘Deep Circalittoral Sand.’ The primary sensitive receptors identified in the Study Area include:

- ‘Seapens and burrowing megafauna’ habitat (Figure 10); and
- Ocean quahog species.

Both are designated under the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) and are Scottish Priority Marine Features (PMFs). There are no protected sites designated for benthic features within 18 km of the WTG.



Figure 4.2 OSPAR threatened and declining habitat ‘Seapens and burrowing megafauna’

Several potential impacts on Benthic Ecology associated with all phases of the Project, were identified. These included:

- Temporary habitat disturbance;
- Temporary increase in suspended sediment and sediment deposition;
- Long-term loss and/or damage to benthic habitats and species;
- Disturbance of contaminated sediments;
- Colonisation of hard structures; and

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- Removal of artificial hard structures during decommissioning.

Due to the small-scale of the Project and with embedded mitigation measures in place, the assessment concluded that these impacts will not result in significant effects on benthic ecology receptors and as such, no additional mitigation is required. Any potential impacts from the Project will be localised and temporary, as such transboundary impacts were scoped out of the EIA. Additionally, no significant cumulative or inter-related effects were identified on Benthic Ecology receptors.

Effects on Annex I Benthic Habitats as qualifying features of European Sites protected under the Habitat Regulations have also been considered within a separate Habitats Regulations Appraisal (HRA) Report, submitted alongside the Application. The HRA Screening process, undertaken in consultation with NatureScot and MD-LOT, concluded there was no potential for Likely Significant Effect (LSE) on these features and therefore no further assessment was required under the HRA process.

Table 4.2: Mitigation measures relevant to Benthic Ecology

Mitigation Measure	Description
Micrositing of wind turbine and the associated offshore infrastructure (including cable).	The final Project layout will be presented within the Cable Plan and Development Specification and Layout Plan (DSLPL) and conditions of the marine licence. The final placement of anchors and export cable will be informed through micro siting based on available site survey data to ensure avoidance of sensitive habitats, archaeological and other structures where possible. Where this is not possible, the route will take the shortest distance possible through the sensitive areas to reduce environmental effects.
Reducing localised habitat loss	Best practice will be followed to ensure that potential habitat loss is minimised throughout the proposed works (e.g. Micro-siting and minimising the benthic footprint of the Project). The amount of rock used to protect the offshore export cable or as scour protection will be kept to a minimum where possible
Project Environmental Monitoring Programme (PEMP)	The PEMP will provide information on the environmental research initiatives for the Project to allow information to be obtained for future offshore wind farm developments.

4.3 Fish and Shellfish Ecology

As summarised in the Environmental Impact Assessment Report – Non Technical Study , Fish and Shellfish found within the Study Area (defined as the International Council for the Exploration of the Sea (ICES) Rectangle 43F1) include marine finfish (pelagic and demersal fish), shellfish and elasmobranchs (e.g. sharks, rays and skates). Potential spawning grounds for cod, lemon sole, mackerel, Norway lobster, Norway pout,

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and sandeel overlap the Project Area. Additionally, potential nursery grounds for cod, anglerfish, blue whiting, ling, herring, mackerel plaice, sandeel and Spurdog were identified in the Project Area. The habitats surveys undertaken in the Project Area identified five species and two families of conservation importance including evidence of a Norway lobster burrow and a possible sandy ray. eDNA surveys also identified large reads of the cod family, including Norway pout and haddock, and of the ling fish family.

Of the species identified within the Study Area, two are listed on the OSPAR List of Threatened and/or Declining Species and Habitats: cod and spurdog. Ten species are listed as Scottish PMFs: these are sandeel, cod, whiting, herring, Norway pout, blue whiting, ling, anglerfish, mackerel and Spurdog. Additionally, one species is listed on the International Union for Conservation of Nature (IUCN) Red List as Threatened, the sandy ray.

Potential impacts on Fish and Shellfish Ecology, all phases of the Project, were identified. These included:

- Disturbance or damage to sensitive species due to underwater sound;
- Habitat loss or disturbance during the installation of the export cable, mooring lines and the anchors;
- Temporary increases in Suspended Sediment Concentration (SSC) and potential sedimentation and smothering of fish and shellfish; and
- Impact to habitats or species as a result of pollution or accidental discharge.

Due to the small scale of the Project, the distance from the coast and with embedded mitigation measures in place to lessen the impact on the seabed, none of these impacts are deemed to result in significant effects and therefore no secondary mitigation is required. Any potential disturbance to Fish and Shellfish Ecology resulting from the Project would be highly localised and temporary, as such, transboundary impacts were scoped out of the EIA. Overall, it is concluded that there will be no significant inter-related or cumulative effects on Fish and Shellfish Ecology receptors.

An assessment under the Habitats Regulations of effects on European Sites designated for Diadromous Fish Features has also been considered within the Project's Habitats Regulations Assessment (HRA) Report. The HRA Screening process, undertaken in consultation with NatureScot and MD-LOT, concluded there was no potential for LSE on European Sites designated for these features and therefore, no further assessment was required under the HRA process.

Table 4.3: Mitigation measures relevant to Fish and Shellfish Ecology

Mitigation Measure	Description
Reducing localised habitat loss	Best practice will be followed to ensure that potential habitat loss is minimised throughout the proposed works (e.g. Micro-siting and minimising the benthic footprint of the Project). The amount of rock used to protect the offshore export cable or as scour protection will be kept to a minimum where possible.
Project Environmental Monitoring Programme (PEMP)	The PEMP will provide information on the environmental research initiatives for the Project to allow information to be obtained for future offshore wind farm developments.

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4.4 Marine Mammals

As summarised in the Environmental Impact Assessment Report – Non Technical Study, Marine Mammals and Other Megafauna refers to several species of cetaceans and pinnipeds occurring within the Study Area and basking shark, considered as a megafauna species. This includes harbour porpoise, bottlenose dolphin, Atlantic-white sided dolphin, minke whale and two species of seals: grey seal and harbour seal.

All species considered in the assessment are of conservation importance and are protected under UK legislation. Potential impacts on Marine Mammals and Other Megafauna, associated with all Project phases, were identified:

- Noise-related impacts to marine mammals and other megafauna associated with construction and decommissioning noise, including the risk of injury and disturbance/displacement.

Since the initial planning and Scoping stage, anchor installation by pile driving has been removed from the Project Design Envelop. Therefore, the potential activities resulting in underwater noise for the Project are limited to vessel activities, cable laying, and pre-construction surveys utilising positioning equipment. Due to the low levels of noise associated with these activities, and with the proposed mitigation measures in place, impacts are assessed as not resulting in significant effects, and as such, no secondary mitigation is required. Overall, it is concluded that there will be no significant inter-related, cumulative or transboundary effects on Marine Mammal and Other Megafauna receptors. Vessel operators should adhere to the guidance and principles of the [Scottish Marine Wildlife Watching Code](#) (SMWWC) and [A Guide to Best Practice for Watching Marine Wildlife](#) to help to minimise any potential disturbance to marine wildlife during vessel transit and operation.

An assessment under the Habitats Regulations of effects on European Sites designated for Marine Mammals has also been considered within the Project's HRA Report. The HRA Screening process, undertaken in consultation with NatureScot and MD-LOT, concluded there was no potential for LSE on European Sites designated for these features and therefore, no further assessment was required under the HRA process.

Table 4.4: Mitigation measures relevant to marine mammal and megafauna

Mitigation Measure	Description
Micro-siting of the WTG and associated offshore infrastructure including cable route	The final Project layout will be presented within the Cable Plan (CaP) and Development Specification and Layout Plan (DSLPL) and conditions of the marine licence. The final placement of anchors and export cable will be informed through micro siting based on available site survey data to ensure avoidance of sensitive habitats, archaeological and other structures where possible. Where this is not possible, the route will take the shortest distance possible through the sensitive areas to reduce environmental effects.
Reducing localised habitat loss	Best practice will be followed to ensure that potential habitat loss is minimised throughout the proposed works (e.g., Micro-siting and minimising the benthic footprint of the Project). The amount of rock used to protect the offshore export cable or as

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	scour protection will be kept to a minimum where possible
Removal of debris from floating lines and cables	Mooring lines and the floating cable will be inspected with a risk-based frequency during the operational lifecycle of the Project, starting at a higher frequency and likely declining after several years, based on evidence gathered during inspections. Any inspected or detected debris on the floating lines and cable will be recovered based on a risk assessment which considers impact on environment, risk to asset integrity and cost of intervention.
Nacelle, tower and rotor design	The nacelle, tower, and rotor are designed and constructed to contain leaks thereby reducing the risk of spillage into the marine environment.

4.5 Ornithology

As summarised in the Environmental Impact Assessment Report – Non Technical Study, The seas around Scotland support internationally important numbers of breeding and overwintering seabirds. Digital Aerial Surveys (DAS) showed that the Project Area is regularly used by seven species: fulmar, gannet, kittiwake, great black-backed gull, herring gull, common guillemot and razorbill. In the breeding season most seabirds in the Project Area are likely to be foraging birds from breeding colonies in eastern Scotland and for some species, possibly from north-east England also. These species occurred at very low or low densities, compared to densities reported from coastal waters off eastern Scotland. Outside the breeding season common guillemot and razorbill were sometimes present in reasonably high densities. In the breeding season most seabirds using the vicinity of the project site are likely to be foraging birds from breeding colonies in eastern Scotland and for some species, likely from north-east England.

The potential impacts identified for Ornithological receptors included:

- Disturbance and displacement during construction and decommissioning (vessels, noise and lighting);
- Disturbance and displacement during operation and maintenance (WTG, vessels, noise and lighting); and,
- Collision risk to flying birds during WTG operation.

Kittiwake, common guillemot and razorbill are vulnerable to disturbance and displacement. Modelling undertaken showed no additional mortality due to displacement of kittiwake and razorbill in the breeding or non-breeding seasons, or of guillemot during the breeding season. It was modelled that on average there could be up to five guillemot deaths during the non-breeding season per year, however, given their winter population size is of more than a million birds, no significant effects from disturbance or displacement were established. Collision risk modelling was also undertaken for the four collision-vulnerable species including gannet, kittiwake, great black-backed gull and herring gull. The modelling predicted that on average the Project would result in well below one fatal collision per year for these species. As such, no significant effects from collision risk were established.

Given the scale of the Project and the distance to the coastline, this greatly reduces the potential for impacts on seabirds compared to larger scale offshore wind developments closer to the coast. The results of the

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modelling show no potential for the Project to materially contribute to a wider regional cumulative impact on any ornithology receptors. It is therefore concluded that cumulative effects are not significant. Additionally, there will be no significant inter-related or transboundary effects related to the Project, and as such, no secondary mitigation is required.

Effects on Ornithological Features as qualifying features of European Sites have also been considered by the HRA process. The HRA screening, undertaken in consultation with NatureScot and MD-LOT, concluded there may be potential for LSE for kittiwake during the breeding season and therefore further assessment has been undertaken as part of the RIAA (Report to inform Appropriate Assessment). The RIAA concludes no adverse effect on site integrity for all European Sites with breeding kittiwake features considered either from the Project alone or in-combination with other Plans or Projects.

Table 4.5: Mitigation measures relevant to Ornithology

Mitigation Measure	Description
Minimum air gap	Minimum air gap from sea level will be equal to or greater than the minimum 22 metres (m) required to comply with Search and Rescue (SAR) requirements. This will also reduce collision risk for ornithology features
Project Environmental Monitoring Programme (PEMP)	The PEMP will provide information on the environmental research initiatives for the Project to allow information to be obtained for future offshore wind farm developments.

4.6 Pollution at Sea

It is unlikely that an accidental pollution event will take place as the general meteorological conditions in the central North Sea mean that any pollutants would likely disperse rapidly through wind, wave and current action, and the magnitude of an accidental is limited by the size of the chemical or oil inventory on maintenance vessels. Additionally, embedded mitigation measures will be adopted to ensure that the potential for accidental release of pollutants is limited, including strict controls on vessel activities and procedures. As a result, fish and shellfish are extremely unlikely to be adversely affected by such an incident, therefore the impact is considered of negligible magnitude.

Leakage of pollutants from vessels could occur at any stage of the Project's operational life. An accidental event, such as a vessel collision, could result in the spillage or release of fuel or other contaminants from the vessels. Both of these could have a physical disturbance effect at the discharge location, and could damage the Fish and Shellfish Ecology receptors and the habitats on which they rely on. However, it is highly unlikely that accidental releases of fuel would mix within the water column in sufficient quantities and depths to interact with the seabed. Chemical leakages or spills could have an impact on plankton in the immediate area, particularly during a period of bloom or fish spawning, which can lead to contamination of the food chain and an accumulation of hydrocarbons (Almeda et al., 2013). This can have long-term chronic effects on plankton, fish, bird, and cetacean populations, such as a reduction in mating success, behavioural disturbance, and health conditions (Dirksen et al., 1995; Benejam et al., 2010; Seuront, 2011).

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Accidental release of pollutants can occur from pollutants contained within the WTG and oil and fluid emissions from Project vessels. The potential for full inventory release for an individual WTG is considered extremely rare. The potential slow release of fluids is considered the only avenue through which pollution or discharge would enter the water column and sediment from the WTG.

More details on potential pollution to the marine environment, mitigation and response are given in Appendix 1, Section 9.

4.7 Underwater Noise

4.7.1 Construction Noise

As summarised in the Environmental Impact Assessment Report – Non Technical Study, the underwater sound pressure levels associated with survey and construction vessel activities are likely to be too low to result in injury to marine mammal species and will be temporary and transient, thus not to result in significant disturbance. There will be a limited number of vessels associated with the survey and construction phase. However, the associated underwater sound is not considered to represent a material change from baseline conditions in the context of existing shipping and navigation activities throughout the North Sea. Moreover, survey and construction activities will be of a short duration. As a result of the minor contribution of vessel noise associated with the project activities to the soundscape, and the short duration (~ 1 month), transience of vessel operations, the magnitude of impact from vessel noise is considered to be negligible.

4.7.2 Trenching, rock placement, and cable lying activities

As summarised in the Environmental Impact Assessment Report – Non Technical Study, trenching and rock placement and cable lying activities will introduce short term anthropogenic noise to the environment. Although the sound associated with trenching by Nedwell et al. (2003) is of a level which could cause disturbance to marine mammals, the SPL (Sound Pressure Level) is broadly comparable to other shipping noise (Simard et al., 2016; in Jiminez-Arranz et al. 2020). It is therefore probable that vessel noise, rather than the mechanical action itself, likely dominates the acoustic signal. Rock placement itself was not thought to give a noticeable rise in noise over background levels. This is indicative of the fact that the sound levels were dominated by vessel noise and not the rock-placement activities. Although sound pressure levels associated with these activities would be above the Level B harassment threshold for continuous sounds, and as such could cause behavioural changes in marine mammal species, the activities mentioned above will be transient and of a short duration. It is therefore unlikely they will have any significant impacts on acoustically sensitive animals such as marine mammals beyond those experienced through baseline conditions (i.e., levels of shipping in the Study Area). Therefore, the magnitude of impact from these activities is considered to be negligible.

4.7.3 Pre-construction visual surveys utilising USBL (Ultra Short Baseline) equipment

As summarised in the Environmental Impact Assessment Report – Non Technical Study, acoustic impacts arising from the project preconstruction surveys and construction activities are highly influenced by both the nature of the works and the receiving environment. Sound attenuates as it propagates throughout the water column and the magnitude of impact will be influenced by local oceanographic conditions (influencing both the path of the sound into the water column and how much sound is transmitted).

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Pre-construction visual surveys with the use of USBL subsea positioning equipment will introduce underwater noise of relatively high intensity but of a short duration (expected survey duration is no longer than 1 day). Additionally, sounds with a frequency of ca. 20-30 kHz, such as these emitted by USBL attenuate more quickly than lower frequency sounds, such that an animal would need to be very close to the sound source for there to be a realistic possibility of acoustic injury.

The likelihood of an animal being this close to operational equipment is extremely unlikely when considering that the source is deployed from a moving vessel travelling at more than 2 m/s (i.e., 4 knots) and, in some cases, is being towed at depth (e.g., a USBL may be mounted on a towed device within a few metres of the seabed). Taking the above operational details into account there is no realistic injury risk due to the USBL use, although the equipment might cause disturbance to marine mammals.

Impacts of disturbance from underwater noise will represent only a minor shift away from baseline conditions, for the short duration of the activities that would generate significant levels of sound. While any effects could be detectable, they are unlikely to result in any significant impacts on the conservation status of any marine mammal species beyond short term behavioural impacts or the temporary masking of biologically relevant sounds. While any impact will affect the receptor directly, the impact is predicted to be of regional special extent, short term duration, and will be intermittent and highly reversible (i.e., impacts will cease when the activity ceases). The magnitude of impact is therefore considered to be negligible.

4.7.4 Operation and Maintenance

As summarised in the Environmental Impact Assessment Report, potential effects during operation and maintenance have been scoped out of the assessment and as such have not been considered further.

4.7.5 Decommissioning

As summarised in the Environmental Impact Assessment Report, the targeted scenario for decommissioning is a clear seabed and decommissioning will involve the dismantling and removal of the WTG and associated substructures, anchoring systems and the removal of the subsea cables. A Decommissioning Programme has been developed to address the principal decommissioning measures for the Project.

Given the nature of the decommissioning activities, which will largely be a reversal of the installation process, the impacts during decommissioning are expected to be similar to or less than those assessed for the construction phase. Therefore, the magnitudes of impact assigned to marine mammals during the construction stage are also applicable to the decommissioning stage. It is also assumed that the receptor sensitivities will not materially change over the lifetime of the Project. Therefore, the decommissioning effects are not expected to exceed those assessed for construction.

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5. WASTE MANAGEMENT

The 'Waste Management Plan – L2-HSSE-04-010 (Appendix A of the Operation and Maintenance Plan) covers how all waste generated by NEO NEXT+ (legacy TotalEnergies sites) in the UK and the Culzean Floating Offshore Wind Turbine Pilot Project) is managed.

All contractors / Subcontractors working on the Culzean Floating Wind construction or maintenance will be following relevant waste disposal procedures. They will be expected to adhere to the waste hierarchy for the management of waste, waste is disposed of in the correct labeled container and that it is transported and disposed of by a licensed waste carrier and treatment facility.

6. ACCIDENTAL DEPOSIT OF AN OBJECT TO SEA

6.1 Introduction

If an object is accidentally dropped to sea, it can cause significant damage to the marine environment or be a hazard to other sea users. The object could have been accidentally deposited from the following:

- A vehicle or vessel
- Aircraft
- A marine structure
- A container floating in the sea.

No intentional deposits should be made at sea unless under force majeure. This only applies if a deposit is necessary in order to maintain the safety of an installation, vessel or its crew.

[Except from this are objects deposited in the sea or on the seabed, in accordance with marine licences].

If a deposit has occurred, then this needs to be reported. Even under the conditions of force majeure, still need to be reported to the Licensing Authority.

6.2 Reporting of an accidental deposit

If the deposit is likely to be danger or hazard to navigation. the timeframe in which notification should be given is as soon reasonably possible, but no later than 6 hours after the event to the following:

- Relevant HM Coastguard rescue coordination centre by telephone – in the case of the Culzean Floating Offshore Wind Turbine Pilot Project, this would be the **Aberdeen Maritime Rescue Coordination Centre** – Phone number – **0344 382 0584**
- UK Hydrographic Office – navwarnings@ukho.gov.uk

If the deposit is any maritime safety equipment (for example – life jacket, life raft or life rings), these must be reported to prevent any unnecessary emergency response mobilisation.

In the case of an accident deposit an 'accidental deposit of an object at sea form' should be completed and submitted by the responsible person, electronically to those listed on the form. This should be done as soon as possible but no later than 24 hours after the accidental deposit.

[The form can be downloaded from the following site - [Offshore renewable energy – accidental deposit of an object at sea: form and guidance - gov.scot](#)].

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NEO NEXT+ will ensure that any contractors / subcontractors working in the construction or maintenance of the Culzean Floating Wind project are aware of the requirements for reporting an accidental deposits to sea.

The following should be taken into account when deciding to report or not, any accidental deposits:

- Objects or material that can interfere with vessel navigation or cause damage to vessels,
- Materials that are resistant to rotting can be hazardous to divers, sea life and submersibles as well as damaging vessel propellers,
- Cooling water intakes can be blocked by bags or plastic sheeting, as well as being a hazard to marine life,
- Materials that can damage fishing nets / lines, or damage fishing vessels,
- Some materials can move considerable distances,
- A risk assessment must be carried out to determine whether the object can be retrieved, and the retrieval must be discussed with the Licensing Authority.

6.3 Retrieval of an object

Where possible the Responsible person must locate the object using a side scan sonar or remote operated vehicle (ROV) survey in grid lines. Any accidentally deposited objects must be removed, as soon as reasonably practicable.

7. INVASIVE NON-NATIVE SPECIES

Invasive non-native species (INNS) are species that due to intentional or non-intentional human actions have arrived in a new location outside of their natural habitat. Some non-native species can spread and become invasive by harming wildlife and the environment in their new location. In order to prevent this, legislation has been implemented to control the potential spread of INNS. Table 7 below describes the mitigations put in place to manage this.

Table 7: Mitigations against INNS

Mitigation measure	Description	Control
International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention)	Ballast water discharges from vessels will be managed under the BWM Convention which aims to prevent the spread of harmful aquatic organisms from one region to another, by establishing standards and procedures for the management and control of ships' ballast water and sediments. Measures will be adopted to ensure that the risk of invasive non-native species introduction during construction, operation and maintenance, and	Ship specific Ballast Water Management Plan Ballast Water Record Book International Ballast Water Certificate

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	decommissioning is minimised.	
GB Non-native Species Secretariat (NNSS) website - http://www.nonnativespecies.org/checkcleandry/	Guidance on what 'boaters' can do to prevent Invasive Non-Native Species. Check, Clean, Dry.	
https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species/invasive-non-native-species	Information on how to help tackle non-native species and how to identify INNS.	

The following site - <https://www.nonnativespecies.org/non-native-species/id-sheets>, contains a list of ID sheets that can be used to identify Non-native species. Specifically for Marine environments, the following can be used: [MBA-NNS-Guide-2020-1.6-MB.pdf](#).

Recordings of non-native species should be reported, links to how to report are found here - [Invasive non-native species | Scotland's environment web](#).

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APPENDIX 1 – MARINE POLLUTION CONTINGENCY PLAN