

Appropriate Assessment for the Culzean Floating Offshore Wind Turbine Pilot Project.
July 2024.

**MARINE DIRECTORATE - LICENSING OPERATIONS TEAM'S
ASSESSMENT OF THE PROJECT'S IMPLICATIONS FOR
DESIGNATED SPECIAL PROTECTION AREAS IN VIEW OF THE
SITES' CONSERVATION OBJECTIVES.**

APPLICATION FOR A MARINE LICENCE UNDER THE MARINE AND COASTAL
ACCESS ACT 2009 FOR THE CONSTRUCTION AND OPERATION OF THE
CULZEAN FLOATING OFFSHORE WIND TURBINE PILOT PROJECT

SITE DETAILS: CENTRAL NORTH SEA, APPROXIMATELY 222 KILOMETRES
("KM") EAST OF ABERDEEN AND 2 KM WEST OF THE EXISTING CULZEAN OIL
AND GAS PLATFORM

Name	Assessor or Approver	Date
Toni-Marie McGinn	Assessor	31/05/2024
Naomi Gibson	Approver	03/07/2024

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SECTION 1: BACKGROUND

1 Appropriate assessment conclusion

- 1.1 This appropriate assessment (“AA”) concludes that there will be no adverse effect on the site integrity (“AEoSI”) of the Buchan Ness to Collieston Coast Special Protected Area (“SPA”), Fowlsheugh SPA, Troup, Pennan and Lion’s Heads SPA, St Abb’s Head to Fast Castle SPA, Forth Islands SPA, or Flamborough and Filey Coast SPA from the TotalEnergies E&P North Sea UK Ltd (“the Applicant’s”) proposal either in isolation or in combination with other plans or projects.
- 1.2 Marine Directorate – Licensing Operations Team (“MD-LOT”) considers that the most up to date and best scientific advice available has been used in reaching the conclusion that the Applicant’s proposal will not adversely affect the integrity of the Buchan Ness to Collieston Coast SPA, Fowlsheugh SPA, Troup, Pennan and Lion’s Heads SPA, St Abb’s Head to Fast Castle SPA, Forth Islands SPA or Flamborough and Filey Coast SPA and is satisfied that no reasonable scientific doubt remains.

2 Introduction

- 2.1 This is a record of the AA undertaken by MD-LOT in regard to the Applicant’s proposal to construct and operate a single floating wind turbine within the central north sea (“the Culzean Turbine Project”), approximately 222 km east of Aberdeen and 2 km west of the existing Culzean oil and gas platform, as required under Regulation 28 of the Conservation of Offshore Marine Habitats and Species Regulations 2017 (“the 2017 Habitat Regulations”). MD-LOT, as the ‘competent authority’ under the 2017 Habitat Regulations, has to be satisfied that the Culzean Turbine Project will not adversely affect the integrity of any European site (Special Areas of Conservation (“SAC”) and SPAs), either alone or in combination with other plans or projects, before it can grant consent for the project.
- 2.2 NatureScot, operating name of Scottish Natural Heritage, and Natural England have been consulted in accordance with Regulation 28(4) of the 2017 Habitat Regulations.

3 Details of proposed project

- 3.1 The Applicant has submitted a marine licence application (“the Application”) under part 4 of the Marine and Coastal Access Act 2009. In support of the Application, the Applicant submitted an [Environmental Impact Assessment \(“EIA”\) Report](#) and a [Habitats Regulations Appraisal Screening and Report to Inform Appropriate Assessment](#) (“RIAA”).

3.2 The Applicant proposes to construct a single floating offshore wind turbine generator (“WTG”) and associated floating substructure. The WTG will be located approximately 222 km east of Aberdeen and approximately 2 km west of the existing Culzean oil and gas platform and Culzean facilities. The WTG will be connected to the Culzean facilities with an export cable, approximately 2.5 km in length, via an existing J-tube on the Culzean platform. The Culzean Turbine Project will include up to 6 floating mooring lines and up to 6 drag anchors (or an alternative scenario of three drag and three plate anchors).

3.3 The key components of the WTG include:

Table 1 WTG Parameters

Design Parameters	Maximum Design Scenario
Number of WTGs	1
Capacity (Megawatts (“MW”))	3
Minimum blade clearance from sea-level	22 metres (“m”) above Mean Sea Level (“MSL”)
Hub height	78 m above MSL
Rotor diameter	112 m
Tip height	134 m above MSL

3.4 It will take approximately one month for the pre-construction, construction and installation of the WTG, moorings and cable installation activities which are proposed to take place in quarter 3 2025. Once commissioned, the Culzean Turbine Project is expected to remain in operation for up to 10 years.

3.5 The final mooring system design is still under consideration as the Applicant is considering new mooring technologies. The Culzean Turbine Project will initially use a catenary mooring design. Approximately one year into the operational phase of the Culzean Turbine Project, the Applicant plans to install either a taut mooring system or a semi-taut mooring system to trial new, innovative and low-impact mooring techniques. Either option is considered to reduce seabed impacts in comparison to more traditional catenary mooring systems and can be seen in Figure 4-8 within the [Culzean Turbine Project Description](#) which was provided alongside the EIA Report.

3.6 Anchoring is dependent on the chosen mooring system design. Should catenary be used, drag anchors will be used to manage the horizontal loading. Should the taut or semi-taut option be used, either drag or plate anchors will be used. There may also be a requirement to install scour protection for drag anchors post-installation to prevent the anchors from being undermined by seabed erosion. Scour protection is anticipated to be rock with the maximum seabed footprint of rock per anchor to be 70 square metres (“m²”), protruding approximately 1 m above the seabed. Based on a worst-case quantity of 1.6 tonnes per cubic metre (“m³”), for the stipulated seabed

footprint and height of the rock, this would represent a total of 112 tonnes of rock per anchor.

- 3.7 Pre-installation surveys will be undertaken throughout 2024 and 2025 consisting of visual inspections of mooring locations and cable routes to confirm the exact routing and determine the need for any seabed preparation. These surveys are expected to last 1 day.

4 Consultation

- 4.1 NatureScot was consulted on the Culzean Turbine Project on 7 March 2024 and responded on 25 April 2024.
- 4.2 Natural England was consulted in respect of impacts to European sites in English waters on 26 April 2024 and responded on 13 May 2024.

5 Main points raised during consultation.

- 5.1 The main points received from NatureScot and Natural England are summarised below. Copies of all consultation comments received by MD-LOT can be found [here](#).

5.2 Annex I Habitats

- 5.2.1 The RIAA screens out all European sites designated for Annex I habitats from further assessment. This conclusion is based on pre-application advice received from NatureScot which advised no likely significant effect (“LSE”) from the Culzean Turbine Project on any Annex I habitats for any SAC. This is due to the distance from designated sites and lack of any impact pathway.
- 5.2.2 MD-LOT agree with this conclusion and Annex I habitats have therefore not been taken forward for further assessment in the AA.

5.3 Diadromous Fish

- 5.3.1 The RIAA screens out all European sites designated for diadromous fish from further assessment. This conclusion is in line with pre-application advice provided by NatureScot which advised that diadromous fish were screened out of further consideration under HRA. This is due to the scale of the Culzean Turbine Project with short installation duration, the offshore location – with no landfall, a limited understanding of spatial and temporal distribution of migratory species, a lack of evidence to inform impact pathways and a lack of reference population figures which prevents impact apportioning to SACs.

5.3.2 MD-LOT agree with this conclusion and diadromous fish have therefore not been taken forward for further assessment in the AA.

5.4 Marine Mammals

5.4.1 The RIAA screens out all European sites designated for marine mammals from further assessment. This conclusion is based on pre-application advice received from NatureScot which advised no LSE from the Culzean Turbine Project on any seal or cetacean qualifying features for any SACs. This is due to the distance from designated sites and a lack of impact pathways.

5.4.2 MD-LOT agree with this conclusion and marine mammals have therefore not been taken forward for further assessment in the AA.

5.5 Ornithology

5.5.1 NatureScot advised that it largely agrees with the conclusions reached in the RIAA, and that the Culzean Turbine Project would have LSE on the kittiwake qualifying interest of the Buchan Ness to Collieston Coast SPA, Fowlsheugh SPA, Troup, Pennan and Lion's Heads SPA, St Abb's Head to Fast Castle SPA and Forth Islands SPA. As such these sites are carried forward for assessment in the AA.

5.5.2 NatureScot noted that three additional Scottish SPAs are considered for their kittiwake qualifying feature in the RIAA that were not considered pre-application :

- Copinsay SPA
- East Caithness Cliffs SPA
- Marwick Head SPA

NatureScot advised that these sites are beyond theoretical connectivity (mean-max foraging range) of the Culzean Turbine Project , and as such it is content for these sites to be screened out from further assessment in the AA since there is no LSE on the kittiwake qualifying feature of these sites.

5.5.3 NatureScot agreed with the conclusions within the RIAA of no LSE for the following qualifying features:

- Common gull
- Great black backed gull
- Herring gull
- Common tern
- Guillemot
- Razorbill

This is due to there being no SPAs within theoretical connectivity of the Culzean Turbine Project. These species have therefore not been taken forward for further assessment in the AA.

5.5.4 NatureScot also agreed with the conclusions within the RIAA of no LSE for the following qualifying features:

- Fulmar
- Gannet

NatureScot identified theoretical connectivity between the Culzean Turbine Project for both of these species. However, NatureScot advised that fulmar have such an extensive foraging range that the displacement associated with a single turbine will be negligible. Additionally, the flight height behaviour and turbine parameters make collision risk low and therefore NatureScot agree with the RIAA conclusion of no LSE for fulmar. NatureScot advised that the number of gannets recorded during the digital ariel surveys was sufficiently low that no further assessment was required and therefore NatureScot agree with the RIAA conclusion of no LSE for gannet. These species have not been taken forward for further assessment in the AA.

5.5.5 NatureScot advised that no assessment was required for the puffin qualifying feature of any SPA given the small number of sightings recorded. This was agreed with the Applicant during pre-application discussions.

5.5.6 Natural England, having considered the scale and location of the Culzean Turbine Project, agreed with the conclusions of the RIAA with respect to English SPAs. The RIAA identified that the Culzean Turbine Project could have LSE on the kittiwake qualifying feature of the Flamborough and Filey Coast SPA so this will be taken forward for further assessment in the AA.

SECTION 2: INFORMATION ON EUROPEAN SITES

6 Background information and qualifying interests for the relevant European sites

6.1 This section provides links to the NatureScot SiteLink website and the Natural England Designated Sites View website where the background information on the sites being considered in this assessment is available. The qualifying interests for the sites are listed as are the conservation objectives.

Table 2 Name of European site affected and relevant links.

Buchan Ness to Collieston Coast SPA https://sitelink.nature.scot/site/8473

Fowlsheugh SPA

<https://sitelink.nature.scot/site/8505>

Troup, Pennan and Lion's Heads SPA

<https://sitelink.nature.scot/site/8587>

St Abb's Head to Fast Castle SPA

<https://sitelink.nature.scot/site/8579>

Forth Islands SPA

<https://sitelink.nature.scot/site/8500>

Flamborough and Filey Coast SPA

<https://designatedsites.naturalengland.org.uk/SiteGeneralDetail.aspx?SiteCode=UK9006101&SiteName=Filey%20Coast&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

Table 3 Qualifying interests

Buchan Ness to Collieston Coast SPA

Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*)*, breeding
Herring gull (*Larus argentatus*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Shag (*Phalacrocorax aristotelis*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Fowlsheugh SPA

Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*)*, breeding
Herring gull (*Larus argentatus*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Razorbill (*Alca torda*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Troup, Pennan and Lion's Heads SPA

Fulmar (*Fulmarus glacialis*)*, breeding
Guillemot (*Uria aalge*)*, breeding

Herring gull (*Larus argentatus*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Razorbill (*Alca torda*)*, breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

St Abb's Head to Fast Castle SPA

Guillemot (*Uria aalge*)*, breeding
Herring gull (*Larus argentatus*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Razorbill (*Alca torda*)*, breeding
Shag (*Phalacrocorax aristotelis*)*, breeding
Seabird assemblage

* indicates assemblage qualifier only

Forth Islands SPA

Arctic tern (*Sterna paradisaea*), breeding
Common tern (*Sterna hirundo*), breeding
Cormorant (*Phalacrocorax carbo*)*, breeding
Gannet (*Morus bassanus*), breeding
Guillemot (*Uria aalge*)*, breeding
Herring gull (*Larus argentatus*)*, breeding
Kittiwake (*Rissa tridactyla*)*, breeding
Lesser black-backed gull (*Larus fuscus*), breeding
Puffin (*Fratercula arctica*), breeding
Razorbill (*Alca torda*)*, breeding
Roseate tern (*Sterna dougallii*), breeding
Sandwich tern (*Sterna sandvicensis*), breeding
Shag (*Phalacrocorax aristotelis*), breeding
Seabird assemblage, breeding

* indicates assemblage qualifier only

Flamborough and Filey Coast SPA

Gannet (*Morus bassanus*), breeding
Guillemot, (*Uria aalge*), breeding
Kittiwake, (*Rissa tridactyla*), breeding
Razorbill, (*Alca torda*), breeding
Seabird assemblage

Table 4 Conservation objectives

**Buchan Ness to Collieston Coast SPA; Fowlsheugh SPA; Troup,
Pennan and Lion's Heads SPA; St Abb's Head to Fast Castle SPA;
Forth Islands SPA**

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site;
- Distribution of the species within site;
- Distribution and extent of habitats supporting the species;
- Structure, function and supporting processes of habitats supporting the species;
- No significant disturbance of the species

Flamborough and Filey Coast SPA

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

SECTION 3: ASSESSMENT IN RELATION TO REGULATION 28 OF THE CONSERVATION OF OFFSHORE MARINE HABITATS AND SPECIES REGULATIONS 2017

7 Requirement for appropriate assessment

- 7.1 Is the project directly connected with or necessary to the conservation management of the site(s)?

The Culzean Turbine Project is not directly connected with or necessary to the conservation management of the site.

7.2 Is the project likely to have a significant effect on the qualifying interests?

7.3 NatureScot agrees with the RIAA that the Culzean Turbine Project is likely to have a significant effect on the kittiwake qualifying feature of the following SPAs due to collision risk and displacement:

- Buchan Ness to Collieston Coast SPA
- Fowlsheugh SPA
- Troup, Pennan and Lion's Heads SPA
- St Abb's Head to Fast Castle SPA
- Forth Islands SPA

7.4 Natural England in its response dated 13 May 2024 agreed with the conclusions of the RIAA which stated that kittiwake as a qualifying feature of the Flamborough and Filey Coast SPA should be screened in for assessment in the AA as it was not possible to conclude no LSE.

7.5 MD-LOT agrees with NatureScot and Natural England's advice and has undertaken an AA for the kittiwake qualifying feature of the Buchan Ness to Collieston Coast SPA, Fowlsheugh SPA, Troup, Pennan and Lion's Heads SPA, St Abb's Head to Fast Castle SPA, Forth Islands SPA and the Flamborough and Filey Coast SPA.

8 Appropriate assessment of the implications for the site in view of the site's conservation objectives.

8.1 The Applicant presented the analyses undertaken to quantify the potential for displacement and collision risk to kittiwake for breeding and non-breeding periods within [Appendix H](#) of the EIA Report.

8.2 The Collision Risk Modelling ("CRM") undertaken by the Applicant details the input parameters and model outputs to predict the number of kittiwakes that might be killed annually due to collision with the Culzean Turbine Project. CRM was undertaken using the Stochastic CRM shiny app v 0.1.1 (Caneco, 2022)¹ and used parameter values according to NatureScot guidance (NatureScot, 2023 (Guidance Note 7))². The CRM calculates outputs for three model variations termed Option 1, Option 2, and Option 3.

¹ Caneco, B. (2022). Stochastic CRM Shiny app. V0.1.1. DMP Statistical Solutions Ltd, Available at: <https://dmpstats.shinyapps.io/sCRM/>

² NatureScot. (2023). Guidance Note 7: Guidance to support Offshore Wind Applications: Marine Ornithology - Advice for assessing collision risk of marine birds.

<https://www.nature.scot/doc/guidance-note-7-guidance-support-offshore-wind-applications-marine-ornithology-advice-assessing>

The Applicant considered Option 2, the basic model using generic flight height distribution data, to be the most appropriate model option for informing its collision risk assessment. Predictions were produced from the CRM run in both deterministic and stochastic modes. A full list of wind farm and kittiwake parameters and the values used in the CRMs is presented in Annex A: Kittiwake Collision Risk Modelling within the [RIAA](#).

8.3 Surveys carried out within a 2km buffer of the WTG recorded a peak density of kittiwakes during the breeding season of 0.25 birds per square kilometre. Despite recent declines in breeding kittiwake populations, collision mortalities for the Culzean Turbine Project have been modelled at less than one bird mortality (0.6) for the 10 year operational period during the breeding season, see Table 5. The Applicant considers this to result in negligible effects to kittiwake populations. Additionally, based on the displacement matrix method using NatureScot recommended values, displacement and disturbance impacts is estimated to result in zero mortalities from the Culzean Turbine Project. This is also considered to result in negligible effects to kittiwake populations. As such the Applicant concluded that there will be no AEOI for kittiwake as a qualifying feature to any SPA from the Culzean Turbine Project alone.

Table 5 Summary of collision risk modelling predictions for kittiwake

Parameter	Value
Stochastic CRM Option 2	
Avoidance rate	0.993
Mean number of fatal collisions per year (breeding and non-breeding season)	0.075 (SD 0.022)
Mean number of fatal collisions per year (breeding season only)	0.060 (SD 0.019)
Number mortality events for 10 year operational period (for breeding and non-breeding season mortalities)	0.75
Number mortality events for 10 year operational period (for breeding season mortalities)	0.6
Average number of operational years for one mortality event (for breeding and non-breeding season mortalities)	13 years
Average number of operational years for one mortality event (for breeding season mortalities)	16 years
Deterministic CRM Option 2	
Avoidance rate	0.992
Mean number of fatal collisions per year (breeding and non-breeding season)	0.076
Mean number of fatal collisions per year (breeding season only)	0.061
Number mortality events for 10 year operational period (for breeding and non-breeding season mortalities)	0.76

Number mortality events for 10 year operational period (for breeding season mortalities)	0.61
Average number of operational years for one mortality event (for breeding and non-breeding season mortalities)	13 years
Average number of operational years for one mortality event (for breeding season mortalities)	16 years

- 8.4 In its consultation response, NatureScot confirmed it was content with the Applicant’s approach taken for both the collision risk and displacement assessment.
- 8.5 NatureScot agreed with the RIAA’s conclusions of no AEoSI for kittiwake as a qualifying feature of the Buchan Ness to Collieston Coast SPA, Fowlsheugh SPA, Troup, Pennan and Lion’s Heads SPA, St Abb’s Head to Fast Castle SPA, and the Forth Islands SPA for the Culzean Turbine Project alone as a result of collision risk or displacement effects.
- 8.6 Natural England, having considered the scale and location of the Culzean Turbine Project agreed with the RIAA’s conclusion of no AEoSI of the Flamborough and Filey Coast SPA.
- 8.7 MD-LOT agrees with the advice provided by NatureScot and Natural England and concludes there will be no AEoSI on the Buchan Ness to Collieston Coast SPA, Fowlsheugh SPA, Troup, Pennan and Lion’s Heads SPA, St Abb’s Head to Fast Castle SPA, Forth Islands SPA and Flamborough and Filey Coast SPA from the Applicant’s Culzean Turbine Project alone.

9 In-combination assessment

- 9.1 MD-LOT has carried out an in-combination assessment to ascertain whether the Culzean Turbine Project will have a cumulative effect with other plans or projects which, in combination, would have the potential to affect the qualifying interests of the Buchan Ness to Collieston Coast SPA, Fowlsheugh SPA, Troup, Pennan and Lion’s Heads SPA, St Abb’s Head to Fast Castle SPA, Forth Islands SPA and Flamborough and Filey Coast SPA.
- 9.2 A review has been carried out of all the projects which currently have an active, or open application for a marine licence or section 36 consent and associated AA which identified LSE on the qualifying interests of the same designated sites as are affected by the Culzean Turbine Project.
- 9.3 Construction of the Culzean Turbine Project is not likely to commence until quarter 3 in 2025 so any licences which expire before this quarter have been discounted.

- 9.4 There are a number of active marine licences to deposit fish farms which will have LSE on the same designated sites as the Culzean Turbine Project; however, effects from these projects are minor and are unlikely to lead to significant in-combination effects with the Culzean Turbine Project. Given the the scale and location of the project, these fish farm licences have also been discounted from the in-combination assessment.
- 9.5 The identified projects have been separated into offshore wind farm projects (Table 6) and non-wind farm projects (Table 7).

Table 6 Wind farm projects which are considered in the in- combination assessment for the Culzean Turbine Project.

Project Name	Description
Forthwind demonstration Project	Single 20 MW test and demonstration WTG and met mast located approximately 1.5 km from the shore at Methil in the Firth of Forth. https://marine.gov.scot/ml/forthwind-demonstration-project
Green Volt Offshore Wind Farm	Consented wind farm consisting of up to 35 WTGs located approximately 80 km off the Aberdeenshire coastline. The project is anticipated to begin construction in quarter 4 2025. https://marine.gov.scot/ml/green-volt-offshore-windfarm
Inch Cape Offshore Wind Farm	A maximum of 72 turbines will be installed 15-22 km from the Angus coastline. The project is due to begin construction mid-2025. https://marine.gov.scot/ml/inch-cape-offshore-windfarm-revised-design
Kincardine Offshore Windfarm	A demonstrator floating wind farm consisting of 5 x 9.5 MW turbines located approximately 8 miles off the coast to the south-east of Aberdeen. The project is now operational. https://marine.gov.scot/ml/kincardine-offshore-windfarm-0
Moray West Offshore Windfarm	A maximum of 60 WTGs will be installed off the Caithness coast. The project is currently under construction and due to be operational by June 2025. https://marine.gov.scot/ml/moray-west-offshore-windfarm
Neart na Gaoithe Offshore Wind Farm	A maximum of 54 WTGs will be installed 15-22 km from the Angus coastline. The project is currently under construction and is due to complete construction July 2025. https://marine.gov.scot/ml/neart-na-gaoithe-offshore-wind-farm-revised-design
Pentland Floating Offshore Wind Farm	Consented wind farm with a maximum of 6 WTGs with offshore construction activities anticipated to commence in 2027.

	https://marine.gov.scot/ml/pentland-floating-offshore-wind-farm
Seagreen Alpha and Bravo Offshore Wind Farms	A maximum of 150 WTGs 27 km from the Angus coastline. The project is currently under construction and due to complete construction by the end of 2024. https://marine.gov.scot/ml/seagreen-alpha-and-bravo-offshore-wind-farms

Table 7 Non-wind farm projects which are considered in the in-combination assessment for the Culzean Turbine Project.

Project Name	Description
Eastern Green Link Cable 2	Installation of a 436 km HVDC cable between Peterhead in Aberdeenshire and Drax in North Yorkshire. https://marine.gov.scot/ml/marine-licence-eastern-green-link-2-egl2-hvdc-cables-and-cable-protection-peterhead-drax-00009943
Granton Harbour Redevelopment	Construction of a new 110 m sheet piled quay wall. 50 m extension of the western breakwater. Creation of a 340 berth marina. Capital dredging of which 154,385 m ³ will be taken for land based disposal, 19,322 m ³ will be used in land reclamation and the remaining 86,980 m ³ will be deposited at a sea deposit site. https://marine.gov.scot/node/23005
Port of Leith Outer Berth	Extension and expansion at the Port of Leith Outer Berth including construction of a retaining wall, capital dredging to deepen the approach channel to the port, capital dredging to further deepen the existing berth pocket, and deposit of dredged material at the Narrow Deep B designated sea deposit site. https://marine.gov.scot/ml/port-leith-outer-berth
Native Oyster restoration trial project	Reintroduction of native oysters in the Firth of Forth. https://marine.gov.scot/node/24873 https://marine.gov.scot/node/24871

9.6 Applications have been received for the Berwick Bank Offshore Wind Farm (“Berwick Bank”) consisting of 307 WTGs, 47.6 km from the coast of East Lothian. A determination has not yet been made on the applications for this project; however, the AA has concluded that it will have an AEOI on a number of qualifying interests of SPAs including kittiwake of the Buchan Ness to Collieston Coast SPA, Fowlsheugh SPA, Troup, Pennan and Lion’s Heads SPA, St Abb’s Head to Fast Castle SPA, Forth Islands SPA, and Flamborough and Filey Coast SPA. Berwick Bank can therefore only be consented if a derogation case is agreed, including compensatory measures to offset its impacts on those species/sites where the AA cannot conclude that there will

be no AEoSI. This means that if Berwick Bank is consented, the effects from Berwick Bank on these species/sites will be compensated for and on this basis, they have not been considered in this in-combination assessment.

10 Assessment of in-combination effects

- 10.1 NatureScot is its consultation response of 25 April 2024 agreed with the conclusions of the RIAA, that there is no AEoSI for kittiwake as a qualifying feature of the Buchan Ness to Collieston Coast SPA, Fowlsheugh SPA, Troup, Pennan and Lion's Heads SPA, St Abb's Head to Fast Castle SPA, and the Forth Islands SPA as a result of collision risk or displacement effects in combination with other projects.
- 10.2 As noted in section 8.3 the Culzean Turbine Project alone will result in less than one mortality from collision and displacement together over the operational life of the project. The Applicant has considered this to be a negligible effect and this view is supported by both NatureScot and Natural England. As such it is not plausible that the Culzean Turbine Project would materially contribute to a wider regional in combination disturbance or mortality effects for kittiwake features of any SPA.
- 10.3 As such, MD-LOT agrees with NatureScot and concludes that there will be no adverse effect on any SPA from the Culzean Turbine Project in combination with other plans or projects.

11 MD-LOT Conclusion

- 11.1 MD-LOT concludes that there will be no AEoSI of the the Buchan Ness to Collieston Coast SPA, Fowlsheugh SPA, Troup, Pennan and Lion's Heads SPA, St Abb's Head to Fast Castle SPA, Forth Islands SPA or Flamborough and Filey Coast SPA from the Culzean Turbine Project either in isolation or in combination with other plans or projects.

SECTION 4: CONDITIONS

12 Requirement for conditions

- 12.1 No requirement for conditions.