Aberdeenshire Council

Aberdeenshire COUNCIL

Our Ref: ENQ/2025/1560
Your Ref: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013

Ask for: Galina Fomina
Tel: [redacted]
Email: [redacted]

Marine Licensing And Consenting

7 November 2025

Dear Sir/Madam

**Marine Licence Consultation for Consultation under Section 36 of the Electricity Act 1989, the Marine (Scotland) Act 2010 and Marine and Coastal Access Act 2009 for the Erection of Offshore Wind Farm and Associated Infrastructure - Further Information at Caledonia Offshore Wind Farm (South), ScotWind NE4 Site, Moray Firth**

Thank you for the above consultation. As the additional information provided relates to offshore development the Natural Environment Team has no comments on it.

The Archaeology Team have reviewed the submitted information and responded with no comments on the submitted additional information.

Aberdeenshire Council has no objections or comments on the additional information provided in regards to the proposed development at this time.

Yours faithfully

[redacted]

Paul Macari
Head of Planning and Economy

# British Telecom (“BT”)

| | |
|---|---|
| **From:** | [redacted] |
| **To:** | MD Marine Renewables |
| **Subject:** | MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited Caledonia North and South Offshore Wind Farms Additional Information Submission Consultation Response Required by 1 December 2025 |
| **Date:** | 23 October 2025 11:53:58 |
| **Attachments:** | image001.png |

General

Our Ref :- WID13656

Good
morning

Thank you for your email dated 17/10/2025

We have studied the additional information with respect to EMC and related problems to BT point-to-point microwave radio links.
The conclusion is that the Project indicated should not cause interference to BT’s current and presently planned radio network

Kind
Regards

Chris

BT Networks

Department of Agriculture and Rural Development of Northern Ireland

| | |
|---|---|
| **From:** | DAERA Marine Information Requests |
| **To:** | MD Marine Renewables |
| **Subject:** | RE: CM: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission - Consultation – Response Required by 1 December 2025 |
| **Date:** | 01 December 2025 13:50:13 |
| **Attachments:** | image001.png<br>image002.png |

---

Hi
This is a nil return from NI Marine and Fisheries. Thanks
Eamonn

**Eamonn Brady | Marine Plan Team |** Department for Agriculture, Environment and Rural Affairs
Ground Floor | Clare House | 303 Airport Road West | Belfast | BT3 9ED
[redacted].

Defence Infrastructure Organisation –

Ministry of Defence

Defence Infrastructure Organisation

Wendy Talbot
Assistant Safeguarding Manager
Ministry of Defence
Safeguarding
Defence Infrastructure Organisation
St George's House
DMS Whittington
Lichfield, Staffordshire
WS14 9PY
United Kingdom

E-mail: DIO-Safeguarding-Wind@mod.gov.uk

Application Ref: 00010861 / 00010862

Our Reference: DIO10058405

Christine McGhie
Licensing Operations Team
Marine Directorate
Scottish Government
Marine Laboratory
ABERDEEN
AB11 9DB

10 November 2025

Dear Christine

**ELECTRICITY ACT 1989**
The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017
The Electricity (Applications for Consent) Regulations 1990

**MARINE (SCOTLAND) ACT 2010**
The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017

**MARINE AND COASTAL ACCESS ACT 2009**
The Marine Works (Environmental Impact Assessment) Regulations 2007

**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 AND MARINE LICENCES UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 AND THE MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE THE CALEDONIA NORTH OFFSHORE WIND FARM, APPROXIMATELY 28 KM FROM WICK AT ITS NORTHERNMOST POINT AND 48 KM FROM BANFF AT ITS SOUTHERNMOST POINT.**

**AND**

**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 AND MARINE LICENCES UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 AND THE MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE THE CALEDONIA SOUTH OFFSHORE WIND FARM, APPROXIMATELY 45 KM FROM WICK AT ITS NORTHERNMOST POINT AND 35 KM FROM BANFF AT ITS SOUTHERNMOST POINT.**

Thank you for consulting the Ministry of Defence (MOD) on documents relating to the additional information provided by the Applicant with regard to the Caledonia North and Caledonia South Offshore Wind Farms on 17 October 2025.

The MOD have reviewed the information provided and published on the Caledonia North and Caledonia South Offshore Wind Farms Project Page of the marine.gov.scot website. We note that as there are no changes with regard to the proposed Caledonia North and Caledonia South Offshore Wind Farm project, the MOD's position previously communicated by letter dated 24 February 2025 remains extant.

I trust this is clear however should you have any questions please do not hesitate to contact me.

Yours sincerely

[redacted]

Wendy Talbot
Assistant Safeguarding Manager

Historic Environment Scotland

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

By email to:
MD.MarineRenewables.gov.scot

Marine Directorate
Marine Laboratory
375 Victoria Road
Aberdeen
AB11 9DB

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

HMConsultations@hes.scot
0131-668-8716

Our case ID: 300061138
Your ref: MS-00011014/ MS-00011015
27 October 2025

Dear Marine Directorate

## The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017, Caledonia North and Caledonia South Offshore Wind Farm, EIA Report, Additional Information

Thank you for your consultation which we received on 17 October 2025. We have reviewed the details in terms of our historic environment interests. This covers world heritage sites, scheduled monuments and their settings, category A listed buildings and their settings, inventory gardens and designed landscapes, inventory battlefields and historic marine protected areas (HMPAs). From 1 January 2025 we no longer provide advice on undesignated underwater cultural heritage. This includes the preparation of documents for post-consent activities including Written Schemes of Investigation or Protocols for Archaeological Discoveries. For EIA projects, the relevant competent authority must ensure that they have access to sufficient expertise to examine the EIA Report in accordance with the relevant regulations.

## Our Advice

We have considered the information received and we do not have any further comments to make on the proposals. Our decision not to provide comments should not be taken as our support for the proposals. This application should be determined in accordance with national and local policy on development affecting the historic environment, together with related policy guidance

This application should be determined in accordance with national and local policy on development affecting the historic environment, together with related policy guidance. Please contact us if you have any questions about this response. The officer managing this case is Kevin Mooney who can be contacted by phone on 0131 651 6787 or by email at kevin.mooney@hes.scot. However, if you wish to reconsult us on this proposal please email HMConsultations@hes.scot.

Yours sincerely

**Historic Environment Scotland**

Highlands and Islands Airports Ltd

| | |
|---|---|
| **From:** | [redacted] |
| **To:** | MD Marine Renewables |
| **Cc:** | Safeguarding; [redacted] |
| **Subject:** | Re: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission - Consultation – Response Required by 1 December 2025 |
| **Date:** | 04 December 2025 16:30:09 |
| **Attachments:** | image001.png<br>values2025_49f0881e-b581-44a4-b961-1aecd2620b56.png |

OFFICIAL

Good afternoon.

Hial are currently working with the developers in regards to the Aviation Impacts this development has upon Wick Airport.

Unless there is a material change to the heights and locations of the turbines HIAL has no additional comment at this time. Having reviewed the additional information presented there is no comment to make.

Kind regards

[redacted]

Joint Nature Conservation Committee

| | |
|---|---|
| **From:** | JNCC Offshore Industries Advice |
| **To:** | MD Marine Renewables |
| **Cc:** | [redacted]; JNCC Offshore Industries Advice |
| **Subject:** | RE: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia – Caledonia North and South – Additional Information – JNCC |
| **Date:** | 17 October 2025 16:40:39 |
| **Attachments:** | image002.png<br>image003.png |

Good Afternoon Christine,

Thank you for consulting JNCC regarding the Caledonia Offshore Wind Farm.
JNCC's role in relation to offshore renewables in Scottish waters has been delegated to NatureScot.
NatureScot is now authorised to exercise the JNCC's functions as a statutory consultee in respect of certain applications for inshore and offshore waters (0-200nm) adjacent to Scotland.
Therefore, NatureScot should provide a full response. NatureScot will contact JNCC directly if additional input is required.
As such JNCC have not reviewed this document and will not be providing further comment at this time.

Kind regards,

**Jon Connon**
*Offshore Industries Advice Officer*
*Marine Management Team*
JNCC, Inverdee House, Baxter Street, Aberdeen, AB11 9QA
[redacted]
Working pattern: Monday to Friday
**Website** **Twitter** **Facebook** **LinkedIn**
**Sign up to the JNCC Nature News monthly enewsletter**

Maritime and Coastguard Agency

| | |
|---|---|
| **From:** | navigation safety |
| **To:** | MD Marine Renewables |
| **Cc:** | [redacted] |
| **Subject:** | RE: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission - Consultation – Response Required by 1 December 2025 |
| **Date:** | 31 October 2025 11:21:19 |
| **Attachments:** | image002.png<br>image003.png<br>image004.png<br>image005.png<br>image006.png<br>image007.png<br>image008.png |

---

Good morning, Christine.

Thank you for your correspondence regarding the updated information for the Caledonia North and South Offshore Wind Farms.

We note that the additional information submitted by the developer is in regard to marine mammals, ornithology, physical processes, and herring receptors. As this is not in regard to shipping and navigation, we will not be providing a response on this occasion. Please take this as a 'nil response' from us.

Kind regards,

Vaughan.

**Vaughan Jackson**
Offshore Renewables Project Lead
**UK Technical Services Navigation**

[redacted]

**Maritime & Coastguard Agency**
Bay 2/25, Spring Place
105 Commercial Road,
Southampton SO15 1EG

Maritime & Coastguard Agency

**Safer Lives, Safer Ships, Cleaner Seas**
www.gov.uk/mca

Marine Directorate - Marine Analytical Unit

**From:** [redacted]
**To:** MD Marine Renewables; [redacted]
**Subject:** RE: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission - Consultation – Response Required by 1 December 2025
**Date:** 20 November 2025 16:44:29
**Attachments:** image001.png

---

Hi Christine,

The additional information submitted by the Applicant below does not pertain to the socio-economic section of the application. Subsequently, the comments provided by the MAU in our initial response remain largely unchanged. [redacted]

[redacted]

Best Regards,

Chris

Marine Directorate – Science, Evidence, Data and Digital

**CHRISTINE MCGHIE**
**MARINE LICENSING AND CONSENTING CASEWORK OFFICER**
**LICENSING OPERATIONS TEAM**
**MARINE DIRECTORATE**
**SCOTTISH GOVERNMENT**

**04/12/2025**

**RE: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North & South Offshore Wind Farms – Section 36 consent & Marine Licence Application**

Advisors from the SEDD Marine Renewables & Ecology Team have reviewed the above request and provide the following advice.

The MD-SEDD oceanography advisor has reviewed the Caledonia EIAR Volume 8 Additional Information Appendix 1 Marine and Coastal Processes Stratification Technical Note of the Caledonian Offshore Wind Farm (referred to as the Stratification Technical Note from here on).

The applicant has chosen to perform a qualitative assessment of impact on stratification and frontal systems, justifying this by the “evident lack of data available to understand quantitatively the impact of WTGs on water column structure within the study area”. MD-SEDD disagree that there is insufficient data available to perform a quantitative (or at least semi-quantitative) impact assessment. MD-SEDD advised MD-LOT on this topic in Feb 2025 and suggested the use of SSW-RS, the analysis of a 10 year time series, and on the use of the Carpenter et al. (2016) semi-quantitative impact assessment. MD-SEDD advise that the applicant has not followed this previous advice. MD-SEDD advise there are a number of misleading statements within the Stratification Technical Note (not detailed further here). The qualitative assessment approach presents evidence from existing scientific papers, which concluded that the impact of OWFs on seasonal stratification is expected to be relatively low.

MD-SEDD advise that these studies do not necessarily well represent the environmental conditions at this location (e.g. sustained seasonal stratification). However, MD-SEDD advise there is limited existing published evidence of the impacts on stratification from OWFs seasonally stratified waters, such as the northern North Sea.

Overall, whilst the qualitative assessment is somewhat lacking and therefore uncertain, MD-SEDD agree with the overall minor significance of effect. This is based on the baseline evidence presented by the Stratification Technical Note and the expert opinion of the MD-SEDD oceanography advisor. To mitigate the considerable uncertainty of the impact assessment, whilst acknowledging it is most likely to be of minor significance, MD-SEDD recommend monitoring of the thermal stratification within the development to confirm the minor significance of effect. MD-SEDD advise that such monitoring is best conducted in a coordinated and strategic manner, in order to reduce uncertainty going forward.

Yours sincerely,

**Renewables and Ecology Team**

Marine Directorate – Science, Evidence, Data and Digital

Natural England

**From:** Ruth Cantrell [redacted]
**Sent:** 05 November 2025 09:08

**To:** MD Marine Renewables <MD.MarineRenewables@gov.scot>
**Cc:** [redacted]

**Subject:** 530792 Additional info for Section 36 for the Caledonia North and South OWF NE Response

Dear Toni-Marie,

Thank you for your summary.

We agree with the applicant that there is LSE from this project for the Farne Islands ~~guillemot~~ kittiwake and Flamborough and Filey Coast gannet, as determined by the applicant's updated RIAA.

Natural England would not expect there to be a credible risk of AEoI from this project on English SPAs. As such, for this windfarm, we do not require a calculation of displacement or collision mortality using the method advised by Natural England for these sites.

Please give me a call if you wish to discuss.

Thanks

Ruth

Ruth Cantrell (pronouns: she, her)
Senior Adviser (Northumbria Area Team: Marine)
Natural England

Phone no. [redacted]
Mobile no. [redacted]

I work a 9-day fortnight with alternate Fridays off.

NatureScot

NatureScot
Scotland's Nature Agency
Buidheann Nàdair na h-Alba

Christine McGhie
Marine Directorate
Scottish Government
Marine Laboratory
Aberdeen
AB11 9DB

15 December 2025

Our ref: CNS – REN – OWSF – NE4 – Caledonia - Application

Dear Christine,

**CALEDONIA NORTH OFFSHORE WIND FARM & CALEDONIA SOUTH OFFSHORE WIND FARM**

**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 AND MARINE LICENCES UNDER THE MARINE (SCOTLAND) ACT AND PART 4 OF THE MARINE AND COASTAL ACCESS ACT 2009 TO CONSTRUCT AND OPERATE THE CALEDONIA NORTH OFFSHORE WIND FARM AND CALEDONIA SOUTH OFFSHORE WIND FARM**

Thank you for consulting us on the Additional Information submitted for the proposed Caledonia North Offshore Wind Farm and Caledonia South Offshore Wind Farm. This follows on from our request for clarification and additional information in our advice provided 27 March 2025 to the original Applications, submitted 20 November 2024, and the supporting information accompanying these applications.

The Caledonia North proposal, located approximately 28km from Wick, includes a project design envelope comprising up to 77 fixed wind turbines, associated infrastructure, and a proposed 35-year lease.

The Caledonia South proposal, located approximately 45 km from Wick, includes a project design envelope comprising up to 78 wind turbines (up to 39 of which may be floating and the remainder fixed), associated infrastructure, and a proposed 35-year lease.

Caledonia North and Caledonia South combined, which is referred to as 'Proposed Development (Offshore)' or 'PDO', will not exceed 140 wind turbines and will have an installation capacity of 2 GW.

The Additional Information includes Addendums to the Environmental Impact Assessment (EIA) Report, Report to Inform an Appropriate Assessment (RIAA) and Derogation case.

We have reviewed the Additional Information, along with the relevant documents submitted with the original EIA Report (EIAR) and provide advice below.

**Background**

In our advice sent to Marine Directorate on 27 March 2025, we requested additional information and/ or clarifications for ornithology, marine mammals, fish and shellfish ecology, benthic ecology and marine and coastal processes receptors, which we advise on below. Revisions to the marine mammal chapter, an ecosystem-level assessment and a herring additional information note have also been provided by the Applicant - we provide further advice on these below.

**NatureScot advice**

**Offshore and intertidal ornithology – EIA**

In relation to the cumulative assessment for Caledonia North and Caledonia South, we conclude that the cumulative effects are Significant in EIA terms for:

- Great black-backed gull through collision.
- Guillemot, razorbill and puffin through displacement.
- Kittiwake and gannet through collision and displacement.

In line with established EIA practice, we expect mitigation to be identified where a Significant adverse effect is identified.

We consider that any likely derogation compensation measures for guillemot, razorbill, puffin, kittiwake, gannet, and great black-backed gull would also be sufficient to address impacts predicted under EIA for the relevant species. Further detail is provided in Section A.10.

**Offshore and intertidal ornithology – RIAA**

*Proposal alone assessment of AEoSI*

For most species and sites re-assessed within the Additional Information, we conclude that there is no AEoSI from project-alone impacts for the Proposed Development (Offshore), Caledonia North and Caledonia South. **The exception to this is great black-backed gull at Hoy SPA for the Proposed Development (Offshore), for which we are currently unable to come to a conclusion**.

In our assessment, we have evaluated the PVA run for Hoy SPA and have noted that the population used is a population count from 1995. The recent counts from Hoy since 2015 indicate a population of 94 birds. This is in comparison to the 1995 count, which indicated a population count of 775.

**We consider if a PVA was to be re-run for Hoy SPA for the Proposed Development (Offshore), we would be unable to conclude no AEoSI. However, we also consider the mortality impact to be less than one bird. We therefore advise that mitigation required through our conclusions of significance in EIA terms for great black-backed gull should take account of this predicted impact at Hoy SPA and the overall package should be considered a mitigation/compensation package.**

See Section A.4.2.1 and A.7 for further details.

*In-combination assessment of AEoSI*

Our detailed conclusions for the in-combination reassessment are presented in Section A.11.2 below.

With regard to the in-combination assessment presented, we note that three developments (Caledonia, Muir Mhòr and Ossian) have submitted Additional Information at a similar time to each other. Assessments within the respective Additional Information submissions are based on the latest publicly available information. However, this information is now out of date given all three projects have submitted revised ornithology assessments within their Additional Information. As such, individual project numbers used within the current in-combination assessments may differ and additional/updated PVAs may need to be conducted for certain sites and species.

**We note that a further collaborative submission (led by Muir Mhòr, supported by Caledonia and Ossian) which has provided an up to date in combination assessment is to be submitted to Marine Directorate for consultation. Depending on our review of this work, our final advice on in-combination impacts may change**.

**Therefore, our advice below is based on the current assessment presented in the Additional Information submission and not the collaborative work to be submitted.**

For the qualifying species and sites listed below, we have **concluded AEoSI** in-combination with other plans and projects:

- Guillemot at East Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Razorbill at East Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Kittiwake at East Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Puffin at North Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Kittiwake at Troup, Pennan and Lion's Head SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Great black-backed gull at Copinsay SPA for the Proposed Development (Offshore) and Caledonia North.
- Kittiwake at West Westray SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Guillemot at Sule Skerry and Sule Stack SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South
- Gannet at Forth Islands SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.

For the qualifying species and sites listed below, we are **unable to conclude no AEoSI** in-combination with other plans and projects:

- Kittiwake at North Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.

- Puffin at Hoy SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Kittiwake at Buchan Ness to Collison Coast SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Kittiwake at Fowlsheugh SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Puffin at Forth Islands SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Kittiwake at Forth Islands SPA for the Proposed Development (Offshore) and Caledonia South.
- Kittiwake at St Abb's Head to Fast Castle SPA for the Proposed Development (Offshore) and Caledonia South.

For great black-backed gull at Hoy SPA, we cannot give a conclusion at this point for the in-combination impacts of collision for the Proposed Development (Offshore) and Caledonia North. This is because we do not have confidence in the population sizes used to assess great black-backed gull at this site.

**We consider if PVAs were to be re-run for Hoy SPA for the Proposed Development (Offshore) and Caledonia North, we would be unable to conclude no AEoSI. However, we also consider the mortality impact to be less than one bird. We therefore advise that mitigation required through our conclusions of significance from the EIAR for great black backed gull should take account to this predicted impact at Hoy SPA and the overall package should be considered a mitigation/ compensation package.**

Based on our assessment and conclusions reached above, we advise that Marine Directorate will be required to undertake an Appropriate Assessment.

**Marine mammals – EIA**

We welcome the Applicant's re-assessment of potential impacts from piling and vessel disturbance, which considers a refined project envelope and use of the deterrence function.

The EIA for marine mammal re-assessment concludes no significant impacts, both alone and cumulatively.

For the Proposed Development (Offshore) alone, we conclude that disturbance from piling to bottlenose dolphin (Coastal and East Scotland Management Unit (CES MU)), harbour porpoise, minke whale and harbour seal is Not Significant in EIA terms.

For the Proposed Development (Offshore) cumulatively with other plans and projects, we conclude:

- **Significant impacts in EIA terms for disturbance from piling for bottlenose dolphin (CES MU) and minke whale.**
- Disturbance from piling to harbour porpoise is Not Significant in EIA terms.
- Disturbance from piling to harbour seal is Not Significant in EIA terms.
- Vessel disturbance within offshore export cable corridors (OECCs) during construction is Not Significant in EIA terms for bottlenose dolphin (CES MU).

Lastly, **we agree with the Applicant that the risk of hindering the conservation objectives of the Southern Trench NCMPA is uncertain for minke whale disturbance from cumulative vessel**

**activities within OECCs during the construction phase.** We welcome the Applicant's commitment to post-consent monitoring of the NCMPA to address knowledge gaps regarding minke whale behavioural response to disturbance, as previously advised in our response to the original Application for Caledonia North and Caledonia South.

**Marine mammals – RIAA**

The RIAA re-assessment concludes that disturbance from piling will result in no adverse effect on site integrity for the Dornoch Firth and Morrich More SAC for harbour seal and the Moray Firth SAC for bottlenose dolphin for the Proposed Development (Offshore) both alone and in-combination with other plans and projects. It also concludes that disturbance from vessel activity will result in no adverse effect on site integrity for the Moray Firth SAC for bottlenose dolphin for the Proposed Development (Offshore) both in-combination with other plans and projects.

We conclude:

- No adverse effect on site integrity for the Dornoch Firth and Morrich More SAC in relation to disturbance from piling for harbour seal for the Proposed Development (Offshore) both alone and in-combination with other plans and projects.
- No adverse effect on site integrity for the Moray Firth SAC in relation to disturbance from piling for bottlenose dolphin for the Proposed Development (Offshore) both alone and in-combination with other plans and projects. However, as there is still LSE and a moderate in-combination disturbance from piling based on current project design envelopes, we advise that if post consent plans continue to indicate this impact level, we request a condition which enables strategic monitoring and mitigation to be deployed.
- No adverse effect on site integrity for the Moray Firth SAC in relation to disturbance from vessel activity for bottlenose dolphin for the Proposed Development (Offshore) in-combination with other plans and projects.

Should Scottish Ministers grant consent, we advise:

- The Applicant will need to consider the implications further, through the development of a Piling Strategy and Marine Mammal Mitigation Protocol (MMMP) post-consent, for all species considered, but particularly for bottlenose dolphin, harbour porpoise, white beaked dolphin, minke whale, grey seal and harbour seal.
- Within the Piling Strategy and Marine Mammal Mitigation protocol, further detailed consideration should be given to type of foundations, duration and timing of noisy activities including piling and vessel noise, potential for noise abatement systems (if practical) and UXO removal methods – with an expectation that low order deflagration is the default method of clearance, as per the Joint Position Statement[1] from UK and devolved Governments and Statutory Nature Conservation Bodies.
- The Applicant implements a strategic monitoring proposal to validate the EIA Report, RIAA predictions and Piling protocol to better understand the likelihood of impacts for disturbance from piling and operational noise (if deemed necessary at the Piling protocol stage).

[1] https://www.gov.uk/government/publications/marine-environment-unexploded-ordnance-clearance-joint-position-statement/marine-environment-unexploded-ordnance-clearance-joint-position-statement

- A detailed monitoring programme (in collaboration with other development activities occurring at similar times in the Southern Trench NCMPA and the minke whale feature).

**Fish and shellfish ecology – EIA**

The additional information report for the fish and shellfish receptor group was to address issues raised by NatureScot about potential cumulative impacts on herring and sandeel, alongside the EIAR conclusion that these impacts are not significant.

The additional information reports reassert the position of the EIAR that the development has no significant impact in terms of EIA for herring spawning and sandeel habitat either alone or cumulatively. The information provided makes the case for magnitude of impacts for underwater noise to remain low. We do not support the arguments presented in the additional information reports and our advice remains the same – we consider that the potential impacts on herring and sandeel may be more significant than has been concluded, particularly in the context of potential cumulative impacts. Our advice therefore remains unchanged, and we provide more detailed comments in Appendix C.

We reiterate our advice given previously, that the following aspects are included in post-consent plans:

- Additional sediment analysis within the offshore array area to identify the suitability of habitat for spawning species (e.g. herring and sandeel);
- A Fish Mitigation Plan, including measures such as:
  - Noise mitigation techniques during peak spawning periods for herring and/or sandeel.
  - Consideration of seasonal restrictions on piling during peak spawning periods for sandeel and/or herring across both array areas and / or partial areas within array areas.
  - Consideration of fish monitoring pre-, during, and post- construction.
  - Use of best available evidence to inform siting and design.
  - Supporting strategic studies to consider potential impact pathways during windfarm construction and operation for key species such as Priority Marine Features, including Atlantic salmon.
- Supporting strategic monitoring which investigates at the effects of Electromagnetic fields (EMF), particularly on elasmobranchs (e.g. basking shark) as well as shellfish,.
  - An action plan for reducing the risk of secondary entanglement and detail on the secondary entanglement monitoring approach.

**Marine and coastal processes – EIA**

In our previous response we raised issues relating to a lack of cumulative assessment with the existing Moray Firth Wind Farms had been excluded from the Cumulative Impact Assessment. We advised that there should be further assessment of the cumulative effects of storm wave height on geodiversity features, and coastal SSSI receptors. This assessment does not appear to have been carried out and should be considered further as part of any Cable Plan.

The applicant has provided further information on the potential impacts on seasonal stratification. Although, NatureScot are not the lead consultee we provide comments in Appendix D.

**Southern Trench NCMPA assessment – EIA**

We previously advised that further assessment of the cumulative effects of other projects on the geodiversity and burrowed mud features of the MPA should be carried out. We also advised that the permanent habitat loss for burrowed mud is fully assessed for the project alone.

The additional information does not appear to have fully addressed our comments. We maintain our advice that both the direct and indirect cumulative effects of Moray Firth projects should be assessed for both geodiversity and burrowed mud.

For the burrowed mud feature, we advise that the MPA assessment should extend beyond the first test and conclude that the proposals are capable of affecting the burrowed mud feature of the Southern Trench NCMPA, other than insignificantly. The assessment should progress to the second test and provide information to inform an assessment on whether there is a significant risk of hindering the conservation objectives. This assessment should follow our guidance – Development management and Nature Conservation Marine Protected Areas[2]. Based on our knowledge of the feature, we advise that this proposal is unlikely to risk hindering the achievement of the conservation objectives, particularly in isolation.

We provide more detailed comments in Appendix E. Note that comments on the minke whale feature of this NCMPA are provided in Appendix B.

**Ecosystem level effects – EIA**

In our advice in response to the original Applications for Caledonia North and Caledonia South, we highlighted that impacts at the ecosystem scale and across key trophic levels has not been assessed in the EIA. We advised that this aspect should be considered further as part of any post-consent plans in respect of mitigation. The Applicant has provided an assessment of ecosystem level effects as part of this Additional Information submission (Appendix 2 of Volume 8), which we welcome.

In reviewing the document we found the trophic level-based approach to be a useful structure. An overview of the ecosystem baseline, through literature reviews and surveys is presented, linking primary production to benthic ecology, to prey species and to apex predators (seabirds and marine megafauna). Consideration is given to future effects and changing baselines through anthropogenic drivers.

The document does infer some of the conclusions without the back up of scientific literature but we appreciate that this is an emerging research topic and so evidence may be lacking. The overall conclusion is that the development is unlikely to result in significant ecosystem levels effects, and that potential ecological benefits could arise. We refer Marine Directorate to our advice on stratification (in Appendix D) and Fish and Shellfish (Appendix C) which are equally relevant in the context of ecosystem level effects.

For seabirds, impacts (both direct and via prey species) are minor at most from ecosystem level effects. We do raise issue with the conclusions of the Cumulative Effects Section (3.4.1.4-3.4.1.7) which appears to be based on the Applicant's conclusions for the Proposed Development (Offshore) in the original Application. NatureScot reached other conclusions for the Proposed Development (Offshore) in the advice given on 27 March 2025.

[2] https://www.nature.scot/doc/development-management-and-nature-conservation-marine-protected-areas

**Ornithology derogation**

In our response to the original Applications (dated 27 March 2025), we welcomed the Applicant's initial consideration of compensation measures and provided early advice on the principle of each measure in terms of their ecological feasibility. However, we advised that the Derogation Case was high level and that we require significantly more detail on the proposed compensation measures, consideration of indirect impacts on other species or habitats, and how the success of the measure will be monitored.

Advice is provided in Appendix F below on the Addendum to the Derogation Case, the refined outline IMP and the East Caithness Cliffs site assessment report, focusing on the ecological feasibility of the proposed compensatory measures. We acknowledge that the Appropriate Assessment has yet to be finalised and as such the SPAs and qualifying species for which compensation may be required remains unconfirmed.

The Addendum to the Derogation Case outlines five proposed compensation measures:

- Reduction of disturbance at colonies at East Caithness Cliffs and Isle of May
- Mammalian predator management and eradication
- Bycatch mitigation
- Restoration or maintenance of breeding sites
- Conservation management funding

Whilst we welcome that some of our previous advice is reflected in this Additional Information and that the proposed measures have been progressed, further detail on evidencing the existing pressures, methodologies and specific locations for compensation measures is largely absent. We acknowledge the commitment to baseline monitoring, and we support the partnership between Caledonia and National Trust for Scotland (NTS) to deliver predator management measure. **However, at present we advise there is still insufficient information to have confidence that the proposed measures are likely to compensate for the predicted impacts of the proposal to seabirds.**

We hope this advice is helpful. Please contact Jenna Turner (jenna.turner@nature.scot) or Fiona Cruickshank (fiona.cruickshank@nature.scot) in the first instance for any further advice, copying in our marine energy mailbox – marineenergy@nature.scot.

Yours sincerely,

**Erica Knott**

Head of Marine Energy – Sustainable Coasts and Seas.

**NATURESCOT ADVICE ON CALEDONIA NORTH OFFSHORE WIND FARM AND CALEDONIA SOUTH OFFSHORE WIND FARM – ADDITIONAL INFORMATION**

**Appendix A Marine and intertidal ornithology**

The Applicant has provided additional information and clarifications for the marine and intertidal ornithology chapter of the EIA Report and the RIAA in Appendices 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 and 31 of Volume 8.

Overall, we are content with the additional information submitted for marine and intertidal ornithology. Our advice and guidance following application submission has been followed and sufficient detail has been provided throughout to allow us to check the assessment process in detail. Each heading in this advice refers to each of the additional information points that we requested.

## A.1 EIA summary

In relation to the cumulative assessment for Caledonia North and Caledonia South, we conclude that the cumulative effects are Significant in EIA terms for:

- Great black-backed gull through collision.
- Guillemot, razorbill and puffin through displacement.
- Kittiwake and gannet through collision and displacement.

In line with established EIA practice, we expect mitigation to be identified where a Significant adverse effect is identified.

We consider that any likely derogation compensation measures for guillemot, razorbill, puffin, kittiwake, gannet, and great black-backed gull would also be sufficient to address impacts predicted under EIA for the relevant species. Further detail is provided in Section A.10.

## A.2 RIAA summary

### *A.2.1 Proposal alone assessment of AEoSI*

For most species and sites re-assessed within the Additional Information, we conclude that there is no AEoSI from project-alone impacts for the Proposed Development (Offshore), Caledonia North and Caledonia South. **The exception to this is great black-backed gull at Hoy SPA for the Proposed Development (Offshore), for which we are currently unable to come to a conclusion**.

In our assessment, we have evaluated the PVA run for Hoy SPA and have noted that the population used is a population count from 1995. The recent counts from Hoy since 2015 indicate a population of 94 birds. This is in comparison to the 1995 count, which indicated a population count of 775.

**We consider if a PVA was to be re-run for Hoy SPA for the Proposed Development (Offshore), we would be unable to conclude no AEoSI. However, we also consider the mortality impact to be less than one bird. We therefore advise that mitigation required through our conclusions of significance in EIA terms for great black-backed gull should take account of this predicted impact at Hoy SPA and the overall package should be considered a mitigation/compensation package.**

See Section A.4.2.1 and A.7 for further details.

### *A.2.2 In-combination assessment of AEoSI*

Our detailed conclusions for the in-combination reassessment are presented in Section A.11.2 below.

With regard to the in-combination assessment presented, we note that three developments (Caledonia, Muir Mhòr and Ossian) have submitted Additional Information at a similar time to each other. Assessments within the respective Additional Information submissions are based on the latest publicly available information. However, this information is now out of date given all three projects have submitted revised ornithology assessments within their Additional Information. As such, individual project numbers used within the current in-combination assessments may differ and additional/updated PVAs may need to be conducted for certain sites and species.

**We note that a further collaborative submission (led by Muir Mhòr, supported by Caledonia and Ossian) which has provided an up to date in combination assessment is to be submitted to Marine Directorate for consultation. Depending on our review of this work, our final advice on in-combination impacts may change**.

**Therefore, our advice below is based on the current assessment presented in the Additional Information submission and not the most recent submission.**

For the qualifying species and sites listed below, we have **concluded AEoSI** in-combination with other plans and projects:

- Guillemot at East Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Razorbill at East Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Kittiwake at East Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Puffin at North Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Kittiwake at Troup, Pennan and Lion's Head SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Great black-backed gull at Copinsay SPA for the Proposed Development (Offshore) and Caledonia North.
- Kittiwake at West Westray SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Guillemot at Sule Skerry and Sule Stack SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South
- Gannet at Forth Islands SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.

For the qualifying species and sites listed below, we are **unable to conclude no AEoSI** in-combination with other plans and projects:

- Kittiwake at North Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Puffin at Hoy SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Kittiwake at Buchan Ness to Collison Coast SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Kittiwake at Fowlsheugh SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Puffin at Forth Islands SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South.
- Kittiwake at Forth Islands SPA for the Proposed Development (Offshore) and Caledonia South.
- Kittiwake at St Abb's Head to Fast Castle SPA for the Proposed Development (Offshore) and Caledonia South.

For great black-backed gull at Hoy SPA, we cannot give a conclusion at this point for the in-combination impacts of collision for the Proposed Development (Offshore) and Caledonia North. This is because we do not have confidence in the population sizes used to assess great black-backed gull at this site.

**We consider if PVAs were to be re-run for Hoy SPA for the Proposed Development (Offshore) and Caledonia North, we would be unable to conclude no AEoSI. However, we also consider the mortality impact to be less than one bird. We therefore advise that mitigation required through our conclusions of significance from the EIAR for great black backed gull should take account to this predicted impact at Hoy SPA and the overall package should be considered a mitigation/ compensation package.**

Based on our assessment and conclusions reached above, we advise that Marine Directorate will be required to undertake an Appropriate Assessment.

*A.2.3 Outdated colony count data*

Outdated colony counts are used for several species/sites, resulting in overestimated population sizes. For great black-backed gull at Hoy SPA, the updated population estimates would result in the threshold for PVA being triggered. Therefore, PVA analysis is required for this species/site. For guillemot at Sule Skerry and Sule Stack SPA and kittiwake at West Westray SPA this issue of outdated colony counts adds uncertainty, which supports our conclusion of AEoSI for these species/sites. For the other affected sites/species, the outdated colony count does not affect our conclusions. We provide further detail in Section A.4.2.

*A.2.4 Vessel disturbance and displacement – Moray Firth SPA*

We conclude that disturbance and displacement from vessels for the Proposed Development (Offshore), both alone and in-combination with other plans and projects, will have no AEoSI for all qualifying species of the Moray Firth SPA. However, the planned vessel traffic may affect great northern diver and red-throated diver in the Moray Firth which have already been impacted by vessel traffic from other offshore wind developments. We recommend pre-construction surveys to gather up-to-date data on diver distribution in the area. In-built mitigation, such as vessels

scanning for aggregations to avoid them, is expected within the Vessel Management Plan. Further information is provided in Section A.6.

## A.3 Updated screening

In the original RIAA, the Applicant incorrectly used the geometric centre as a screening distance – this should only be used at the apportioning stage. The same geometric centre distance was applied to all three scenarios (North, South and the Proposed Development (Offshore)). This resulted in various sites and qualifying species being incorrectly excluded which then had knock on consequences for the apportioning for all three scenarios.

In our original advice in response to the Section 36 Applications for Caledonia North and Caledonia South, we requested updated HRA screening and apportioning, with subsequent consideration of any requirement for further Population Viability Analysis (PVA). We requested that the HRA screening be re-done in line with our advice as opposed to the Applicant approach. We requested that the HRA screening be undertaken separately for Caledonia North and Caledonia South.

For the Additional Information submission, the Applicant has undertaken updated HRA screening in line with NatureScot advice and separately for Caledonia North (Appendix 8), Caledonia South (Appendix 9) and the Proposed Development (Offshore) (Appendix 7).

### *A.3.1 In-combination impacts*

The inclusion of the sites incorrectly screened out in the original application has resulted in our conclusions of adverse effect on site integrity being changed for a number of sites, as shown in Table 1 below.

*Table 1. Sites and species where conclusions have changed for the Proposed Development (Offshore) between original applications and additional information.*

| SPA | Species | NatureScot Application conclusion | NatureScot Additional Information conclusion |
|---|---|---|---|
| North Caithness Cliffs | Razorbill | Cannot conclude | No AEoSI |
| North Caithness Cliffs | Kittiwake | - | Cannot conclude |
| North Caithness Cliffs | Guillemot | Cannot conclude | No AEoSI |
| Troup, Pennan & Lion's Head | Guillemot | Cannot conclude | No AEoSI |
| Troup, Pennan & Lion's Head | Razorbill | Cannot conclude | No AEoSI |
| Copinsay | Great black-backed gull | - | AEoSI |
| Hoy | Great black-backed gull | - | See Sections A.11.1 and A.11.2.1 |
| Hoy | Puffin | - | Cannot conclude |
| Buchan Ness | Kittiwake | AEoSI | Cannot conclude |
| Calf of Eday | Guillemot | - | No AEoSI |
| Rousay | Guillemot | - | No AEoSI |
| West Westray | Razorbill | - | No AEoSI |
| West Westray | Kittiwake | - | AEoSI |
| Sule Skerry | Guillemot | - | AEoSI |
| Sule Skerry | Puffin | AEoSI | No AEoSI |
| Sule Skerry | Gannet | - | No AEoSI |

| | | | |
|---|---|---|---|
| Fowlsheugh | Kittiwake | - | Cannot conclude |
| Cape Wrath | Puffin | - | No AEoSI |
| Fair Isle | Puffin | Cannot conclude | No AEoSI |
| Fair Isle | Gannet | - | No AEoSI |
| Foula | Puffin | Cannot conclude | No AEoSI |
| North Rona | Gannet | - | No AEoSI |
| Forth Islands | Puffin | - | Cannot conclude |
| Forth Islands | Kittiwake | - | Cannot conclude |
| Noss | Gannet | - | No AEoSI |
| St Abbs Head | Kittiwake | - | Cannot conclude |
| Hermaness, Saxa Vord | Gannet | Cannot conclude | No AEoSI |

*– denotes where no assessment was carried out.*

In some circumstances, our conclusion has been downgraded from AEoSI to no AEoSI (e.g. puffin at Sule Skerry and Sule Stack SPA). We have also concluded AEoSI for some sites which were previously not considered, based on the results of the updated assessment.

The Applicant has concluded AEoSI for the Proposed Development (Offshore) for kittiwake at North Caithness Cliffs SPA (Section 7.1.1.7 of Appendix 4). However, we are unable to conclude no AEoSI and would therefore not determine AEoSI. Further detail is provided in Section A.11.2.

There are some occasions where the impacts by one part of the proposed development (i.e. North or South) are higher than those predicted by the Proposed Development (Offshore). We assume this is a result of the differences in design worst case scenario.

## A.4 Updated apportioning

The revised HRA apportionment is discussed in Appendices 4, 10 and 13 for the Proposed Development (Offshore), Appendices 5, 11 and 14 for Caledonia North, and Appendices 6, 12 and 15 for Caledonia South.

Revised HRA apportionment has been undertaken using the geometric centre of the array area to the geometric centre of the SPA (closest distance around land). This has been undertaken separately for the Proposed Development (Offshore), Caledonia North and Caledonia South.

The level of detail provided for the apportionment has been very useful. We have checked the breeding season apportionment calculation for gannet and kittiwake (as examples) - the apportionment calculation for these two species is correct. The SMP database data appears to have been used largely correctly, with the appropriate correction factors applied to count units where relevant. However, please see Section A.4.2 below detailing issues with the use of outdated colony count data in a small number of cases.

We have not checked the breeding season apportioning results for guillemot, razorbill or puffin in detail, due to time constraints and a lack of any major issues with the apportioning for other species such as for kittiwake and gannet.

We have also checked the non-breeding season apportioning for kittiwake (as an example) and agree with the results.

### *A.4.1 Minor errors in apportioning*

We note some minor errors that were found when checking the kittiwake and gannet apportioning. However, these errors are small enough that they would not significantly affect the final outcome of the assessment. These errors are detailed below for transparency.

*A.4.1.1 Gannet*

For Sule Skerry and Sule Stack SPA, the percentage of foraging range at sea slightly differs in the Caledonia South apportioning results (Appendix 15) when compared to the Caledonia North and the Proposed Development (Offshore) results (Appendices 13 and 14). For Caledonia North and the Proposed Development (Offshore), Table 2-5 of the respective appendices states values of 87.16 for Sule Skerry and 86.77 for Sule Stack. Whilst in the Caledonia South Appendix, Table 2-5 states the values as 81.97 for Sule Skerry and 87.16 for Sule Stack. As the difference in the values is very small, it is unlikely that this would have a significant impact on the final apportioning values for gannet.

*A.4.1.2 Kittiwake*

There are several non-SPA colonies for which the colony count and/or the percentage of foraging range at sea data differs between the Proposed Development (Offshore), Caledonia North and Caledonia South apportioning results (Table 2-1 of Appendices 13, 14 and 15). As the only difference between the three appendices should be the distance between the colony and the site, these differences are mostly likely errors. We have checked the colony counts against the SMP database to determine which dataset is correct. Table 2 below provides further details.

*Table 2. Summary of the Kittiwake non-SPA colonies for which data differed between the Proposed Development (Offshore), Caledonia North and Caledonia South apportioning results appendices.*

| Site | Section | Proposed Development (Offshore) | | North | | South | | SMP |
|---|---|---|---|---|---|---|---|---|
| | | Count | % FRaS | Count | % FRaS | Count | % FRaS | Count |
| Newtonhill to Hall bay | May Craig to Muchalls | **128** | **97.68** | 468 | 55.84 | 468 | 55.84 | 468 |
| | Newtonhill to May Craig | **124** | **98.01** | 596 | 55.99 | 596 | 55.99 | 596 |
| No Ness to Levenwick | No Ness | **12** | **97.6** | 76 | 95.17 | 76 | 95.17 | 76 |
| | Troswick Beach to Boddam | **24** | **98.01** | 42 | 94.52 | 42 | 94.52 | 42 |
| | Troswick Ness | **134** | **98.05** | 40 | 94.63 | 40 | 94.63 | 40 |
| North Mainland 22 - Black Hill to Boat Geo South | HU 3066 - SKUA/GBBG | **68** | **98.02** | 4 | 94.28 | 4 | 94.28 | 4 |

*Note: SMP count data is provided for comparison, and the cases in which the count data differed to the SMP have been highlighted in bold to indicate that we believe that this data may be incorrect.*

We also note that the Out Skerries non-SPA site in the Proposed Development (Offshore) Appendix 13 is named as the “North Benelip” Section in the Caledonia North Appendix 14, and the

"Housay" Section in the Caledonia South Appendix 15. The Housay Section is the only Section with kittiwake counts in the SMP database, however, the most recent count was zero.

Shapinsay 1 and Seahouses 1 have been confused. The Proposed Development (Offshore) Appendix 13 and the Caledonia South Appendix 15 have included Seahouses 1, but not Shapinsay 1, while the Caledonia North Appendix 14 has included Shapinsay 1, but not Seahouses 1. The count and percentage of foraging range as sea is the same between the two sites across the appendices, and the count data matches that for Seahouses 1 in the SMP, while Shapinsay 1 does not have a kittiwake count. Therefore, this appears to be a minor error where Seahouses 1 has been misnamed in the Caledonia North Appendix 14.

*A.4.2 Colony count: use of outdated data*

We highlight that there are several instances where outdated colony counts have been used for count Sections within SPAs. Our general advice is that colony counts older than those used in Seabirds Count should not be used. This is due to the level of population change that has been seen in many seabird species over the past several decades, meaning that colony counts become less accurate as time passes. Additionally, there may be many reasons why a colony count Section has not been counted in the time since, and it is often not possible to determine why this is without further investigation. In some cases, count Sections or records of a particular species at a site may have been dropped by the surveyor due to a lack of seabirds, and this may not have been recorded as a zero count. In other cases, count Sections may have been renamed or redefined, especially when an SPA has since been established at the site. Due to these uncertainties and the likelihood of population size change, we do not accept the use of data older than Seabirds Count in the cases below.

*A.4.2.1 Great black-backed gull at Hoy SPA*

In Table 2-3 of Appendices 10 and 11 for the Proposed Development (Offshore) and Caledonia North respectively, counts from 1996 onwards have been used for great black-backed gull at Hoy SPA. This has led to a breeding adult population estimate of 775. Due to the extreme decline in the great black-backed gull population, 775 would be an unlikely population estimate for this site. Due to the considerable decline in population size, we do not recommend the use of the colony counts prior to 2015.

Therefore, we advise that the colony count for great black-backed gull should only include counts from 2015 onwards, i.e. the Grutfea (2018, 0 AOT), HOY7 (2017, 0 AOT), Sandy Loch (2018, 0 AOT), Stourdale (2024, 6 AON) and Stuifea Lochs (2018, 0 AOT) Sections of the Hoy SPA master site. This results in a population estimate of 12 breeding adult individuals. Additionally, the Seabirds Count record for Hoy SPA includes counts at several sites named as abbreviations of grid references. These sites are included in the SMP under the master name "SKUA/GBBGU – Hoy (Master) [111103]". The most recent counts of these sites from 2015 onwards results in an additional 82 adult individuals.

As the apportioning of impacts to great black-backed gull colonies was based on the non-breeding season and BDMPs, the apportioned mortality estimate will be unaffected by the difference in population estimate.

A breeding population estimate of 94 would result in a 0.0213 percentage point change in adult survival from project-alone impacts for the Proposed Development (Offshore). Therefore, PVA for

the project-alone impacts of the Proposed Development (Offshore) and the in-combination impacts of the Proposed Development (Offshore) and Caledonia North would be required for this species at this site. See section A.7 for further advice where we propose a pragmatic solution to this. Note that the collision mortality for Caledonia North (project-alone) is smaller and would not cross the threshold for PVA requirement.

*A.4.2.2 Kittiwake at West Westray SPA*

In Table 2-3 of Appendices 10, 11 and 12, counts from 1999 onwards have been used for kittiwake at West Westray SPA. Only one count Section count was last performed before 2015, the 1999 count of West Westray 4, which consists of a count of 1583 AON. Without the West Westray 4 count the total count is 2419 AON, resulting in 4838 adult individuals, as opposed to the Applicant's estimate of 8004.

This difference will affect the proportion of the kittiwake mortality estimate that would be apportioned to West Westray SPA. With the updated colony count we would expect a significantly smaller proportion of mortality to be apportioned to this site.

With the current total apportioned collision and displacement mortality of 0.54 to 0.65, the percentage point change in adult survival at West Westray SPA would be 0.011 to 0.013 percentage points. Therefore, no PVA is required for project alone impacts and there is no significant change from the Applicant's project alone assessment.

The Applicant's in-combination assessment for kittiwake at West Westray SPA did trigger the 0.02 percentage point change in adult survival threshold for PVA, and the change in apportioned mortality should be relatively small compared to the overall in-combination impact. Therefore, it is unlikely that this conclusion would be affected.

As population size is an input to the PVA, the overestimate of population size may affect the results of the analysis. We have concluded an adverse effect on site integrity (AEoSI) for kittiwake at West Westray SPA based on the results as presented in this assessment.

*A.4.2.3 Guillemot at Sule Skerry and Sule Stack SPA*

Guillemots were most recently counted at Sule Skerry in 2024. However, the SMP database does not have a count of guillemots at Sule Stack since 1998. We note that Sule Stack has had counts of gannets performed in 2004 and 2013, which does show that surveyors have visited this site since 1998. Without further information, the 1998 count of 1062 guillemot INDs at Sule Stack does not appear to be a reliable estimate of current day numbers.

Therefore, we would only include the 2024 count of 9598 INDs, resulting in an estimate of 12,861 breeding adult individuals, as opposed to the Applicant's estimate of 14,284 (stated in Table 2-3 of Appendices 10, 11 and 12).

This difference will affect the apportioning of mortality estimates to guillemot at Sule Skerry and Sule Stack SPA and may also impact the results of the PVA. We have concluded an AEoSI for guillemot at Sule Skerry and Sule Stack SPA based on the results presented in this assessment.

*A.4.2.4 Herring gull at Troup, Pennan and Lion's Head SPA*

In Table 2-3 of Appendices 10, 11 and 12, counts from 1995 onwards have been used for herring gull at Troup, Pennan and Lion's Head SPA. However, only one Section count was last performed

before 2015, the 1995 count of Pennan Village, which only includes a single AON. The population estimate without the 1995 count of Pennan Village would be 553 AON, and therefore 1106 adult individuals, instead of the Applicant's estimate of 1108. This is a very minor difference and does not significantly change the results.

### A.5 In-combination assessment - RIAA

In our original advice in response to the Section 36 Applications for Caledonia North and Caledonia South, we noted that the in-combination assessment in the RIAA had been undertaken for the Proposed Development (Offshore) but not separately for Caledonia North or Caledonia South. This meant we couldn't draw conclusions on the in-combination assessment impacts for Caledonia North and Caledonia South separately.

For the Additional Information submission, the Applicant has provided in-combination (RIAA) assessments for Caledonia North (excluding Caledonia South) and for Caledonia South (excluding Caledonia North), in order for North and South to be assessed separately.

We have considered all in-combination assessment outcomes based on the third bullet point outlined in Section 6.2.1.3 of Appendix 4, i.e. the in-combination assessment includes all projects, except for consented projects that have made a commitment to compensation (plus Caledonia). The Applicant has removed the sites which reached AEoSI, and are therefore compensated for, and has retained uncompensated, below AEoSI threshold impacts from other projects. This methodology was discussed in a meeting on August 7th, 2025, and confirmed by email.

However, although Berwick Bank Offshore Wind Farm has since been consented, the compensation plan submitted by Berwick Bank has been found to be insufficient. Although we are content with the approach to present in-combination impacts for all projects excluding those that have made a commitment to compensation, we do not believe there to be sufficient evidence that Berwick Bank reaches the criteria necessary. Regardless, in the interest of fairness, we have considered the scenario with compensated projects excluded as we would expect the compensation package presented by Berwick Bank to be updated prior to construction.

Although the Applicant approach provides useful context, and we have considered the outputs, our advice is ultimately based on the Guidance approach.

We have considered the Applicant's literature review in Appendix 21 regarding a review of relevant evidence for distributional responses. The information presented shows there is a lack of consensus of the data on displacement, attraction and collision. Where there is a lack of evidence is precisely where we need to be more precautionary. The Precautionary Principle is a response to the lack of scientific evidence. The NatureScot Guidance Notes are currently under review and will take recent studies into account. However, until the updated Guidance Notes are published, our current guidance stands.

### A.6 Vessel disturbance and displacement – Moray Firth SPA

In our response to the original Applications for Caledonia North and Caledonia South, we requested an updated assessment of disturbance and displacement from vessels within the Moray Firth SPA. We specifically requested:

- More information on the methodology and worst-case scenario used for the assessment of vessel disturbance to the qualifying species of the Moray Firth SPA.

- That the assessment be completed for each of the SPA qualifying species.
- Information regarding the potential impacts of disturbance on the ability of the qualifying species to access prey-supporting habitat.

The Applicant has provided this requested Additional Information in Appendices 19, 20 and 31 for the operation and maintenance phase and the construction phase. The updated assessment is thorough and contains the appropriate level of detail.

As stated in Section 2.1 of Appendix 19, Buckie and Fraserburgh have been identified as potential bases for the operation and maintenance phase. Section 2.1 of Appendix 20 lists the locations under consideration for construction ports as Aberdeen city, Peterhead, Fraserburgh, Buckie, Cromarty, Nigg, Wick, and Ardersier. If the project uses the ports of Buckie, Nigg, Ardersier or Cromarty, vessels will transit through the Moray Firth SPA when travelling between the port and the Proposed Development (Offshore).

Section 1 of Appendix 20 details that, during the construction phase for the array and the export cable for the Proposed Development (Offshore), there will be up to 3,992 trips of construction vessels through the Moray Firth over up to 8 years (assuming sequential construction of Caledonia North and Caledonia South, in either order). This is the maximum scenario considered in the assessment.

We note that the increase in vessel traffic due to construction would represent a substantial increase in traffic relative to the baseline traffic levels through the Moray Firth SPA. Moray West Offshore Wind Farm vessel traffic will be greatly reduced by the time construction for the Proposed Development (Offshore) commences, although will not be zero as operation and maintenance vessel trips will still occur.

For the operation and maintenance phase, Section 1 of Appendix 19 states that a total of 938 round vessel trips per year are anticipated through the Moray Firth between the O&M base and the Proposed Development (Offshore). This equates to an average of 2.6 round trips, or 5.1 one-way trips, per day. This is the maximum scenario considered in the assessment.

For decommissioning, vessel activity is assumed to be similar to the construction phase.

*A.6.1 Divers*

We note that the predicted vessel transit area from Buckie to the Array Area passes through a hotspot for great northern diver (Appendix 19, Figures 4-5 and 4-6). It would be of interest to know how to what extent the divers have been impacted by vessel traffic to other Moray Firth offshore wind farms (Appendix 19, Figure 3-1). Vessel traffic does not appear to have been assessed for the Beatrice, Moray East and Moray West projects so we do not know how divers have been impacted in the past.

The diver hotspots presented in the baseline modelled distribution do not appear to overlap with hotspots recorded in 2001-2007 data (Lewis et al., 2008[3]). We therefore cannot rule out that the divers have been displaced to their current location by other vessel traffic.

[3] Lewis, M., Wilson, L.J., Söhle, I., Dean, B.J., Webb, A. and Reid, J.B. (2008). Wintering sea ducks, divers and grebes in UK inshore areas: Aerial surveys and shore-based counts 2006/07. JNCC Report, No. 414

In order to ensure the Proposed Development (Offshore) does not cause adverse effects to the great northern or red-throated diver populations, we recommend pre-construction surveys to gather up-to-date data on diver distribution in the area. In-built mitigation, such as vessels scanning for aggregations to avoid them is expected within the Vessel Management Plan. We would also recommend these measures if Ardersier is used as a port for construction.

**With these measures in place, we conclude that disturbance and displacement from vessels for the Proposed Development (Offshore), both alone and in-combination with other plans and projects, will have no AEoSI for the great northern diver and red-throated diver qualifying species of the Moray Firth SPA.**

*A.6.2 Other qualifying species*

For all other qualifying species, we consider that disturbance from vessels is not of concern during either the construction, operation and maintenance and decommissioning phases of the Proposed Development (Offshore). We therefore conclude that disturbance and displacement from vessels for the Proposed Development (Offshore), both alone and in-combination with other plans and projects, will have no AEoSI for the following qualifying species of the Moray Firth SPA.

- Common scoter
- Common eider
- Common goldeneye
- Long-tailed duck
- Red-breasted merganser
- Greater scaup
- Slavonian grebe
- Velvet scoter
- European shag

## A.7 Great black-backed gull PVAs

In our response to the original Applications for Caledonia North and Caledonia South, we requested further PVA assessment regarding collision risk for great black-backed gull at Copinsay SPA and Hoy SPA, for both project alone and in-combination. The Applicant has provided this in the Additional Information reports for the Proposed Development (Offshore) (Appendix 4), Caledonia North (Appendix 5) and Caledonia South (Appendix 6). Further detail is provided in PVA Technical reports for the Proposed Development (Offshore) (Appendix 16), Caledonia North (Appendix 17) and Caledonia South (Appendix 18).

Additional PVAs were carried out for great black-backed gull at Copinsay SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South, and at Hoy SPA for the Proposed Development (Offshore) and Caledonia North. Although project impacts are small (<1 bird per annum), the populations at these SPAs are small, which results in significant impacts cumulatively and in-combination with other projects.

We are content with the conclusion of no AEoSI for the project-alone impact of collision on great black-backed gull at Copinsay SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South, and for great black-backed gull at Hoy SPA for Caledonia North. We are also content with the conclusion of no AEoSI for the impact of collision on great black-backed gull at Copinsay SPA for Caledonia South in-combination with other projects. However, considering the

very low CPS and CGR presented in Table 3-19 of Appendix 16 and Table 4-16 of Appendix 17, and considering the condition of the feature, we conclude an **AEoSI** for the impact of collision on great black-backed gull at Copinsay SPA for The Proposed Development (Offshore) and Caledonia North in-combination with other projects.

In Section 3.2.4.8 of Appendices 5 and 6, the Applicant has concluded an overall significance of Minor for the impact of collision on great black-backed gull cumulatively with other projects for Caledonia North and Caledonia South, which is Not Significant in EIA terms. However, we conclude an overall significance of Major for Caledonia North and Caledonia South, which is **Significant in EIA terms**.

As we explain in Section A.4.2.1 above, the great black-backed gull population size of 775 for Hoy SPA (Table 5-6, Appendix 4) has been calculated using outdated count data from the 1990s. Great black-backed gull numbers have decreased by 93% at this site since Seabirds 2000 (Burnell et al., 2023) so this is likely to be a significant overcount. The most up to date estimate (taken from count data from 2015 to 2021 from Seabirds Count and updated using the more recent counts from the SMP database) would be much smaller, at 94 breeding adults, and therefore we do not have confidence in the PVA outcomes.

**We consider if PVAs were to be re-run for Hoy SPA for project-alone impacts of the Proposed Development (Offshore) and in-combination impacts of the Proposed Development (Offshore) and Caledonia North, we would be unable to conclude no AEoSI. However, we also consider the mortality impact to be likely less than one bird. We therefore advise that mitigation required through our conclusions of significance in EIA terms for great black-backed gull should take account to this predicted impact at Hoy SPA and the overall package should be considered a mitigation/compensation package.**

In Section 6.2 of Appendix 4 and 2.1 of Appendix 16, the Applicant appears to have misunderstood our advice regarding providing PVAs only when updated impacts are greater than 0.5 of a bird. That advice was purely provided to give a pragmatic solution considering the large number of additional PVAs required from the Applicant for the Additional Information submission. It is not NatureScot guidance to only assess impacts where they are greater than 0.5 birds per annum. Previous guidance required a PVA where there was an impact of 0.2 birds per annum. However, our advice has since been updated, such that we no longer accept the use of the 0.2 birds per annum threshold. We currently request PVAs where there is a 0.02 percentage point change in adult survival rate only.

### A.8 Distributional responses during construction and decommissioning - EIA

In our response to the original Applications for Caledonia North and Caledonia South, we highlighted that there was no cumulative assessment of distributional responses during construction or decommissioning with the EIA report. We advised this assessment should be undertaken.

In Section 3.1 of Appendices 4, 5 and 6, the Applicant has provided a qualitative assessment of distributional responses during construction and decommissioning for the Proposed Development (Offshore), Caledonia North and Caledonia South, alone and cumulatively.

We are content with the information provided by the Applicant for this qualitative assessment. We agree that the potential impact of distributional responses during construction and

decommissioning is Negligible and therefore Not Significant in EIA terms for the Proposed Development (Offshore), Caledonia North and Caledonia South, both alone and cumulatively.

### A.9 Great skua (PDO, North & South)

In our response to the original Applications for Caledonia North and Caledonia South, we requested clarification of why the Applicant used 0 for the stochastic Nocturnal Activity Factor (NAF) for great skua, with regards to stochastic Collision Risk Modelling (CRM). We had previously advised that the stochastic NAF for great skua should be 0.125.

As discussed during a meeting with the Applicant on 4th June 2025, we note that at the early stages of pre-application consultation, the Guidance Notes were still under development which led to conflicting advice being given. We are content with conclusions made in the assessment regarding CRM for great skua. Therefore, **no further action is required**.

### A.10 NatureScot appraisal – EIA

The Additional Information provides re-assessment of the potential cumulative impacts collision and/or displacement on kittiwake, guillemot, razorbill, puffin, gannet, great black-backed gull and herring gull for Caledonia North (excluding Caledonia South) and Caledonia South (excluding Caledonia North) with other plans and projects. The Applicant's assessment and conclusions are presented in Section 3.2 of Appendix 5 and Appendix 6, for Caledonia North and Caledonia South respectively. Our appraisal of the updated cumulative impact assessment is provided below.

#### *A.10.1 Cumulative impact assessment*

The updated cumulative and in-combination totals have resulted in a number of cases in which our conclusions now differ to those based on the original EIA. Although it was agreed prior to submission of the Additional Information that only cumulative impacts were needed for Caledonia North (excluding Caledonia South) and for Caledonia South (excluding Caledonia North), as the Proposed Development (Offshore) assessment was covered in the original application, the updated totals have resulted in conclusions which differ to those for the Proposed Development (Offshore) in a non-logical manner. This is presented in Table 3 below.

*Table 3. EIA cumulative conclusions based on the original totals (Proposed Development (Offshore) (PDO)) and updated totals (Caledonia North & Caledonia South).*

| Develop-ment | Species | Median CGR (low to high mortality) | Median CPS (low to high mortality) | Additional Inform-ation conclusion (Applicant) | Additional Inform-ation conclusion (Nature Scot) | Original Appli-cation conclusion (Applicant) | Original Appli-cation conclusion (Nature Scot) |
|---|---|---|---|---|---|---|---|
| South | Guillemot | 0.993-0.986 | 0.771-0.598 | **Minor to moderate** | **Major** | NA | NA |
| North | Guillemot | 0.993-0.986 | 0.775-0.604 | **Minor to moderate** | **Major** | NA | NA |
| Original PDO | Guillemot | 0.998-0.997 | 0.941-0.884 | NA | NA | Minor | **Moderate** |
| South | Razorbill | 0.996-0.990 | 0.859-0.699 | Minor | **Major** | NA | NA |
| North | Razorbill | 0.996- | 0.858- | Minor | **Major** | NA | NA |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | 0.990 | 0.698 | | | | |
| Original PDO | Razorbill | 0.998-0.993 | 0.918-0.791 | NA | NA | Minor | **Moderate** |
| South | Puffin | 0.998-0.997 | 0.947-0.898 | Minor | **Moderate** | NA | NA |
| North | Puffin | 0.998-0.997 | 0.947-0.898 | Minor | **Moderate** | NA | NA |
| Original PDO | Puffin | 0.998-0.997 | 0.947-0.896 | NA | NA | Minor | **Moderate** |
| South | Kittiwake | 0.994-0.993 | 0.797-0.772 | **Minor to moderate** | **Major** | NA | NA |
| North | Kittiwake | 0.994-0.993 | 0.798-0.773 | **Minor to moderate** | **Major** | NA | NA |
| Original PDO | Kittiwake | 0.996-0.995 | 0.864-0.839 | NA | NA | Minor | **Moderate** |
| South | Gannet | 0.997-0.996 | 0.901-0.855 | Minor | **Moderate** | NA | NA |
| North | Gannet | 0.997-0.996 | 0.901-0.856 | Minor | **Moderate** | NA | NA |
| Original PDO | Gannet | 0.998-0.997 | 0.941-0.904 | NA | NA | Minor | **Moderate** |
| South | Great black-backed gull | 0.993 | 0.783 | Minor | **Major** | NA | NA |
| North | Great black-backed gull | 0.993 | 0.783 | Minor | **Major** | NA | NA |
| Original PDO | Great black-backed gull | 0.985 | 0.582 | NA | NA | Minor | **Major** |
| South | Herring gull | 0.999 | 0.953 | Minor | Minor | Minor | Minor |
| North | Herring gull | 0.999 | 0.953 | Minor | Minor | Minor | Minor |
| Original PDO | Herring gull | 0.999 | 0.960 | NA | NA | Minor | Minor |

*Note: Bold denotes significant effects in EIA terms.*

We conclude:

- Major significance of impact to great black-backed gull due to collision cumulatively.
- Major significance of impact to guillemot and razorbill due to displacement cumulatively.
- Major significance of impact to kittiwake due to combined impacts of displacement and collision cumulatively.
- Moderate significance of impact to puffin due to displacement cumulatively.
- Moderate significance of impact to gannet due to combined impacts of displacement and collision cumulatively.

This is **Significant in EIA terms**.

All cumulative impacts which we conclude to be either Major or Moderate were previously concluded to be Significant in EIA terms by NatureScot for the original EIA. There has been no change in significance for any species. In the interest of streamlining, we refer the reader to our response to the original Applications for our full reasoning of our conclusions. This is with the caveat that median CPS and CGR will have changed.

In line with established EIA practice, we expect mitigation to be identified where a Significant adverse effect is identified. Without prejudging the outcome of the Appropriate Assessment, we anticipate that, should consent be granted, compensatory measures would need to be secured for kittiwake, guillemot, razorbill, puffin, gannet and great-black-backed gull. We consider that agreed compensation measures would be sufficient to address impacts predicted under EIA for these species.

### A.11 NatureScot appraisal – RIAA

#### *A.11.1 Project-alone assessment of AEoSI*

For species and sites re-assessed within the Additional Information, the Applicant concluded no AEoSI from project-alone impacts for the Proposed Development (Offshore), Caledonia North and Caledonia South. We agree that there is no AEoSI for the majority of sites and species for the project-alone impacts. **The exception to this is great black-backed gull at Hoy SPA for the Proposed Development (Offshore), for which we are currently unable to come to a conclusion**.

In our assessment, we have evaluated the PVA run for Hoy SPA and have noted that the population used is a population count from 1995. The recent counts from Hoy since 2015 indicate a population of 94 birds. This is in comparison to the 1995 count, which indicated a population count of 775.

**We consider if a PVA was to be re-run for Hoy SPA for the Proposed Development (Offshore), we would be unable to conclude no AEoSI. However, we also consider the mortality impact to be less than one bird. We therefore advise that mitigation required through our conclusions of significance in EIA terms for great black-backed gull should take account of this predicted impact at Hoy SPA and the overall package should be considered a mitigation/compensation package.**

See Sections A.4.2.1 and A.7 for further details.

#### *A.11.2 In-combination assessment of AEoSI*

As highlighted above in Section A.2.2, we are aware of an issue with the in-combination assessment, stemming from three developments (Ossian, Muir Mhòr and Caledonia) submitting Additional Information at a similar time to each other.

**We note that a further collaborative submission (led by Muir Mhòr, supported by Caledonia and Ossian) which has provided an up to date in combination assessment has been submitted to Marine Directorate for consultation. Depending on our review of this work, our final advice on in-combination impacts may change**.

**Therefore, our advice below is based on the current assessment presented in the Additional Information submission and not the most recent submission.**

We provide advice on the PVA results after 35 years and our determination of AEoSI for seabird SPAs, based on the NatureScot approach. A summary of our advice is provided in Section A.2.2 and assessments for individual SPAs and species are detailed below.

In the interest of streamlining, where our conclusion of AEoSI is unchanged to that in our response to the original Applications, we have not laid out our full reasoning and have instead referred to our original response. This is with the caveat that median CPS and CGR will have changed.

*A.11.2.1 In-combination assessment – individual SPA assessments*

*East Caithness Cliffs SPA*

*Table 4. PVA results for East Caithness Cliffs SPA after 35 years*

| Development | Species | Max mortality from project alone | Median CGR (low to high mortality) | Median CPS (low to high mortality) | NatureScot conclusion of AEoSI in-combination |
|---|---|---|---|---|---|
| PDO | Guillemot | 209.2 | 0.995-0.991 | 0.843-0.724 | **AEoSI** |
| South | Guillemot | 142.37 | 0.995-0.991 | 0.850-0.734 | **AEoSI** |
| North | Guillemot | 89.9 | 0.996-0.992 | 0.853-0.739 | **AEoSI** |
| PDO | Razorbill | 21.75 | 0.996-0.992 | 0.869-0.750 | **AEoSI** |
| South | Razorbill | 12.25 | 0.996-0.992 | 0.875-0.757 | **AEoSI** |
| North | Razorbill | 11.56 | 0.996-0.992 | 0.874-0.758 | **AEoSI** |
| PDO | Kittiwake | 17.98 | 0.996-0.993 | 0.857-0.775 | **AEoSI** |
| South | Kittiwake | 11.42 | 0.996-0.993 | 0.860-0.778 | **AEoSI** |
| North | Kittiwake | 7.4 | 0.996-0.993 | 0.862-0.779 | **AEoSI** |

Our conclusion for razorbill and guillemot based on the in-combination impacts of distributional responses at East Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South remains **AEoSI**. Please see our response to the original Applications for our reasoning behind this conclusion.

Our conclusion for kittiwake based on in-combination, combined impacts of collision and distributional responses at East Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South remains **AEoSI**. Please see our response to the original Applications for our reasoning behind this conclusion.

*North Caithness Cliffs SPA*

*Table 5. PVA results for North Caithness Cliffs SPA after 35 years.*

| Development | Species | Max mortality from project alone | Median CGR (low to high mortality) | Median CPS (low to high mortality) | NatureScot conclusion of AEoSI in-combination |
|---|---|---|---|---|---|
| PDO | Guillemot | 32.68 | 0.999-0.998 | 0.945-0.900 | No AEoSI |

| | | | | | |
|---|---|---|---|---|---|
| South | Guillemot | 22.58 | 0.999-0.998 | 0.965-0.935 | No AEoSI |
| North | Guillemot | 14.01 | 0.999-0.998 | 0.950-0.909 | No AEoSI |
| PDO | Razorbill | 2.46 | 0.999-0.998 | 0.975-0.938 | No AEoSI |
| South | Razorbill | 1.34 | 0.999-0.998 | 0.980-0.942 | No AEoSI |
| North | Razorbill | 1.42 | 0.999-0.998 | 0.977-0.944 | No AEoSI |
| PDO | Puffin | 1.45 | 0.995-0.991 | 0.822-0.723 | **AEoSI** |
| South | Puffin | 0.75 | 0.995-0.991 | 0.825-0.726 | **AEoSI** |
| North | Puffin | 1.06 | 0.995-0.991 | 0.824-0.723 | **AEoSI** |
| PDO | Kittiwake | 2.46 | 0.998-0.997 | 0.936-0.897 | **Unable to conclude no AEoSI** |
| South | Kittiwake | 1.56 | 0.998-0.997 | 0.938-0.900 | **Unable to conclude no AEoSI** |
| North | Kittiwake | 1.09 | 0.998-0.997 | 0.938-0.901 | **Unable to conclude no AEoSI** |

Our conclusion for puffin based on the in-combination impacts of distributional responses at North Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South remains **AEoSI**. Please see our response to the original Applications for our reasoning behind this conclusion.

We are **unable to conclude no AEoSI** for kittiwake based on the in-combination, combined impacts of collision and distributional responses at North Caithness Cliffs SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South. This conclusion was reached on the basis of:

- Moderately low median CPS values, representing a reduction in population size of 6.2 to 10.3% relative to the baseline unimpacted scenario after 35 years of impact.
- Relatively low median CGR values, representing a reduction in population growth rate of 0.2 to 0.3% relative to the baseline unimpacted scenario after 35 years of impact.
- A 45% decrease in the kittiwake population at the SPA between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).
- A 57.2% decrease in the national population of kittiwake in Scotland between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).

*Troup, Pennan and Lion's Head SPA*

*Table 6. PVA results for Troup, Pennan and Lion's Head SPA after 35 years.*

| Development | Species | Max mortality from project alone | Median CGR (low to high mortality) | Median CPS (low to high mortality) | NatureScot conclusion of AEoSI in-combination |
|---|---|---|---|---|---|
| PDO | Guillemot | 34.05 | 0.999-0.998 | 0.961-0.916 | No AEoSI |
| South | Guillemot | 34.88 | 0.999-0.998 | 0.960-0.915 | No AEoSI |
| North | Guillemot | 9.91 | 0.999-0.998 | 0.960-0.915 | No AEoSI |
| PDO | Razorbill | 2.99 | 0.999-0.997 | 0.965-0.912 | No AEoSI |
| South | Razorbill | 2.71 | 0.999-0.997 | 0.965-0.909 | No AEoSI |
| North | Razorbill | 1.11 | 0.999-0.998 | 0.967-0.916 | No AEoSI |
| PDO | Kittiwake | 7.85 | 0.996-0.995 | 0.864-0.822 | **AEoSI** |
| South | Kittiwake | 8 | 0.996-0.995 | 0.862-0.820 | **AEoSI** |
| North | Kittiwake | 2.24 | 0.996-0.995 | 0.869-0.828 | **AEoSI** |

Our conclusion for kittiwake based on in-combination, combined impacts of collision and distributional responses at Troup, Pennan & Lion's Head SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South remains **AEoSI**. Please see our response to the original Applications for our reasoning behind this conclusion.

*Copinsay SPA*

*Table 7. PVA results for Copinsay SPA after 35 years*

| Development | Species | Max mortality from project alone | Median CGR | Median CPS | NatureScot conclusion of AEoSI in-combination |
|---|---|---|---|---|---|
| PDO | Great black-backed gull | 0.07 | 0.947 | 0.135 | **AEoSI** |
| South | Great black-backed gull | 0.04 | 1.000 | 0.986 | No AEoSI |
| North | Great black-backed gull | 0.05 | 0.947 | 0.141 | **AEoSI** |
| PDO | Guillemot | 0.5 | 1.000 | 0.984 | No AEoSI |
| South | Guillemot | 0.37 | 1.000 | 0.987 | No AEoSI |

We conclude **AEoSI** for great black-backed gull based on the in-combination impacts of collision at Copinsay SPA for the Proposed Development (Offshore) and Caledonia North. This conclusion was reached on the basis of:

- Very low median CPS values, representing a 85.9 to 86.5% reduction in population size relative to the baseline unimpacted scenario after 35 years of impact.
- Very low median CGR values, representing a reduction in population growth rate of 5.3% relative to the baseline unimpacted scenario after 35 years of impact.

- A 93% decrease in the great black-backed gull population at the SPA between Seabirds 2000 and Seabirds Count censuses (Burnell et al., 2023). There has also been a further 45.5% decrease in the number of great black-backed gull breeding adults at this SPA between Seabirds Count and the most recent count data from 2023 and 2025 available on the SMP database.
- A 63% national decrease in the great black-backed gull population between Seabirds 2000 and Seabirds Count censuses (Burnell et al., 2023).

*Hoy SPA*

*Table 8. PVA results for Hoy SPA after 35 years.*

| Development | Species | Max mortality from project alone | Median CGR (low to high mortality) | Median CPS (low to high mortality) | NatureScot conclusion of AEoSI in-combination |
|---|---|---|---|---|---|
| PDO | Guillemot | 5.73 | 1.000-0.999 | 0.990-0.981 | No AEoSI |
| South | Guillemot | 4.28 | 1.000-1.000 | 0.988-0.978 | No AEoSI |
| North | Guillemot | 2.11 | 1.000-1.000 | 0.991-0.984 | No AEoSI |
| PDO | Puffin | 0.37 | 0.998-0.995 | 0.938-0.847 | **Unable to conclude no AEoSI** |
| South | Puffin | 0.2 | 0.998-0.995 | 0.940-0.846 | **Unable to conclude no AEoSI** |
| North | Puffin | 0.25 | 0.998-0.996 | 0.943-0.855 | **Unable to conclude no AEoSI** |
| PDO | Great black-backed gull | 0.02 | - | - | **See Sections A.4.2.1 and A.7** |
| North | Great black-backed gull | 0.01 | - | - | **See Sections A.4.2.1 and A.7** |

We **cannot conclude no AEoSI** for puffin based on the in-combination impacts of distributional responses at Hoy SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South. This conclusion was reached on the basis of:

- Low median CPS values, representing a 5.7 to 15.4% reduction of population size relative to the baseline unimpacted scenario after 35 years of impact.
- Relatively low CGR values, representing a 2 to 5% reduction of population growth rate relative to the baseline unimpacted scenario after 35 years of impact.

- The fact that this colony was not counted in Seabirds 2000 and has not been counted since the 2016 and 2017 censuses included in Seabirds Count, therefore meaning that population trends at this colony cannot be assessed.
- The 21% (complete dataset) to 32% (comparable dataset) national decline in the puffin population between Seabirds 2000 and Seabirds Count censuses (Burnell et al., 2023).

As discussed in Sections A.4.2.1 and A.7 above, we do not have confidence in the population sizes used to assess great black-backed gulls at this site. As such, we cannot give a conclusion at this point for the in-combination impacts of collision at Hoy SPA for the Proposed Development (Offshore) and Caledonia North.

For additional context:

- There has been a 93% decrease in the great black-backed gull population at Hoy SPA between Seabirds 2000 and Seabirds Count (Burnell et al., 2023).
- There has been a 63% national decrease in the great black-backed gull population between Seabirds 2000 and Seabirds Count censuses (Burnell et al., 2023)

**We consider if PVAs were to be re-run for Hoy SPA for the Proposed Development (Offshore) and Caledonia North, we would be unable to conclude no AEoSI. However, we also consider the mortality impact to be less than one bird. We therefore advise that mitigation required through our conclusions of significance in EIA terms for great black-backed gull should take account to this predicted impact at Hoy SPA and the overall package should be considered a mitigation/ compensation package.**

*West Westray SPA*

*Table 9. PVA results for West Westray SPA after 35 years.*

| Development | Species | Max mortality from project alone | Median CGR (low to high mortality) | Median CPS (low to high mortality) | NatureScot conclusion of AEoSI in-combination |
|---|---|---|---|---|---|
| PDO | Guillemot | 9.87 | 1.000 | 0.989 | No AEoSI |
| South | Guillemot | 7.96 | 1.000 | 0.990 | No AEoSI |
| North | Guillemot | 2.95 | 1.000 | 0.990 | No AEoSI |
| PDO | Razorbill | 0.2 | 0.999-0.998 | 0.967-0.925 | No AEoSI |
| South | Razorbill | 0.11 | 0.999-0.998 | 0.968-0.928 | No AEoSI |
| PDO | Kittiwake | 0.65 | 0.997-0.994 | 0.882-0.798 | **AEoSI** |
| South | Kittiwake | 0.44 | 0.997-0.994 | 0.883-0.800 | **AEoSI** |
| North | Kittiwake | 0.31 | 0.997-0.994 | 0.884-0.800 | **AEoSI** |

We conclude **AEoSI** for kittiwake based on the in-combination, combined impacts of collision and distributional responses at West Westray SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South. This conclusion was reached on the basis of:

- Low median CPS values, representing a reduction in population size of 11.6 to 21.1% relative to the baseline unimpacted scenario after 35 years of impact.
- Relatively low median CGR values, representing a reduction in population growth rate of 0.3 to 0.6% relative to the baseline unimpacted scenario after 35 years of impact.

- A 92% decrease in the kittiwake population at the SPA between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).
- A 57.2% decrease in the national population of kittiwake in Scotland between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).

*Sule Skerry and Sule Stack SPA*

*Table 10. PVA results for Sule Skerry and Sule Stack SPA after 35 years.*

| Development | Species | Max mortality from project alone | Median CGR (low to high mortality) | Median CPS (low to high mortality) | NatureScot conclusion of AEoSI in-combination |
|---|---|---|---|---|---|
| PDO | Guillemot | 3.01 | 0.990 | 0.586 | **AEoSI** |
| South | Guillemot | 2.47 | 0.990 | 0.686 | **AEoSI** |
| North | Guillemot | 0.87 | 0.990 | 0.690 | **AEoSI** |
| PDO | Puffin | 6.74 | 1.000 | 0.990 | No AEoSI |
| South | Puffin | 3.37 | 1.000-1.000 | 0.995-0.991 | No AEoSI |
| North | Puffin | 4.54 | 1.000 | 0.991 | No AEoSI |
| PDO | Gannet | 0.93 | 1.000 | 0.983 | No AEoSI |
| South | Gannet | 0.61 | 1.000 | 0.984 | No AEoSI |
| North | Gannet | 0.23 | 1.000 | 0.986 | No AEoSI |

As only the high mortality scenario has been presented, we have based our conclusion on this only. We conclude **AEoSI** for guillemot based on the in-combination impacts of distributional responses at Sule Skerry and Sule Stack SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South. This conclusion was reached on the basis of:

- Very low median CPS values, representing a reduction in population size of 31.0 to 41.4% relative to the baseline unimpacted scenario after 35 years of impact.
- Relatively low median CGR values, representing a reduction in population growth rate of 1.0% relative to the baseline unimpacted scenario after 35 years of impact.
- A 21% decrease in the guillemot population at the SPA between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).
- A 31% decrease in the national population of guillemot in Scotland between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).

*Forth Islands SPA*

*Table 11. PVA results for Forth Islands SPA after 35 years.*

| Development | Species | Max mortality from project alone | Median CGR (low to high mortality) | Median CPS (low to high mortality) | NatureScot conclusion of AEoSI in-combination |
|---|---|---|---|---|---|
| PDO | Puffin | 19.03 | 0.998-0.996 | 0.929-0.865 | **Unable to conclude no AEoSI** |
| South | Puffin | 11.98 | 0.998-0.996 | 0.930-0.866 | **Unable to conclude no AEoSI** |

| | | | | | |
|---|---|---|---|---|---|
| North | Puffin | 10.74 | 0.998-0.996 | 0.930-0.866 | **Unable to conclude no AEoSI** |
| PDO | Gannet | 6.19 | 0.996-0.995 | 0.876-0.825 | **AEoSI** |
| South | Gannet | 5.77 | 0.996-0.995 | 0.877-0.826 | **AEoSI** |
| North | Gannet | 2.94 | 0.996-0.995 | 0.877-0.827 | **AEoSI** |
| PDO | Kittiwake | 0.42 | 0.998-0.996 | 0.917-0.873 | **Unable to conclude no AEoSI** |
| South | Kittiwake | 0.34 | 0.998-0.996 | 0.918-0.872 | **Unable to conclude no AEoSI** |

We **cannot conclude no AEoSI** for puffin based on the in-combination impacts of distributional responses at Forth Islands SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South. This conclusion was reached on the basis of:

- Low median CPS values, representing a 7.0 to 13.5% reduction of population size relative to the baseline unimpacted scenario after 35 years of impact.
- Relatively low CGR values, representing a 0.2 to 0.4% reduction of population growth rate relative to the baseline unimpacted scenario after 35 years of impact.
- A 39% decrease in the puffin population at the SPA between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).
- The 21% (complete dataset) to 32% (comparable dataset) national decline in the puffin population between Seabirds 2000 and Seabirds Count censuses (Burnell et al., 2023).

Our conclusion for gannet based on the in-combination impacts of distributional responses and collision at Forth Islands SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South remains **AEoSI**. Please see our response to the original Applications for our reasoning behind this conclusion.

We **cannot conclude no AEoSI** for kittiwake based on the in-combination, combined impacts of collision and distributional responses at Forth Islands SPA for the Proposed Development (Offshore) and Caledonia South. This conclusion was reached on the basis of:

- Relatively low median CPS values, representing a reduction in population size of 8.2 to 12.8% relative to the baseline unimpacted scenario after 35 years of impact.
- Relatively low median CGR values, representing a reduction in population growth rate of 0.2 to 0.4% relative to the baseline unimpacted scenario after 35 years of impact.
- A 22% decrease in the kittiwake population at the SPA between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).
- A 57.2% decrease in the national population of kittiwake in Scotland between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).

*Buchan Ness to Collieston Coast SPA*

*Table 12. PVA results for Buchan Ness to Collieston Coast SPA after 35 years.*

| Development | Species | Max mortality from project alone | Median CGR (low to high mortality) | Median CPS (low to high mortality) | NatureScot conclusion of AEoSI in-combination |
|---|---|---|---|---|---|
| PDO | Guillemot | 13.31 | 0.999-0.997 | 0.951-0.879 | No AEoSI |
| South | Guillemot | 12.07 | 0.999-0.998 | 0.952-0.881 | No AEoSI |
| North | Guillemot | 3.79 | 0.999-0.998 | 0.957-0.891 | No AEoSI |
| PDO | Kittiwake | 2.8 | 0.998-0.997 | 0.918-0.887 | **Unable to conclude no AEoSI** |
| South | Kittiwake | 2.49 | 0.998-0.997 | 0.918-0.887 | **Unable to conclude no AEoSI** |
| North | Kittiwake | 0.92 | 0.998-0.997 | 0.920-0.890 | **Unable to conclude no AEoSI** |

We **cannot conclude no AEoSI** for kittiwake based on the in-combination, combined impacts of collision and distributional responses at Buchan Ness to Collieston Coast SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South. This conclusion was reached on the basis of:

- Relatively low median CPS values, representing a reduction in population size of 8.0 to 11.3% relative to the baseline unimpacted scenario after 35 years of impact.
- Relatively low median CGR values, representing a reduction in population growth rate of 0.2 to 0.3% relative to the baseline unimpacted scenario after 35 years of impact.
- A 19% decrease in the kittiwake population at the SPA between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).
- A 57.2% decrease in the national population of kittiwake in Scotland between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).

*Fowlsheugh SPA*

*Table 13. PVA results for Fowlsheugh SPA after 35 years.*

| Development | Species | Max mortality from project alone | Median CGR (low to high mortality) | Median CPS (low to high mortality) | NatureScot conclusion of AEoSI in-combination |
|---|---|---|---|---|---|
| PDO | Kittiwake | 2.06 | 0.997-0.996 | 0.906-0.870 | **Unable to conclude no AEoSI** |
| South | Kittiwake | 1.73 | 0.997-0.996 | 0.907-0.870 | **Unable to conclude no AEoSI** |
| North | Kittiwake | 0.71 | 0.997-0.996 | 0.908-0.871 | **Unable to conclude no AEoSI** |

We **cannot conclude no AEoSI** for kittiwake based on the in-combination, combined impacts of collision and distributional responses at Fowlsheugh SPA for the Proposed Development (Offshore), Caledonia North and Caledonia South. This conclusion was reached on the basis of:

- Relatively low median CPS values, representing a reduction in population size of 9.2 to 13.0% relative to the baseline unimpacted scenario after 35 years of impact.
- Relatively low median CGR values, representing a reduction in population growth rate of 0.3 to 0.4% relative to the baseline unimpacted scenario after 35 years of impact.
- A 51% decrease in the kittiwake population at the SPA between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).
- A 57.2% decrease in the national population of kittiwake in Scotland between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).

*St Abb's Head to Fast Castle SPA*

*Table 14. PVA results for St Abb's Head to Fast Castle SPA after 35 years.*

| Development | Species | Max mortality from project alone | Median CGR (low to high mortality) | Median CPS (low to high mortality) | NatureScot conclusion of AEoSI in-combination |
|---|---|---|---|---|---|
| PDO | Kittiwake | 0.31 | 0.998-0.997 | 0.923-0.884 | Unable to conclude no AEoSI |
| South | Kittiwake | 0.1 | 0.998-0.997 | 0.924-0.884 | Unable to conclude no AEoSI |

We **cannot conclude no AEoSI** for kittiwake based on the in-combination, combined impacts of collision and distributional responses at St Abb's Head to Fast Castle SPA for the Proposed Development (Offshore) and Caledonia South. This conclusion was reached on the basis of:

- Relatively low median CPS values, representing a reduction in population size of 7.6 to 11.6% relative to the baseline unimpacted scenario after 35 years of impact.
- Relatively low median CGR values, representing a reduction in population growth rate of 0.2 to 0.3% relative to the baseline unimpacted scenario after 35 years of impact.
- A 68% decrease in the kittiwake population at the SPA between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).
- A 57.2% decrease in the national population of kittiwake in Scotland between Seabird 2000 and Seabirds Count censuses (Burnell et al., 2023).

**NATURESCOT ADVICE ON CALEDONIA NORTH OFFSHORE WIND FARM AND CALEDONIA SOUTH OFFSHORE WIND FARM – ADDITIONAL INFORMATION**

**Appendix B Marine mammals**

The Applicant has provided clarifications and revisions to the marine mammal chapter of the EIA Report in Appendices 2, 22, 23, 24, 25, 26 and 27 of Volume 8. Revisions to the RIAA are provided in Appendix 28 of Volume 8.

We appreciate the effort that has gone into providing this additional information. It has been vital in understanding the levels of precaution associated with using the dose-response function. We confirm that the additional information provided has resolved most of the concerns raised by NatureScot in our original response to the Caledonia North and Caledonia South Applications and subsequent discussions. Any outstanding issues can be addressed post-consent.

The results of the assessment enable prioritisation of specific areas of the marine mammal assessment that require further monitoring and strategic work post-consent. We welcome the Applicant's commitment to post-consent monitoring and we encourage strategic collaboration with other developers to address concerns cumulatively and in-combination particularly.

Our marine mammal advice in this appendix relates solely to impacts arising from the Proposed Development (Offshore) as this represents the worst-case scenario, but it also applies to impacts arising from Caledonia North or Caledonia South, unless otherwise specified.

**B.1 EIA summary**

We welcome the Applicant's re-assessment of potential impacts from piling and vessel disturbance, which considers a refined project envelope and use of the deterrence function.

The EIA for marine mammal re-assessment concludes no significant impacts, both alone and cumulatively.

For the Proposed Development (Offshore) alone, we conclude that disturbance from piling to bottlenose dolphin (Coastal and East Scotland Management Unit (CES MU)), harbour porpoise, minke whale and harbour seal is Not Significant in EIA terms.

For the Proposed Development (Offshore) cumulatively with other plans and projects, we conclude:

- **Significant impacts in EIA terms for disturbance from piling for bottlenose dolphin (CES MU) and minke whale.**
- Disturbance from piling to harbour porpoise is Not Significant in EIA terms.
- Disturbance from piling to harbour seal is Not Significant in EIA terms.
- Vessel disturbance within offshore export cable corridors (OECCs) during construction is Not Significant in EIA terms for bottlenose dolphin (CES MU).

Lastly, **we agree with the Applicant that the risk of hindering the conservation objectives of the Southern Trench NCMPA is uncertain for minke whale disturbance from cumulative vessel activities within OECCs during the construction phase.** We welcome the Applicant's commitment to post-consent monitoring of the NCMPA to address knowledge gaps regarding minke whale behavioural response to disturbance, as previously advised in our response to the original Application for Caledonia North and Caledonia South.

## B.2 RIAA summary

The RIAA re-assessment concludes that disturbance from piling will result in no adverse effect on site integrity for the Dornoch Firth and Morrich More SAC for harbour seal and the Moray Firth SAC for bottlenose dolphin for the Proposed Development (Offshore) both alone and in-combination with other plans and projects. It also concludes that disturbance from vessel activity will result in no adverse effect on site integrity for the Moray Firth SAC for bottlenose dolphin for the Proposed Development (Offshore) both in-combination with other plans and projects.

We conclude:

- No adverse effect on site integrity for the Dornoch Firth and Morrich More SAC in relation to disturbance from piling for harbour seal for the Proposed Development (Offshore) both alone and in-combination with other plans and projects.
- No adverse effect on site integrity for the Moray Firth SAC in relation to disturbance from piling for bottlenose dolphin for the Proposed Development (Offshore) both alone and in-combination with other plans and projects. However, as there is still LSE and a moderate in-combination disturbance from piling based on current project design envelopes, we advise that if post consent plans continue to indicate this impact level, we request a condition which enables strategic monitoring and mitigation to be deployed.
- No adverse effect on site integrity for the Moray Firth SAC in relation to disturbance from vessel activity for bottlenose dolphin for the Proposed Development (Offshore) in-combination with other plans and projects.

Should Scottish Ministers grant consent, we advise:

- The Applicant will need to consider the implications further, through the development of a Piling Strategy and Marine Mammal Mitigation Protocol (MMMP) post-consent, for all species considered, but particularly for bottlenose dolphin, harbour porpoise, white beaked dolphin, minke whale, grey seal and harbour seal.
- Within the Piling Strategy and Marine Mammal Mitigation protocol, further detailed consideration should be given to type of foundations, duration and timing of noisy activities including piling and vessel noise, potential for noise abatement systems (if practical) and UXO removal methods – with an expectation that low order deflagration is the default method of clearance, as per the Joint Position Statement[4] from UK and devolved Governments and Statutory Nature Conservation Bodies.
- The Applicant implements a strategic monitoring proposal to validate the EIA Report, RIAA predictions and Piling protocol to better understand the likelihood of impacts for disturbance from piling and operational noise (if deemed necessary at the Piling protocol stage).
- A detailed monitoring programme (in collaboration with other development activities occurring at similar times in the Southern Trench NCMPA and the minke whale feature).

## B.3 Methodology

Marine mammal clarifications and the piling re-assessment methodology is provided in Appendix 22 of Volume 8.

[4] https://www.gov.uk/government/publications/marine-environment-unexploded-ordnance-clearance-joint-position-statement/marine-environment-unexploded-ordnance-clearance-joint-position-statement

*B.3.1 Application response clarifications*

In our original advice in response to the Section 36 Applications for Caledonia North and Caledonia South, we requested that the Applicant provides a table with densities for each species from SCANS III, SCANS IV and DAS, as well as confirmation of which density estimate was used for each species, rather than the range of densities presented for the SCANS III modelled surfaces.

Table 2-1 of Appendix 22 presents a summary of the ranges of cetacean densities available to input into any quantitative assessment of the proposed development. We are content that the most precautionary, whilst most proportionate estimate, was used for the assessment.

*B.3.2 Re-assessment methodology (project-alone)*

*B.3.2.1 Design envelope changes*

We welcome the presentation of information in Table 3-1 which lays out clearly the number of piling days for the Proposed Development (Offshore), Caledonia North and Caledonia South. We understand the worst-case assessment is based on 339 days of piling for the Proposed Development (Offshore) (101 days bottom-fixed WTG, 234 days floating WTG, 4 days fixed OSP) versus 515 days of piling for the Proposed Development (Offshore) from the original EIA (101 days bottom-fixed WTG, 410 days floating WTG, 4 days bottom-fixed OSP). This reduction in piling days is due the reduction of anchors per tension leg platform. We welcome this project envelope refinement.

*B.3.2.2 Assessment of disturbance*

As explained by the Applicant in Section 3.1.2, it was agreed during post-Application discussion that the Applicant could use the deterrence function (Graham *et al.*, 2019) for their re-assessment of piling disturbance and that they would also provide an assessment using the Effective Deterrence Ranges (EDR) approach. Therefore, the Additional Information submitted by the Applicant includes an assessment of piling disturbance using the dose-response, deterrence function and EDR approaches for comparison. We welcome the effort put into providing these results to allow for comparison and context of the level of precaution involved in applying the dose response curve.

The previous JNCC EDRs are presented in addition to the PrePARED derived EDR, presenting a range of EDRs, rather than solely the new JNCC EDR of 20 km for all sizes of pile. This is a helpful and informative approach.

*B.3.2.3 Density*

In our original advice in response to the Section 36 Applications for Caledonia North and Caledonia South, we requested clarification on what reference population the Applicant used for bottlenose dolphin (CES MU). If a reference population of 245 instead of 226 was used, we requested justification for this.

The Applicant has confirmed in Section 3.1.3 and Table 3-4 that they have followed NatureScot's advice and used a reference population of 226 for bottlenose dolphin (CES MU) for the re-assessment. We are content with this approach.

*B.3.2.4 Summary of changes*

In Table 3-4, we note that the bottlenose dolphin (CES MU) density outside of the 2 km buffer (discussed in paragraph 3.2.3.3) was not applied to the alone assessment, as there would be no overlap with spatial extent of impacts. We do not agree that there would be no overlap with the spatial extent of impacts. The proposed development lies within the GNS MU for bottlenose dolphin, where the SCANS III density could have been used, and the deterrence function would mean impacts right up to the coastline, crossing the CES MU and 2 km buffer of higher density. We do not recommend this approach for any further post-consent work concerning the GNS MU for bottlenose dolphin. However, as the additional information we requested was not concerning GNS MU bottlenose dolphin, we are content that no further assessment is needed.

*B.3.3 Re-assessment methodology (cumulative)*

*B.3.3.1 List of projects included*

In Section 3.2.1.1, the Applicant explains that, in line with advice issued by NatureScot on 04 June 2025, the number of projects scoped into the cumulative assessment did not need to change. For clarity, we advised we would comment on the cumulative assessment with the assumption the applicant has scoped in the relevant projects based on the criteria previously advised.

*B.3.3.2 Species-specific project screening*

Section 3.2.2.1 states that only projects where there is physical overlap of the array area with species MUs were screened into the cumulative assessment. For clarity, we advise that it should be the project impacts which are screened and assessed, not just the array areas overlapping the MUs. This is because disturbance from underwater noise from piling, the impact travels beyond the array area. However, it does not change the number of projects scoped in for minke whale or harbour porpoise as the MUs are extensive spatially. We appreciate that for harbour seal, each SMU was considered individually and combined. We are content with the approach where projects within 60 km of the CES MU have been scoped in for bottlenose dolphin as this is the cut off distance from the deterrence function presented in Graham *et al.* (2019).

*B.3.3.3 Assessment approach*

As discussed in Section 3.2.3.2, for projects where there is no information on the number of animals disturbed available, the Applicant has used the deterrence function numbers for the cumulative assessment. We are content with this approach for Caledonia, which we understand also has MD-SEDD's approval. Additionally, for bottlenose dolphin (CES MU), this is likely to be the most precautionary approach as more projects would be screened in (and a larger number of animals potentially disturbed) when compared to using the 26 km EDR. We note that the deterrence function has not yet been approved for Scotland-wide use, and that other developments should consult on its use.

As explained in Section 3.2.3.3, the bespoke 2 km strip derived density was used for bottlenose dolphin (CES MU), then SCANS III out to the 12 nm line was used. We agree with this approach, as advised in previous correspondence. We are content with the densities used for all other species scoped in.

*B.3.4 iPCoD scenarios*

Section 4.1.1.1 details that iPCoD was re-run for the Proposed Development (Offshore), Caledonia North and Caledonia South alone for bottlenose dolphins only. iPCoD was re-run for the Proposed

Development (Offshore), Caledonia North and Caledonia South cumulatively with other projects for all species considered in this additional information process (harbour porpoise, bottlenose dolphin, minke whale and harbour seal). We are content with this approach.

In our original advice in response to the Section 36 Applications for Caledonia North and Caledonia South, we advised that the re-assessment of cumulative impacts for Caledonia North should include Caledonia South and vice versa. Section 4.1.1.2 explains that Caledonia North is not scoped into the Caledonia South cumulative assessment and vice versa because this is covered by the Proposed Development (Offshore) cumulative assessment.

In post-application consultation with the Applicant, we advised that the iPCoD modelling for the re-assessment should show recoverability of a stable Moray Firth SAC bottlenose dolphin population, as well as an increasing population. This would help to account for the fact that iPCoD uses a fixed increase which gives an unrealistic future population size. The Applicant has followed our advice and presented results for both a stable and increasing population.

*B.3.4.1 Cumulative re-assessment*

In our original advice in response to the Section 36 Applications for Caledonia North and Caledonia South, we advised that, for the re-assessment of cumulative impacts, the Applicant should run the concurrent, sequential and gap scenarios through iPCoD for each species (as this was not consistent throughout the original iPCoD modelling report).

In Section 4.4.1 of Appendix 22, the Applicant states the concurrent and sequential scenarios were taken forward for the assessment of cumulative effects and iPCoD modelling. We note the 5-year gap scenario has not been assessed cumulatively by the Applicant.

## B.4 EIA re-assessment results

The results of the marine mammal EIA re-assessment are discussed in Appendix 26 of Volume 8 and the iPCoD results are displayed in Appendices 23, 24 and 25. As agreed, the conclusions of the re-assessment are based on the deterrence function only, where applicable.

In post-application discussion with the Applicant (NatureScot letter dated 21st August 2025), it was agreed that, for their Additional Information submission, the Applicant would undertake a more proportionate cumulative assessment. This would focus on species that are associated with designated sites located in the same MUs as the development to inform the cumulative impact assessment. This resulted in the Applicant re-assessing bottlenose dolphin (CES MU), harbour porpoise, minke whale, both alone and cumulatively, and harbour seal cumulatively. The Applicant will complete a further full cumulative impact assessment post-consent, which will address all species.

In Section 1.1.1.3, it is explained that the original EIA findings for the Proposed Development (Offshore), Caledonia North and Caledonia South were consistent with the re-assessment provided, in terms of magnitude, sensitivity and significance (as assigned by the Applicant). This highlights the subjective nature of the EIA process - where the results can differ greatly, yet the same conclusions are reached. Further, in our original advice in response to the Applications, we advised that all marine mammal species assessed should be assigned Medium sensitivity to disturbance from piling. This advice has not been followed by the Applicant.

In our original advice in response to the Section 36 Applications for Caledonia North and Caledonia South, we advised that the UK portion of the MU should be used when calculating the proportion of the reference populations potentially impacted, as well as for the iPCoD modelling. From the results presented in Appendix 23, 24, 25 and 26, the Applicant has followed this advice.

*B.4.1 Project alone*

*B.4.1.1 Bottlenose dolphin (CES MU)*

Section 2.3 of Appendix 26 states that the number of bottlenose dolphins predicted to be disturbed per piling day using the deterrence function is only 11 - 13% of the number predicted by the dose-response function. The proportion of the bottlenose dolphin (CES MU) population predicted to be impacted is between 2.2% and 2.7%. The iPCoD modelling has shown no change to the population trajectory, with the mean impacted population size remaining at >98% of the mean size of the unimpacted population.

The Applicant has assigned Medium magnitude of effect and Low sensitivity, which concludes the overall effect as Minor and Not Significant in EIA terms. However, we conclude Low magnitude of effect and Medium sensitivity, which still results in a Minor and Not Significant in EIA terms for disturbance to bottlenose dolphin (CES MU) from piling. Therefore, we agree with the Applicant's overall conclusion.

*B.4.1.2 Harbour porpoise*

As stated in Section 2.2, the number of harbour porpoise predicted to be disturbed per piling day using the deterrence function is only 4.7 - 5% of the number predicted by the dose-response function. The proportion of the harbour porpoise population predicted to be impacted is 0.2% (UK NS MU), as shown in Table 2-1.

The Applicant has concluded the overall effect as Negligible and Not Significant in EIA terms for disturbance to harbour porpoise from piling. We agree with the Applicant's overall conclusion of Not Significant.

*B.4.1.3 Minke whale*

As stated in Section 2.2, the number of minke whale predicted to be disturbed per piling day using the deterrence function is only 11.7 - 13.9% of the number predicted by the dose-response function. The proportion of the minke whale population predicted to be impacted is 0.3% (UK CGNS MU), as shown in Table 2-3.

The Applicant has concluded the overall effect as Minor and Not Significant in EIA terms for disturbance to minke whale from piling.

We appreciate the Applicant providing the deterrence function results for the project alone minke whale re-assessment, as this enables comparison with the original assessment. However, we do not recommend the deterrence function is used for minke whale. We advise that minke whale assessments should continue to use the dose response and EDRs. This is due to the low number of studies on minke whale disturbance, and corresponding evidence gaps.

Our advice from our response to the original Applications still applies for the assessment of project alone effects of piling disturbance on minke whale. This means we agree with the Applicant's

overall conclusion of Not Significant for disturbance to minke whale from project-alone piling impacts.

*B.4.2 Cumulative*

*B.4.2.1 Bottlenose dolphin (CES MU)*

The cumulative piling disturbance re-assessment results for bottlenose dolphin (CES MU) are outlined in Section 3.3 of Appendix 26. As shown in Table 3-5, up to 15.49% of the bottlenose dolphin (CES MU) population is predicted to be disturbed cumulatively with other projects - under the Proposed Development (Offshore) sequential scenario in 2031. Throughout each of the 7 years assessed, over 5% of the CES MU could be disturbed. This is significant due to the length of time piling could be taking place across various wind farm developments along the East Coast combined with the fact these results are with the deterrence function applied.

However, the iPCoD model outputs do not suggest a bottlenose dolphin (CES MU) population crash, even with a stable population. As shown in Table 3-10 of Appendix 23, for the stable population, the mean impacted population size as a proportion of the mean unimpacted population size is at its lowest - 94.32%, in the year 2032 under the Proposed Development (Offshore) sequential no gap scenario. The impacted population is predicted to continue on a stable trajectory of over 200 animals.

Also, we recognise that due to supply chain pressures, it is unlikely that all projects will be piling at the same time. When we consider that the deterrence function is based on harbour porpoise, which are considered to more sensitive to behavioural disturbance than bottlenose dolphin, we are content that these results are precautionary.

The Applicant has assigned Medium magnitude of effect and Low sensitivity, which concludes the overall effect as Minor and Not Significant in EIA terms. However, **we conclude Medium magnitude of effect and Medium sensitivity, which results in a Moderate and therefore Significant in EIA terms for disturbance to bottlenose dolphin (CES MU) from cumulative piling**. As such, we disagree with the Applicant's overall conclusion.

Should the proposed development be consented, we advise that the Applicant explores ways of reducing noise at the source through the Piling Strategy. Developers should also work collaboratively to mitigate impacts to the CES MU and contribute to the overall work that Ocean Winds has led on in underwater noise monitoring and refining the assessment of impact on marine mammals.

*B.4.2.2 Harbour porpoise*

The cumulative piling disturbance re-assessment results for harbour porpoise are outlined in Section 3.2 of Appendix 26. As shown in Table 3-2, up to 4.19% of the UK population of harbour porpoise (UK NS MU) is predicted to be disturbed cumulatively with other projects, under the Proposed Development (Offshore) sequential scenario in 2031. Despite applying the deterrence function, this percentage is still relatively high. However, we are aware that due to supply chain pressures, it is unlikely that all projects will be piling at the same time.

The iPCoD model outputs suggest no change in population trajectory for the UK portion or the whole NS MU for harbour porpoise, with the mean impacted population size remaining over 99% of the unimpacted mean population size.

The Applicant has assigned Medium magnitude of effect and Low sensitivity, which concludes the overall effect as Minor and Not Significant in EIA terms. However, we conclude Low magnitude of effect and Medium sensitivity, which results in a Minor and Not Significant impact in EIA terms for cumulative disturbance during piling for harbour porpoise. Therefore, we agree with the Applicant's overall conclusion.

We encourage developers to work strategically to collaborate and ensure sustainable levels of noise through post-consent engagement in groups, such as MFRAG or equivalent.

*B.4.2.3 Minke whale*

The cumulative piling disturbance re-assessment results for minke whale are outlined in Section 3.4 of Appendix 26. As shown in Table 3-8, up to 3.57% of the UK population of minke whale (UK CGNS MU) is predicted to be disturbed cumulatively with other projects, under the Proposed Development (Offshore) sequential scenario in 2031.

The iPCoD model outputs suggest no change in population trajectory for the UK portion or the whole CGNS MU for minke whale, with the mean impacted population size remaining over 99% of the unimpacted mean population size.

The Applicant has assigned Low magnitude of effect and Medium sensitivity, which concludes the overall effect as Minor and Not Significant in EIA terms.

We appreciate the Applicant providing the deterrence function results for the cumulative minke whale re-assessment to enable comparison with the original assessment. However, we do not recommend the deterrence function is used for minke whale. We advise that minke whale assessments should continue to use the dose response and EDRs where the number of animals disturbed is not available.

Therefore, our advice from our response to the original Applications still applies for the assessment of cumulative effects of piling disturbance on minke whale. **We advise a magnitude of Medium combined with Medium sensitivity, which results in a Moderate significance of effect for cumulative disturbance during piling for minke whale, which is Significant in EIA terms.**

*B.4.2.4 Harbour seal*

We acknowledge that the cumulative assessment for harbour seal is precautionary as it has assessed the Seal Management Units (SMUs) separately, when in reality we understand that there is interchange and overlap between SMUs. This is important to bear in mind when we consider that the North Coast and Orkney (NC&O) SMU is currently in decline regardless of offshore wind development.

For the Moray Firth (MF) SMU (which the proposed development is located within), Table 3-11 of Appendix 26 shows that up to 6.52% of the harbour seal population could be disturbed by cumulative piling, under the Proposed Development (Offshore) concurrent scenario. For the NC&O SMU, Table 3-12 shows that up to 10.05% of the harbour seal population could be disturbed by cumulative piling, under the Caledonia North and the Proposed Development (Offshore) concurrent and sequential scenarios. For the East Scotland (ES) SMU, Table 3-13 shows that up to 1.83% of the harbour seal population could be disturbed by cumulative piling, under the Proposed Development (Offshore) sequential scenario. Lastly, for all SMUs combined, Table 3-14 shows that up to 7.79% of

the harbour seal population could be disturbed by cumulative pilling, under the Proposed Development (Offshore) sequential scenario.

As shown in Table 3-15, the iPCoD modelling results predict there to be no change in population trajectory for all SMUs assessed under all scenarios, with the mean population sizes remaining over 99% of the unimpacted mean population sizes.

The Applicant has assigned Low magnitude to the MF, NC&O and ES SMUs, Low sensitivity to the MF & ES SMUs and Medium sensitivity to the NC&O SMU. This results in a Negligible significance of effect for cumulative disturbance during piling for harbour seal in all three SMUs, which is Not Significant in EIA terms. However, we conclude Low magnitude of effect and Medium sensitivity for the MF, NC&O and ES SMUs, which results in a Minor and Not Significant impact in EIA terms for cumulative disturbance during piling for harbour seal. Therefore, we agree with the Applicant's overall conclusion.

### B.5 Offshore export cable corridor vessel disturbance

In our original advice in response to the Section 36 Applications for Caledonia North and Caledonia South, we advised that the cumulative impacts re-assessment should include export cable corridors (ECCs), particularly for bottlenose dolphin and minke whale. Cumulative OECC vessel disturbance is considered by the Applicant in Appendix 27 of Volume 8.

This Appendix focuses on bottlenose dolphin (CES MU) and minke whales within the Southern Trench NCMPA, in relation to the increased vessel activities associated with 4 export cable corridors required for the overall proposal. We understand that up to two OECCs will be required for Caledonia North and up to two OECCs for Caledonia South. We note that approximately 18 months of cable laying will be required over a 4-year period.

Table 3-4 outlines the conservation objectives of the Southern Trench NCMPA relevant to minke whale and disturbance from vessels. Significant disturbance is defined as contributing to long term decline in the use of the MPA, continued changes to the distribution or changes in behaviour such that it reduces the ability to feed, breed or survive.

In Section 4.2.1.2, peak cumulative vessel activity within the CES MU has been identified to take place between 2029 and 2031. Each project presumed to cross the CES MU or the Southern Trench NCMPA has been scoped in with a prediction of the percentage increase in vessel traffic.

Between 2029 and 2031 in the CES MU, an increase in vessel traffic of an additional 54 vessels (149% increase) across six OECCs is predicted. We agree that while this is notably large, it is important to consider that over three years there would not be continuous cable laying taking place, but it would take place sporadically over that time. We are content that it would be unlikely that 54 construction vessels would be situated within the CES MU at the same time.

We agree that by adhering to the Scottish Marine Wildlife Watching Code (SMWWC) and the demonstrated tolerance of bottlenose dolphins to high traffic environments, any disturbance should be temporary and unlikely to cause population-level impacts. The overall effect of cumulative vessel disturbance as a result of construction activities taking place within OECCs in the CES is considered by the Applicant to be Minor and Not Significant in EIA terms. We agree with this

conclusion. We advise that increased vessel movements is scoped into any post consent cumulative assessment for all species.

For minke whale, peak cumulative vessel activity within the Southern Trench NCMPA has also been identified between 2029 and 2031, when five projects are assumed to be constructing concurrently. Only two project OECCs will overlap with the highest density portion of the MPA. The number of additional vessels anticipated during construction within the OECC shall be the same as for bottlenose dolphin (CES MU). Similarly to bottlenose dolphin, all consented projects will be producing a Vessel Management Plan including adherence to the SMWWC.

We agree with the Applicant that the risk of hindering the conservation objectives of the Southern Trench NCMPA is uncertain for minke whale disturbance from cumulative vessel activities within OECCs during the construction phase.

We welcome the Applicant's involvement in a collaborative campaign which recently deployed PAM devices within the Southern Trench NCMPA to monitor minke whale presence.

## B.6 RIAA updates

The marine mammal RIAA updates are provided in Appendix 28 of Volume 8.

### *B.6.1 Dornoch Firth and Morrich More SAC*

In our original advice in response to the Section 36 Applications for Caledonia North and Caledonia South, we advised that the Dornoch Firth and Morrich More SAC should have been screened into the RIAA for a potential likely significant effect on the site. Therefore, we requested further information from the Applicant on underwater noise from piling resulting in a likely significant effect on the harbour seal qualifying species of the Dornoch Firth and Morrich More SAC, and an assessment of adverse effect on site integrity if required. This applied to Caledonia North, Caledonia South and the Proposed Development (Offshore), both alone and in-combination. The Applicant has provided this assessment as Additional Information and we provide our advice below.

#### *B.6.1.1 Proposed development – alone*

Section 5.3.4 of Appendix 28 concludes that the maximum number of harbour seals predicted to be disturbed on any piling day is up to 8.04% of the Moray Firth Seal Management Unit (SMU) under the Proposed Development (Offshore) scenario. The results from iPCoD show no population-level consequences for the Moray Firth SMU under concurrent or sequential build out.

Whilst there is connectivity and a potential likely significant effect, we agree with the conclusion that the Proposed Development (Offshore) alone will not result in any adverse effect on site integrity of the Dornoch Firth and Morrich More SAC in relation to behavioural disturbance of harbour seal from piling during construction or decommissioning.

#### *B.6.1.2 In-combination*

As detailed in Section 6.3.2, due to the lack of information available in the public domain from other screened in projects, predicted numbers of individuals potentially disturbed are based on EDRs. We agree with this approach. The in-combination assessment has resulted in an extra two seals disturbed in addition to the Proposed Development (Offshore), therefore the overall conclusions are the same.

We agree with the conclusion that the Proposed Development (Offshore), in-combination with other projects, will not result in any adverse effect on site integrity of the Dornoch Firth and Morrich More SAC in relation to behavioural disturbance of harbour seal from piling during construction or decommissioning.

*B.6.2 Moray Firth SAC*

In our original advice in response to the Section 36 Applications for Caledonia North and Caledonia South, we advised that we were unable to conclude no adverse effect on site integrity for the Moray Firth SAC with respect to behavioural disturbance from pile driving during construction of Caledonia North, Caledonia South or the Proposed Development (Offshore) alone (and therefore also in-combination with other plans and projects).

The Applicant has provided Additional Information with a revised assessment of the potential disturbance impacts of underwater noise from piling on the bottlenose dolphin qualifying species of the Moray Firth SAC. The re-assessment takes into account design envelope changes, namely refinement of the number of anchors required for the floating foundations from 18 anchors per WTG to six anchors per WTG. This refinement has reduced the number of anchor piling days from 410 days to 234 days for the Proposed Development (Offshore). Further, it was agreed during post-Application discussion that the Applicant could use the deterrence function (Graham *et al.*, 2019) for their assessment of piling disturbance and that they would also provide an assessment using the EDR approach. Therefore, the Additional Information submitted by the Applicant includes an assessment of piling disturbance using the dose-response, deterrence function and EDR approaches for comparison.

*B.6.2.1 Proposed development – alone*

Section 7.3.1.4 states that up to 2.65% of the Moray Firth SAC bottlenose dolphin population could be disturbed by a single piling event under the Proposed Development (Offshore) scenario. The temporal aspect of the effects has reduced from 515 piling days to 339 days over 3-6 years of construction. Moreover, the SAC itself will not experience any disturbance from piling as using the deterrence function cuts off disturbance past 60 km.

As detailed in Section 7.3.1.7 and Table 7-3, the deterrence function iPCoD results show that all build out scenarios are predicted to result in no long-term change to the Moray Firth SAC bottlenose dolphin population trajectory. Even when using the dose response on a stable population, the population would still remain over 200 individuals, and the overall population trend would not change.

We agree with Section 7.3.1.8 that using the deterrence function from harbour porpoise is precautionary for bottlenose dolphin as each species is thought to have different sensitivities and behavioural responses, with harbour porpoise considered to be more sensitive to noise than bottlenose dolphins.

We agree with the conclusion that the Proposed Development (Offshore) alone will not result in any adverse effect on site integrity of the Moray Firth SAC in relation to behavioural disturbance of bottlenose dolphin from piling during construction or decommissioning.

*B.6.2.2 In-combination*

Table 7-5 outlines the potential number of animals disturbed by piling in-combination with other projects that could be under construction at the same time. The proportion of the CES MU population potentially disturbed is up to 15.49% in 2031 under the Proposed Development (Offshore) sequential scenario. While the Moray Firth SAC itself should be outside the disturbance range of piling alone and in-combination, this is still a large proportion of the Moray Firth SAC population.

As described in Section 7.3.1.16 onwards, the iPCoD results show that, under stable population assumptions, the population could reach a minimum of 94.32% of the unimpacted population. However, it remains stable and above 200 animals throughout. Under an increasing population, the number of animals reaches over 500 and the trajectory remains steeply increasing, while the impacted population could reach 94.16% of the unimpacted at its lowest. It is predicted that there could be a reduction of up to 14 animals within the CES MU (6% of 226). While this is not 'taking' or killing animals, there is potential for the current population of 226 to be constrained of 6% growth, scaled up over the next 25 years.

We agree that piling would be intermittent and that applying the harbour porpoise deterrence function is precautionary for bottlenose. However, should the proposed development gain consent, we require strategic collaboration to minimise impacts to the CES MU and therefore to the Moray Firth SAC.

We welcome the explanation set out in Section 7.3.1.23-24. We understand that the iPCoD model has not been updated for bottlenose dolphin since 2013 and that it assumes disturbed dolphins cease foraging for 24 hours. In 2019, the harbour porpoise model was updated to assume that foraging is interrupted for 6 hours after disturbance. As this species is considered to be more responsive to noise impacts than bottlenose dolphin, the cessation of foraging for 24 hours for bottlenose dolphins should be a topic to target in post-consent strategic work and / or research. This could help to refine iPCoD and produce more realistic results industry wide.

From Section 7.3.1.25, we also understand that iPCoD assumes no density dependence and therefore does not have a mechanism to show that populations would recover or increase to previous conditions after piling stops, due to a lack of data available to parameterise this relationship. This could be another area that could be targeted strategically by developers to refine the outputs of iPCoD and make them more realistic.

We recognise that the in-combination assessment assumes that all projects scoped in will be consented, built, and built at overlapping times. It is our view that the results from any cumulative assessment should be treated with extreme caution. However, the results are an important way to target species and impacts that require strategic consideration in any post-consent work and when it comes to build out of the offshore wind farm.

The conservation objectives of the Moray Firth SAC relevant to bottlenose dolphin are as follows:

- 2a. The population of bottlenose dolphin is a viable component of the site.
- 2b. The distribution of bottlenose dolphin throughout the site is maintained by avoiding significant disturbance.
- 2c. The supporting habitats and processes relevant to bottlenose dolphin and the availability of prey for bottlenose dolphin are maintained.

On the basis of the re-assessment provided by the Applicant, we are content that all conservation objectives will not be hindered by the Proposed Development (Offshore) alone due to the stable population iPCoD results (2a and 2b), no disturbance reaching the SAC itself (2b and 2c) and the low 3% of the population potentially impacted (2a and 2b).

For the Proposed Development (Offshore) in-combination with other plans and projects, the same as above applies. However, the prediction that up to 15.49% of Moray Firth SAC population could be disturbed is significant when considering Conservation Objective 2a and 2b. Further consideration of the extent to which the population may be affected, including any changes to distribution will require further consideration post consent.

For these reasons, we agree that while there is a likely significant effect on the Moray Firth SAC, the Proposed Development (Offshore) in-combination with other plans and projects will not result in an adverse effect on site integrity in relation to behavioural disturbance of bottlenose dolphin from piling during construction or decommissioning. However, as up to 15% of the Moray Firth SAC population could be disturbed, we advise that, should consent be granted, this is on the condition that Moray Firth SAC bottlenose dolphins are given distinct post-consent strategic priority. Developers need to work strategically to develop and refine assessment parameters for bottlenose dolphin, such as a bottlenose dolphin deterrence function, updating iPCoD, collecting more information to support density dependence to be built into iPCoD and monitoring underwater noise from piling to build on the work of PrePARED.

*B.6.2.3 In-combination – vessel disturbance*

In our original advice in response to the Section 36 Applications for Caledonia North and Caledonia South, we requested a full in-combination assessment of the impact of vessel disturbance on the bottlenose dolphin qualifying species of the Moray Firth SAC. The Applicant has provided an in-combination assessment of vessel disturbance on the bottlenose dolphin qualifying species of the Moray Firth SAC within Appendix 28.

As outlined in Section 7.3.2.6, we consider the predicted in-combination increase in vessel numbers (up to 149% over baseline) reported represents a theoretical, but unrealistic worst-case scenario, as supply chain and vessel availability is likely to constrain this.

We appreciate that the OECC routes of most of the projects screened in would cross the CES MU along the Aberdeenshire coast, which is comparatively less understood as most bottlenose dolphin studies have focused on the Moray Firth and the Firth of Tay and Forth estuaries. We recognise that the OECCs lie outside the Moray Firth SAC boundary and represent a very small proportion of the habitat for bottlenose dolphin within the wider CES MU (<4%). Also, vessel presence would be intermittent in this Section of the CES MU.

While there is a possible likely significant effect, we agree with the conclusion in Section 7.3.2.17 that the disturbance from vessel activity of the Proposed Development (Offshore) in-combination with other plans and projects will not result in any adverse effect on site integrity for bottlenose dolphin associated with the Moray Firth SAC.

**NATURESCOT ADVICE ON CALEDONIA NORTH OFFSHORE WIND FARM AND CALEDONIA SOUTH OFFSHORE WIND FARM – ADDITIONAL INFORMATION**

**Appendix C Fish and shellfish ecology**

## C.1 Summary of NatureScot advice

The additional information report for the fish and shellfish receptor group was to address issues raised by NatureScot about potential cumulative impacts on herring and sandeel, alongside the EIAR conclusion that these impacts are not significant.

The additional information reports reassert the position of the EIAR that the development has no significant impact in terms of EIA for herring spawning and sandeel habitat either alone or cumulatively. The information provided makes the case for magnitude of impacts for underwater noise to remain low. We do not support the arguments presented in the additional information reports and our advice remains the same – we consider that the potential impacts on herring and sandeel may be more significant than has been concluded, particularly in the context of potential cumulative impacts.

We reiterate our advice given previously, that the following aspects are included in post-consent plans:

- Additional sediment analysis within the offshore array area to identify the suitability of habitat for spawning species (e.g. herring and sandeel);
- A Fish Mitigation Plan, including measures such as:
  - Noise mitigation techniques during peak spawning periods for herring and/or sandeel.
  - Consideration of seasonal restrictions on piling during peak spawning periods for sandeel and/or herring across both array areas and / or partial areas within array areas.
  - Consideration of fish monitoring pre-, during, and post- construction.
  - Use of best available evidence to inform siting and design.
  - Supporting strategic studies to consider potential impact pathways during windfarm construction and operation for key species such as Priority Marine Features, including Atlantic salmon.
  - Supporting strategic monitoring which investigates at the effects of Electromagnetic fields (EMF), particularly on elasmobranchs (e.g. basking shark) as well as shellfish.
  - An action plan for reducing the risk of secondary entanglement and detail on the secondary entanglement monitoring approach.

## C.2 Appraisal of Additional Information

In providing our advice on the Additional Information for Fish and Shellfish we have reviewed the following documents:

- Caledonia - Additional Information - Volume 8 - Caledonia Offshore Wind Farm EIAR and HRA Addendum
- Caledonia - Additional Information - Volume 8 - Appendix 3 - Herring Additional Information Note
- Caledonia - Additional Information - Volume 8 - Appendix 2 - Ecosystem Level Effects

## C.3 Herring

The applicant highlights that the impacts from UWN only overlap with the medium to low intensity area of herring spawning (IHLS) (Fig 3.3 to 3.9 within Section 3.3.2), however the area in which herring spawn is so small within the wider North Sea context, that medium and lower intensity spawning areas are still important.

ICES[5] stock assessment for Spawning Stock Biomass (SSB) shows that levels are low and have been decreasing over the last 10 years. The stock has been in a low productivity regime since 2002, with very low recruitment estimated for 2025 (ICES, 2025). Herring stocks are mentioned in the Ecosystem Level Effects report, but less emphasis is given to the decreasing stock numbers by stating that they are 'above the biological limits' (Section 2.3.1.12). It is our understanding that the ICES stock assessment means that all pressures on the stock should be reduced. This includes all anthropogenic activities, not just fisheries.

ICES has recommended for non-fisheries conservation, that activities that have a negative impact on spawning habitats, should not occur unless the effects of these activities have been assessed and shown not to be detrimental. This is mentioned in the Ecosystem Level Effects report (Section 2.3.1.12) which highlights that the OWF will not affect herring spawning habitat. It is our understanding that ICES conservation advice to mean not only the spawning habitat, but also the spawning herring themselves. As herring clearly require access to herring spawning habitat to increase stock biomass.

The report includes two figures that were incorrectly drawn within the EIAR submission, addressing an error in the mapped cumulative Sound Exposure Level (SELcum) contours for mortality and potential mortal injury and recoverable injury for herring, showing the 219 dB and 216 dB contours instead of the 207 dB and 203 dB contours, respectively. The area of each contour increases but the conclusions drawn by the applicant have not changed. Our view is that this adds to the evidence that UWN would have cumulative impact as the TTS contour now extends further into the Shetland and Buchan spawning areas.

### C.4 Sandeel

This receptor has been included within the EIAR and HRA Addendum and Ecosystem Level Effects documents.

Section 5.4.1.6 within the EIAR and HRA report the applicant states that they have responded to specific comments regarding sandeel in the 'Gap Analysis' submitted to MD-LOT. In summary, there is expected to be no significant effect from the impacts of this OWF project alone or cumulatively. However, the applicant will complete pre-construction surveys for particle size analysis (PSA) and where preferred habitat for sandeel is identified it will be avoided where possible. **We support this and request sight of the survey results and any information relating to locations of prime habitat as part of the Fish Mitigation Plan.**

[5] ICES (2025). EU, Norway, and UK joint request to incorporate the Long-Term Management Strategy option MS3 (ICES, 2025a) in the advice for herring (*Clupea harengus*) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel). ICES Advice: Special Requests. Report. https://doi.org/10.17895/ices.advice.30305668.v2

**NATURESCOT ADVICE ON CALEDONIA NORTH OFFSHORE WIND FARM AND CALEDONIA SOUTH OFFSHORE WIND FARM – ADDITIONAL INFORMATION**

**Appendix D Marine and coastal processes**

## D.1 Summary of NatureScot advice

In our previous response we raised issues relating to a lack of cumulative assessment with the existing Moray Firth Wind Farms had been excluded from the Cumulative Impact Assessment. We advised that there should be further assessment of the cumulative effects of storm wave height on geodiversity features, and coastal SSSI receptors. This assessment does not appear to have been carried out and should be considered further as part of any Cable Plan.

The applicant has provided further information on the potential impacts on seasonal stratification. Although not the lead consultee we provide comments in this Appendix.

## D.2 Cumulative impacts to storm wave height

Our previous advice recommended further assessment of the predicted cumulative impact of storm height on geodiversity features, and that this should include Moray West (unless there had been agreement to exclude Moray West from the CIA), and identifying coastal receptors, including SSSIs, which could also be affected.

The 'Volume 8 Additional Information – Caledonia Offshore Wind Farm EIAR and HRA Addendum' report does not provide this additional assessment. The stated maximum reduction in wave height (1% to 2%) is the same as in the original EIA. The report does not mention Moray West. The only coastal SSSI considered is Cullen to Stake Ness, as in the EIAR, but there are other sites around the Moray Firth Coast which have not been considered such as Berriedale Cliffs SSSI.

In addition, the report (at 5.2.2.7) does not fully identify and assess the potential impacts at Cullen to Stake Ness SSSI:

- The geological interest (Dalradian) does have some sensitivity to reduction in wave energy, as this could potentially lead to growth of supratidal coastal vegetation over notified bedrock outcrops.
- The report also fails to mention the habitat interest, including shingle and salt marsh, which could potentially be affected by vegetation succession caused by reduced wave action.

## D.3 Impacts on seasonal stratification

MD-LOT advised that if there is regional seasonal stratification then potential impacts on this should be assessed. Although MD-SEDD will be the lead advisor on this topic, we offer the following comments on the assessment.

The 'Appendix 1 – Marine & Coastal Processes Stratification Technical Note' report does demonstrate seasonal stratification. It goes on to assess a low Magnitude of potential impacts in terms of turbulent mixing due to the presence of turbine bases in the water column. We advise that effects on stratification which extend beyond the array area have not been ruled out, and therefore the **Magnitude could be assessed instead as Medium**. Combined with the medium to high Sensitivity, this would identify a **significant effect**. Our reasoning is:

- Effects on mixing would be “only partial and localised” (2.4.2.10), these terms are too vague to determine the assessment.
- The quoted findings of Hammar, *et al.* (2010)[6], that certain proposed wind farms would increase mixing by only 1% (e.g. Sections 2.4.2.5, 2.4.2.9), are of uncertain relevance because it is not clear how analogous those proposals are to Caledonia. Hammar et al (2010) is a review paper and the findings come from grey literature which we have been unable to review.
- The reference to findings of Wu & Ouyang (2020)[7], that flow regime changes persist for “approximately three times the length scale” of turbine bases (2.4.2.8), is not correct. Wu & Ouyang (2020) studied obstacles occupying only the bottom 15% of water depth, and their "three times" finding related to obstacle height, not "length scale". Therefore, this finding may be of limited relevance, and the statement that the 944m spacing at Caledonia would rule out cumulative impacts between foundations is not supported.
- Despite a reference to turbine wind wakes potentially opposing the water wake effects on stratification (2.4.2.12), there’s no attempt to quantify this.
- More generally, the assessment focuses only on fixed foundations. Regarding floating foundations, it merely notes a lack of previous studies (2.4.2.5), without any attempt to quantify or even conceptualise how these foundations create turbulent mixing.

[6] Hammar, L., Andersson, S. & Rosenberg, R (2010) Adapting offshore wind power foundations to local environment. The Swedish Environmental Protection Agency. Report 6367.
[7] Wu, C. & Ouyang, H. (2020) Flow morphology in bottom-propagating gravity currents over immersed obstacles. AIP Advances. Volume 10, Issue 11.

**NATURESCOT ADVICE ON CALEDONIA NORTH OFFSHORE WIND FARM AND CALEDONIA SOUTH OFFSHORE WIND FARM – ADDITIONAL INFORMATION**

**Appendix E Southern Trench NCMPA assessment**

Additional information was requested by MD-LOT on the potential impacts to the burrowed mud and geodiversity features of the Southern Trench NCMPA. This information is provided in the following documents:

- *Volume 8 Additional Information – EIAR and HRA Addendum*
- *Volume 8, Appendix 33 – Marine Protected Area Assessment Update.*

## E.1 Summary of NatureScot advice

We previously advised that further assessment of the cumulative effects of other projects on the geodiversity and burrowed mud features of the MPA should be carried out. We also advised that the permanent habitat loss for burrowed mud is fully assessed for the project alone.

The additional information does not appear to have fully addressed our comments. We maintain our advice that both the direct and indirect cumulative effects of Moray Firth projects should be assessed for both geodiversity and burrowed mud.

For the burrowed mud feature, we advise that the MPA assessment should extend beyond the first test and conclude that the proposals are capable of affecting the burrowed mud feature of the Southern Trench NCMPA, other than insignificantly. The assessment should progress to the second test and provide information to inform an assessment on whether there is a significant risk of hindering the conservation objectives. This assessment should follow our guidance – Development management and Nature Conservation Marine Protected Areas[8]. Based on our knowledge of the feature, we advise that this proposal is unlikely to risk hindering the achievement of the conservation objectives, particularly in isolation.

Note that comments on the minke whale feature of this NCMPA are provided in Appendix B.

## E.2 Geodiversity features

We reiterate the advice given in our previous response where we recommended further assessment on the cumulative effects of Moray Firth wind developments on the wave regime and how this could affect the geodiversity features of the MPA. This additional assessment does not appear to have been carried out. The stated maximum reduction in wave height (1% to 2%) is the same as in the original EIA. The report also does not mention Moray West offshore wind farm. Our previous comments remain unchanged.

## E.3 Burrowed Mud

We are content that the quantitative assessment of a potential loss of 0.15% of burrowed mud habitat presents a worst case/ precautionary scenario. Comparable cable crossings presented in the cumulative impact summary from other developments strongly suggest that the actual area of permanent loss would be orders of magnitude lower (0.00X%).

[8] https://www.nature.scot/doc/development-management-and-nature-conservation-marine-protected-areas

Whilst we specifically requested consideration of permanent habitat loss, the overall impacts on the burrowed mud protected feature of the Southern Trench MPA have not been brought together and assessed within Appendix 33 (i.e. including the temporary effects of cable laying/ any trenching etc.). This would have enabled a more comprehensive assessment of the impacts arising from this development and of cumulative impacts on the MPA feature. As highlighted in our previous response, the assessment is limited to the extent and distribution aspects of the Conservation Objectives with no consideration given to potential effects on habitat structure, function, quality and community composition.

The site-specific extent element of the Conservation Objectives seeks to '*Conserve the current extent and distribution of burrowed mud habitat within the site so that it is stable or increasing*'. Having calculated a worst-case scenario of a permanent loss of up to 1.3 $km^2$ of burrowed mud habitat, we do not agree with the overall conclusion presented within the Section 4.1 of Appendix 33 that '*There is, therefore, no potential for non-conformance, having regard to the Conservation Objectives of the burrowed mud feature of the Southern Trench NCMPA ….*'. Following the MPA assessment guidance, our view is that the proposals are capable of affecting the burrowed mud feature, and that the permanent nature of the loss of habitat, alongside the cumulative impacts (discussed further below) of other cable developments crossing the site, mean that the impacts could potentially be assessed as significant.

Ideally, further analysis from the developer should have been provided on the potential effects on the Conservation Objectives. However, on the basis of the information available, the precautionary approach taken, and the scale of this and the other cable developments considered in the cumulative assessment, **it is likely that the overall conclusion would be that the proposal has no significant risk of hindering the achievement of the conservation objectives.**

*E.3.1 Cumulative effects on burrowed mud*

For Moray West (Operational) an estimate of a total of 0.00142 $km^2$ (1,420 $m^2$) of cable protection has been deployed within burrowed mud habitat within the Southern Trench NCMPA in total, for the two OECCs. This represents 0.11% of the worst-case figure for the Proposed Development (Offshore) alone, and 0.0002% of the available burrowed mud habitat. Overall, given the extent of mud habitats within the site and the surrounding area, this is not expected to impact the conservation objectives for the designated site.

For Moray East (Operational) total of 0.014974 $km^2$ (14,974 $m^2$) of cable protection has been deployed within the burrowed mud habitat within the Southern Trench NCMPA in total, for the three OECCs. This represents 1.14% of the worst-case figure for the Proposed Development (Offshore) alone, and 0.0017% of the available burrowed mud habitat. Overall, given the extent of mud habitats within the site and the surrounding area, this is not expected to impact the conservation objectives for the designated site.

For Stromar (in pre-planning stages) no details are available on the impacts associated with their export cables so no assessment made.

The conclusion given when considering the cumulative impact is that *There is, therefore, no potential for non-conformance with Conservation Objectives.* Again, this is not the usual terminology we would use for an MPA Assessment.

We expect developers to complete an assessment, including a comprehensive cumulative approach following our MPA Assessment Guidance. This cumulative appraisal, should include previous projects considered as a baseline and as agreed with MD-LOT and ourselves. We advise that, despite the approach taken, we broadly agree with the conclusion that the cumulative effects are unlikely to hinder the achievements of the conservation objectives for burrowed mud. This is mainly due to the small scale of the development impact footprint compared with the scale of the burrowed mud feature.

*E.3.2 Mitigation measures for burrowed mud*

We welcome the proposal to investigate cable protection technology as part of a Cable Plan.

**NATURESCOT ADVICE ON CALEDONIA NORTH OFFSHORE WIND FARM AND CALEDONIA SOUTH OFFSHORE WIND FARM – ADDITIONAL INFORMATION**

**Appendix F Ornithology Derogation**

As part of the Additional Information submission, the Applicant has included an addendum (Appendix 29) to the previously submitted Derogation Case, which was provided on a without prejudice basis alongside the original Applications for Caledonia North and Caledonia South (20 November 2024). The Applicant has also provided a supporting refined Outline Implementation and Monitoring Plan (IMP) (Appendix 30) and an East Caithness Cliffs site assessment report (Appendix 34).

In our response to the original Applications (dated 27 March 2025), we welcomed the Applicant's initial consideration of compensation measures and provided early advice on the principle of each measure in terms of their ecological feasibility. However, we advised that the Derogation Case was high level and that we require significantly more detail on the proposed compensation measures, consideration of indirect impacts on other species or habitats, and how the success of the measure will be monitored.

Advice is provided below on the Addendum to the Derogation Case, the refined outline IMP and the East Caithness Cliffs site assessment report, focusing on the ecological feasibility of the proposed compensatory measures. We acknowledge that the Appropriate Assessment has yet to be finalised and as such the SPAs and qualifying species for which compensation may be required remains unconfirmed.

Our detailed advice builds upon our advice submitted in response to the original Application, which is still relevant.

We welcome the Applicant's decision to not progress avian predator management as a potential compensation measure.

**F.1 Summary of NatureScot advice**

The Addendum to the Derogation Case outlines five proposed compensation measures:

- Reduction of disturbance at colonies at East Caithness Cliffs and Isle of May
- Mammalian predator management and eradication
- Bycatch mitigation
- Restoration or maintenance of breeding sites
- Conservation management funding

Whilst we welcome that some of our previous advice is reflected in this Additional Information and that the proposed measures have been progressed, further detail on evidencing the existing pressures, methodologies and specific locations for compensation measures is largely absent. We acknowledge the commitment to baseline monitoring, and we support the partnership between Caledonia and National Trust for Scotland (NTS) to deliver predator management measure. **However, at present we advise there is still insufficient information to have confidence that the proposed measures are likely to compensate for the predicted impacts of the proposal to seabirds.**

**We are also unable to confirm / advise without further site-specific information whether SSSI consent is likely to be required or granted.**

### F.2 Reduction of disturbance at colonies

Potential locations for this compensation measure have been identified at the Isle of May and East Caithness Cliffs. Site visits have been undertaken at both potential sites to assess the feasibility of implementation and to evidence visitor-related disturbance. Further feasibility site visits and baseline monitoring will be carried out during the first breeding season post-consent, with implementation locations and compensation measure design to be finalised shortly after.

We are content with the equations and the literature review presented in principle in Section 6.3.2 of Appendix 29. However, it is unrealistic to use historical population peaks as a proxy for possible population recovery if disturbance reduction measures are implemented, as this does not recognise the multitude of pressures that seabirds face. This is particularly relevant at Northern Isles SPAs.

Realistic compensated population calculations must be presented in the IMP. This should be evidence-based and can be based on the literature and grey literature available or looking at other sites where this measure has been or is proposed to be carried out, including any information in the forthcoming Portfolio of Seabird Compensation Measures work being led by Offshore Wind Directorate. Any proposed compensation measures are likely to be species-, site- and habitat-specific - and this uncertainty should be made clear in the review. We also highlight that this measure is not likely to be equally effective across the whole colony. Nests closer to the disturbed area will be significantly more disturbed, which should be seriously considered in the calculation and is a further reason we cannot accept historical peaks as a proxy for potential benefits.

With regards to the consideration of any indirect effects of this measure, we welcome consultation with the steering group to ensure negative effects on non-target species are avoided or minimised. However, without site-specific information, we cannot rule out whether SSSI consent is likely to be required or granted.

In regard to Section 3.1.6 of Appendix 30, the principles of the Applicant's approach to monitoring the success of the measure by comparing disturbed and undisturbed areas are logical. Once the proposed measure has been developed further and more details are available, we request that the Applicant provide NatureScot details as to the locations of reference areas (preferably including maps and photography), and a consideration of the potential differences between the disturbed and undisturbed areas that may also contribute to any differences in productivity.

Additionally, once more details are available, the methodology which will be used to monitor visitor behaviour and footfall should be provided. Visitor behaviour and footfall monitoring should take into account the likely high variation in activity across weekdays, weekends and holiday periods, as well as variation across time of day and with weather conditions.

The information provided on corrective measures is useful - the three suboptimal monitoring outcomes presented make sense and appear to be comprehensive. The potential corrective measures provided for each outcome are reasonable solutions to the problems, provided that any additional construction work is undertaken with the same care as the original construction work (so as to not disturb the breeding seabirds, or the features of the SSSI).

#### *F.2.1 Isle of May potential measures*

The Applicant discusses potential disturbance reduction measures at the Isle of May in Section 6.3.4 of Appendix 29. We welcome the proposal to track visitors using electronic tags to map preferred visitor routes and duration of stay at key locations. This intends to identify high footfall areas and correlate them with observed seabird responses which will generate actionable data to guide site planning and disturbance mitigation. This tracking method would have significantly more challenges at other sites, considering that seabirds are major driver of visits to the Isle of May. The Applicant would have to carefully consider how to approach and gain consent from visitors to other sites, particularly where visitors are not as closely managed as on the Isle of May.

We agree that data gathered in such a manner could result in interventions such as re-aligning paths away from high-sensitivity nesting sites, installation of non-intrusive viewing aids and/or construction of bird-hides at strategic locations to shield visitors from view and reduce direct disturbance to nesting birds. However, certain measures (e.g. CCTV units) would only work at areas with a visitor centre or other official building and would be unsuitable at most sea cliffs. A careful review of other sites with bird-hides should also be undertaken to understand situations in which these are best utilised.

*F.2.2 East Caithness Cliffs potential measures*

Locations potentially suitable for interventions such as disturbance reduction, rabbit and vegetation management, and drainage improvements have been identified at East Caithness Cliffs. A detailed review is provided by the Applicant in the East Caithness Cliffs site assessment report (Appendix 34), and we provide our advice on this report in Section F.7 below.

### F.3 Mammalian predator management and eradication

The Applicant has partnered with Muir Mhòr and NTS in the creation of a predator eradication project. A letter of intent from NTS has been received (Appendix 32) and a Memorandum of Understanding has been signed with Muir Mhòr. A Joint Implementation Plan is being drafted and will be refined post-consent. The Applicant states that the project could act as a pilot, to be scaled up to provide strategic compensation. We recommend a discussion with Offshore Wind Directorate around any potential to scale up this proposed compensation measure.

No detail is provided on site selection refinement in Section 6.4 of Appendix 29, other than the site will be a NTS property. The Applicant has used West Westray and Fair Isle SPAs as stand-ins for site selection. Again, we highlight the need for site visits and subsequent reporting to be undertaken for selected sites.

Historical peak population data are presented as a proxy for population sizes post-eradication. We do not have confidence in these numbers as presented in Section 6.4.2. Seabirds at these sites are under multiple stressors, not solely mammalian predation and therefore we cannot accept that predator removal will result in populations increasing to historical highs.

We recommend the Applicant provides more realistic population increases due to this particular compensation measure when submitting further detail. This must be evidence based and can include a literature review for evidence of potential predator densities along Scottish coastlines with similar habitats, potential levels of predation by each predator and therefore an estimate of the numbers of birds which may be protected, sense checked by the number and distribution of birds currently breeding at the colonies. Alternatively, the Applicant could look at other sites where this measure has been done in the past and compare pre- and post-predator eradication

breeding success, although with the caveat that this can be site- and time era-specific. Ultimately, we would expect any benefits to the measure to be strongly evidence-based and site/ habitat/ species specific.

We also require strong evidence of presence of predators and of predation upon seabirds. This could be via scat evidence, thermal imaging evidence of predators, stable isotope analysis or other techniques. This would need to be backed up with evidence of percentage of colony within reach of the predators as colonies are not uniform.

We are content with the Applicant's consideration of indirect effects in Section 6.4.2 of Appendix 29, through accidental or secondary poisoning, disturbance during construction to breeding birds, and impacts to habitat and flora. We direct the Applicant to the Best Practice manual[9] for the use of anticoagulant rodenticides from Biosecurity for Scotland.

We are also content with the principles of the Applicant's approach to baseline data collection and monitoring the success of this measure, as detailed in Section 3.2.6 of Appendix 30. We expect further detail to be provided in the Joint Implementation Plan as to the methodologies to be used.

If baseline or monitoring data cannot be directly collected, the use of alternative sources of data (e.g. data from nearby sites, historical data and estimates of likely re-incursion rates in the absence of biosecurity) is acceptable when site specific data is not available and cannot be collected. Potential limitations and confounding factors should be considered when using alternative sources of data, such as differences in habitat type, species composition, and wider changes that may have occurred over the time period between historical data and the current day (e.g. changes in prey availability, climate change, mass mortality events and HPAI outbreaks etc).

The examples of suboptimal monitoring outcomes and their respective potential corrective measures appear to be logical.

### F.4 Bycatch mitigation

The Applicant is proposing bycatch mitigation measures to be conducted in Scotland, with the aim of compensating for gannet and guillemot impacts.

The target fishery has not yet been identified so the Applicant is unable to quantify the benefits of the proposed bycatch reduction to show that the measure can compensate for predicted losses. A literature review of the impacts of seabird bycatch on gannet and guillemot is presented in Section 6.5.2 of Appendix 29. This provides useful context and evidence that gannet and guillemot are vulnerable to bycatch in Scottish waters. This review also provides evidence specific to fishery type and region. However, further baseline monitoring is required to identify the scale of bycatch for both guillemot and gannet in Scottish fisheries. Additionally, further evidence is required to quantify the degree to which the bycatch mitigation compensation plan will reduce bycatch. The scale of compensation possible through this measure also depends on the scale of bycatch mitigation that is currently in place in the relevant fishery. The Applicant plans to use trial studies to help to address these knowledge gaps.

A literature review of the indirect effects of bycatch mitigation is presented in Section 6.5.3 of Appendix 29, highlighting cases where a mitigation measure that benefits one species may result

[9] https://biosecurityforlife.org.uk/admin/resources/manual-use-of-rodenticide-bait.pdf

in more bycatch of another species. This is useful context and should be taken into consideration during the development of the bycatch mitigation plan so that these risks can be minimised.

In Section 6.5.4 of Appendix 29, the Applicant outlines the range of voluntary and collaborative actions that they have the capacity to deliver to support the implementation of bycatch mitigation measures. This is a useful information and helps us to understand what form the mitigation measures may take.

The pilot study is also discussed in Section 6.5.4. A self-reporting bycatch study was ran from March to October in 2024 and included 10 fishing vessels (3 static gear boats, 7 trawlers and 1 dredger). It would be helpful if the type of static gear deployed by the 3 static gear boats could be provided, as different bycatch impacts are expected for different static gear types. For example, longline fishing was noted in the literature review as impacting gannets, and so it would be helpful to know whether this fishery type is included in the pilot study. Despite hundreds of deployments and retrievals being monitored in this study there were no instances of seabird entanglement or bycatch reported. The Applicant is considering increasing the sample size and potentially using additional or alternative study regions for 2026. The Applicant has also collected some video footage of gear setting and retrieval on a subset of vessels during 2025, but this is still being reviewed and so no data is available yet.

As no seabird entanglement or bycatch has been recorded in the pilot studies to date, our assessment of the effectiveness of the scaled-up measure will be dependent on the full results of the pilot studies once more data has been collected and analysed. We encourage the expansion of the pilot studies and request that we are kept up to date as to the numbers and types of fishing vessels and gear included, as well as any changes in the location of the studies. The Applicant could also consider an expansion of the pilot study to the west coast of Scotland.

We also note that in Section 3.3.2.5 of the refined IMP (Appendix 30), the Applicant states: "*Longline and static gear vessels are likely to be prioritised, as bycatch in trawls for the target species (gannet and auks) is thought to be low, with trawls thus lower priority for bycatch reduction".* We therefore suggest that the expansion of the pilot study should target longline and static gear vessels.

We welcome the Applicant's statement in the refined IMP that Clean Catch and other relevant parties will be consulted in order to identify alternative or additional delivery locations. We suggest that these groups could also be consulted in relation to an expansion of the pilot studies.

The Applicant states that the bycatch mitigation measure will benefit the biogeographic population and site network more generally, rather than specific SPAs. However, they intend to identify the colonies which are likely to benefit based on published data on seabird distribution, connectivity and foraging sites. When a specific fishery has been identified to undertake this measure, further information will be provided within the IMP. We welcome this approach to assess which colonies will benefit. The methods outlined in our guidance notes 3 and 4[10] may also be useful in determining connectivity in the breeding season via foraging range and in the non-breeding season via BDMPS.

[10] https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/renewable-energy/marine-renewables/advice-marine-renewables-development

With regards to quantification of the existing pressures, existing management measures, and information on how this measure integrates with existing management measures, the Applicant refers to their literature review of the impacts of seabird bycatch on gannet and guillemot. The literature review provides useful context, and we note that the pilot studies may also be helpful in quantifying the existing pressures. The Applicant also states that further information on how bycatch mitigation would integrate into existing management measures will be discussed in the final IMP when the target fishery is identified, which we welcome.

In Section 3.3.7 of Appendix 30, the Applicant states that monitoring of seabird bycatch numbers and rates will be carried out across all participating vessels using electronic monitoring, supported by the use of trained on-board observers where possible. We welcome the alignment of data collection methodology with Clean Catch UK and the UK Bycatch Monitoring Programme and the refinement of methodology through the steering group. The use of control and mitigation groups will be helpful in determining the effectiveness of the mitigation measure. The possible suboptimal monitoring outcomes and the potential corrective measures presented are logical. We expect additional details to be provided as the IMP develops, and the mitigation method is selected.

### F.5 Restoration or maintenance of breeding sites

The restoration or maintenance of breeding sites potential compensation measure is discussed in Section 6.6 of Appendix 29. The Applicant proposes the restoration or maintenance of breeding sites for puffin. The Applicant is currently in the process of refining site selection through engagement with site managers and the completion of initial site visits. While a confirmed site has not yet been identified, potential opportunities have been recognised at the Isle of May and the East Caithness Cliffs. The Applicant's aim is to carry out feasibility site visits and baseline monitoring during the first breeding season post-consent, with implementation locations and measure design finalised shortly after in collaboration with site managers. Final details regarding site selection will be confirmed within the forthcoming IMP.

Data from the Isle of May is presented as an example of the calculations of potential benefits in Section 6.6.1. Data is presented to show that the puffin population at the Isle of May has decline by 17,196 pairs since 2003. It is suggested that there is potential nesting space for over 17,196 pairs at the Isle of May. The applicant acknowledges that further site visits would be required to determine the extent to which habitat degradation has impacted the Isle of May (or whichever site is selected).

We are not confident in the link between the decline in puffin AOBs at the Isle of May and the potential scope of breeding site restoration at the Isle of May. Without further data, it is not clear how much of this decline, if any, is due to breeding site degradation. However, as the number of nests required to meet compensation requirements for puffin is relatively small, we acknowledge that there may be scope for this measure to contribute the necessary nests at this or other colonies. Additionally, the information provided from the Applicant's site visit does suggest that some puffin burrows have been lost to habitat degradation. The additional work that the Applicant proposes to undertake at the Isle of May in Section 6.6.3.5 should address this knowledge gap.

The Applicant provides a useful literature review of the potential indirect effects of restoration activities in Section 6.6.2, specifically the removal of invasive plant species (such as tree mallow).

However, there is no discussion of the possible indirect impacts of the other measures mentioned, namely erosion reduction and drainage management.

The principles of the planned baseline data collection in Section 3.4 of Appendix 30 are logical. We expect further details to be provided as to the exact methodology to be used as the IMP is developed.

Should artificial puffin burrows chosen as a measure, then monitoring of the rate of burrow uptake should consider whether newly occupied artificial burrows actually indicate an increase in the number of breeding pairs at the site, or whether existing pairs may have simply moved burrow (particularly if existing natural burrows continue to be lost to habitat degradation). This may be addressed by monitoring the overall colony size. The Applicant should also consider the potential for differences in breeding success between artificial and natural burrows, taking into account burrow depth.

The indicators of measure failure described in Section 3.4.6 of Appendix 30 are logical. Further details as to the exact methodology and thresholds can be provided as more information becomes available. We are content with the potential suboptimal monitoring outcomes and the respective potential corrective measures. Any additional construction work required as a corrective measure should be assessed for potential unintended impacts and care should be taken to avoid impacts and disturbance to breeding birds and any other protected features.

*F.5.1 Isle of May site visit*

As detailed in Section 6.6.3.3-7 of Appendix 29, the Applicant undertook site visits to the Isle of May and noted signs of habitat degradation and erosion affecting puffin burrows. Some habitat degradation was thought to be due to visitors walking off-path. The Applicant proposes undertaking further work, including:

- Mapping burrow collapse and habitat loss using site visits and historical data
- Review of path network to identify erosion-prone areas and improvement opportunities
- Literature review on the consequences of inaction regarding burrow collapse
- Analysis of puffin population trends and changes in habitat availability over time
- Evaluation of puffin nest box designs and their effectiveness in supporting breeding success

This appears to be a robust plan for addressing the knowledge gaps and will be valuable for informing future management decisions. We also welcome that the Applicant will collaborate with the site warden and NatureScot.

The measures proposed for the Isle of May include:

- Boardwalks over soft ground: Preventing further erosion and protecting underlying burrow structures.
- Path creation using stabilising materials: Employing rock, gravel, or ground stabilisation techniques to reinforce paths and reduce lateral erosion.
- Puffin nest box installation: Providing artificial nesting sites to compensate for lost or degraded burrows
- Native ground cover restoration: Replanting vegetation and implementing targeted watering to support habitat recovery and reduce soil loss.

- These measures are intended to stabilise the landscape, protect existing burrows, and enhance breeding habitat availability.

These measures appear to be appropriate, dependent on the results of the further work to assess the potential effectiveness of the measure. In general, we would prefer the restoration of natural nest sites over the addition of artificial nest sites. However, we welcome a discussion of the potential benefits of artificial puffin burrows in this site-specific context. We welcome an ongoing discussion of the proposed assessment works.

### F.6 Conservation management funding

The Applicant states that the conservation management funding currently being considered includes the measures and collaborations set out above. Other funding options are not currently being actively sought by the Applicant, but should opportunities arise details will be set out as part of the IMP process.

### F.7 East Caithness Cliffs Site Assessment Report

The Applicant has also provided an East Caithness Cliffs Site Assessment Report in Appendix 34. On 16 and 17 June 2025 the Applicant carried out site visits to locations along the coastline of East Caithness Cliffs (ECC) SPA and conducted surveys of habitats in order to identify potential locations for compensation measures.

In summary, two locations have been identified, with three possible compensation measures:

- [redacted]
  - [redacted]
  - [redacted]
- [redacted]
  - [redacted]

*F.7.1 [redacted]: Reduction of visitor disturbance*

The details from the site visit to [redacted] presented in Appendix 34 are very useful. While the disturbance observed in this site visit is not extreme, it is possible that these low-levels of disturbance across the entire breeding season may cause stress for the fulmar nesting at the top of the cliff, potentially reducing their breeding success. From the details presented in the report, it seems unlikely that other seabird species are impacted by visitor disturbance at this site.

In order for the potential benefits of this compensation measure to be quantified, additional information would be required. The following data may be useful for this:

- Measurements of visitor presence along the pathway to [redacted] across the breeding season, with considerations of how visitor presence is likely to differ over time of day, weekdays, weekends and holidays. Additional site visits could also consider visiting at

different tidal states to assess the potential for visitor disturbance from visitors walking along the rocks at the bottom of the cliff at low tide.

- An evidence-based estimate of the number of fulmar impacted by visitor disturbance, i.e. how many fulmar are nesting close enough to the edge of the cliff where they have direct line of sight to and are aware of visitors on the current path. If the Applicant believes that this measure will benefit other seabird species, then evidence should be provided to support this.
- Measurements and monitoring of the breeding success of fulmar impacted by the disturbance (i.e. those at the top of the cliff near the pathway to [redacted]) before and after the implementation of the measure

Additionally, there should also be a detailed plan for the installation of the new path section, preferably with maps showing the distance from the cliff edge and where the new path diverges from the old. [redacted] Means of preventing visitors from ignoring the new path should also be considered, especially if the new path is to be up to 8 metres away from the cliff edge. The planned information signs will help to address this issue, but the natural tendency of visitors to create shortcuts between path sections should also be considered. Monitoring and adaptive management of the path system may be necessary if visitors fail to follow the new pathway. Additionally, fence re-alignment and viewing platform installation are also mentioned as possible activities in the report, if either or both of these are taken forward, then further details should be provided.

Any construction activity should be planned in such a way as to reduce impacts to the breeding birds at the SPA, preferably by taking place outside of the breeding season. The Applicant should discuss construction activities with NatureScot once more details are available. The potential impacts of any building activities on the features of the [redacted] should also be considered. The most recent condition monitoring report highlights that the SAC is in good condition. However, we advise that the detailed compensation plan will require an assessment for impacts on the adjacent SSSI and SAC.

In view of our comments above, we request that further consultation and agreement with NatureScot, regarding the detailed design of the measure, is undertaken before the proposed plan is finalised.

*F.7.2 [redacted]: Rabbit eradication*

It is stated that rabbit burrows are causing erosion at the top of the cliffs, which is resulting in vegetation damage and localised collapse of soil (in some cases immediately above nesting fulmar). The report also notes that soil collapse may also provide an avenue for predators to access additional nest sites on the cliffs. We agree that it is likely that some nesting fulmar may benefit from measures to limit erosion but the benefits to other species remain unclear. The Applicant proposes the eradication of rabbits (using lethal or non-lethal means) and the exclusion of animals from clifftops using fences and “rabbit mat” mesh. The compensation measure would be monitored using fixed point photographs and vegetation monitoring.

In order for the potential benefits of this compensation measure to be quantified, additional information would be required. The following data may be useful for this:

- An evidence-based assessment of the number of nesting seabirds at risk from rabbit-caused erosion, including a count of fulmar directly below areas at risk from soil collapse. It may also be possible for the Applicant to estimate which nests are at imminent risk of being impacted, and which ones may be at risk at some point in the future.
- If other species are to be included within this measure, then evidence should be provided to show that individuals/nests of these species are at risk from the rabbit-induced soil erosion and collapse. For cliff-nesting birds, an evidence-based assessment of the sections of the cliff which are believed to be at risk due to soil collapse, or due to an increase in predator accessibility should be carried out. These assessments may need to be qualitative, but could be supported through the use of photograph where at risk sections are clearly indicated and labelled. A desk-based review of the evidence from sites with similar cliff structures may be useful for providing additional context, especially if species other than fulmar may be impacted.
- Fixed-point photographs of the areas at risk of soil collapse prior to the measure may be useful for establishing the rate of soil erosion, and the consequences of soil erosion and collapse. Seasonal impacts on soil erosion may also need to be considered, as the season during which the soil collapses may impact whether impacts to breeding seabirds are direct, indirect, or minimal.

The Applicant will also need to consider the potential for negative impacts of rabbit eradication on other species, dependent on the type of eradication method employed, as well as indirect ecosystem level effects. We note that there is likely to be some overlap in the indirect impacts of this measure with those from the mammalian predator control measure. However, different lethal control methods tend to be employed against rabbits, and these may carry different risks to seabirds.

The potential impacts of the fence installation and presence on the features of the [redacted] should also be considered. The most recent condition monitoring report highlights that the SAC is in good condition.

*F.7.3 [redacted]: Drainage management*

The Applicant has identified a Section of cliff [redacted] where a significant amount of water was draining down the side of the cliff. Kittiwakes can be seen nesting on the dry sections of cliffs, up to the edge of the wet section. It is therefore possible that if the wet section were to be dried there may be scope for the kittiwake colony to extend into the newly dry section. However, we note that the numbers of kittiwake nesting on the dry section is not particularly dense. Additionally, the photographs do not show the lower part of the cliff, so it is unclear whether guillemots and razorbills would also be expected to benefit from this measure.

There is a paucity of information on impacts of rainfall/ run-off on cliff-nesting seabirds and how effective management of this will be. Acknowledging this, we consider that although there are no data to directly support efficacy, it is logically assumed that reduction of the run-off will positively affect seabirds and their nesting habitat. This presents an opportunity to better quantify the impacts of this as a management measure. If after implementation, monitoring indicates this measure not to be sufficient then adaptive management measures will be required.

This measure will require meteorological, hydrological and biological monitoring, namely, the rain and storm conditions over the monitoring period, how the hydrological function changes, and if the measure has been successful in terms of improving seabird breeding numbers. Some of this data will need to be collected to provide a baseline to inform the detailed monitoring.

The detailed compensation plan should include archival and historic data on both the drainage and areas of nesting birds within the geo, including from local seabird recorders and landowners.

Estimates of the number of birds which may then occupy the dry section of the cliff should be based on a biologically realistic estimate of how many birds are likely to colonise the new section. For example, estimates of the density of birds on the nearby cliff may be more relevant than density estimates derived from the SPA as a whole. We note that from the photographs presented in the report, the section of cliff directly next to the wet section is not especially crowded, and so there may not be a lack of appropriate nesting space in this area. However, the Applicant may also consider gathering evidence to assess whether the section to potentially be dried may provide any advantages over the currently dry sections (e.g. better sheltering from extreme weather conditions, or more suitable ledge space). Additionally, monitoring of the effectiveness of this measure should also take into account the potential that any new colonisation of the newly dried section may simply be birds moving over from the nearby already dry section and may not result in an increase in the net number of nests in the local area.

The area proposed for this measure is adjacent to [redacted] The most recent condition monitoring report highlights that the SAC is in good condition. However, we advise that the detailed compensation plan will require an assessment for impacts on the adjacent SSSI and SAC, particularly where the run-off is diverted to, i.e. how do the changes in drainage function through the SSSI and SAC under heavier rainfall and how the changes in hydrology will impact on the plant species that comprise the SAC and SSSI designation.

Northern Lighthouse Board

| | |
|---|---|
| **From:** | [redacted] |
| **To:** | MD Marine Renewables |
| **Cc:** | [redacted] |
| **Subject:** | RE: [EXT] FW: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission - Consultation – Response Required by 1 December 2025 |
| **Date:** | 03 December 2025 13:19:34 |
| **Attachments:** | image001.png |

Christine,

Please accept my apologies – it appears that I did miss sending this response!

NLB have no comment to provide on the additional information relating to marine mammals, ornithology, physical processes, and herring receptors at the Caledonia North and South OWF projects.

Regards

[redacted]

[redacted]
Northern Lighthouse Board

[redacted]

Orkney Islands Council

| | |
|---|---|
| **From:** | Marine Planning |
| **To:** | MD Marine Renewables |
| **Subject:** | RE: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission - Consultation – Response Required by 1 December 2025 |
| **Date:** | 28 October 2025 14:19:36 |
| **Attachments:** | image003.png |

Classification: NOT PROTECTIVELY MARKED

Hi,

Thank you for consulting us. OIC Marine Planning have no comments to make on the MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 Caledonia North and South Offshore Wind Farms Additional Information Consultation.

Kind regards,
Emily

**Emily Murphy Gray | Graduate Marine Planner**
Development and Marine Planning | Planning and Regulatory Services
Infrastructure and Organisation [redacted] evelopment | Orkney Islands Council
[redacted] | OIC Marine Planning

Public Representative – MacDuff Resident

| | |
|---|---|
| **From:** | [redacted] |
| **To:** | MD Marine Renewables |
| **Subject:** | Re: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission - Consultation – Response Required by 1 December 2025 |
| **Date:** | 26 November 2025 16:07:38 |
| **Attachments:** | image001.png |

Dear Marine Directorate

Thank you for the advice of further documentation submitted as part of the Caledonian Wind Farm EIA. As with my comments in January, my representations below refer mostly to what I consider as incomplete considerations of potential impacts to cetaceans; in short the additional information now submitted makes hardly any additional considerations as regards:
- risks to cetaceans during the operation of the Caledonia OWF;
- risks to cetaceans during the construction of the export cable.

More specifically:

1/ In the OWF itself, ie the offshore site, the original considerations for Marine Mammals were considered in Volume 2 Chapter 7. Specifically, Table 7-7 lists the risks that the EIA considers – nearly all of which are risks that apply during the construction phase. Next to no consideration was given in that document to the risks to cetaceans during normal operation of the OWF, specifically no consideration was given in the original EIA as regards risks from mooring catenaries.
The newly submitted Appendix 28 is entitled “Marine Mammals RIAA Updates” but this, and other new Appendices, completely fail to make any additional risk considerations; for examples risk from mooring catenaries. I find the documentation unclear whether the floating units will be tension leg or catenary moored, but if the latter is being considered then surely all risks to cetaceans should be considered, and not just those of piling. Will there be a risk assessment during the design phase as part of the decision process between the choice of TLP or catenary mooring, and further update this EIA?
For clarity, I have observed near misses between moving mooring lines and cetaceans, including during wind farm operations, and with moored wind turbines being a fairly new concept, in my opinion such risks should not be ignored - especially as there are methods to quantify the inputs needed for a risk assessment.
In short this EIA appears to be incomplete, since such risks are not even mentioned, let alone evaluated.

2/ Volume 8 Appendix 27 – specifically referring to the Export Corridor – appears to still not address some of the limitations of the original documents for this aspect of the whole development.
Section 4.2.3.1 makes a sweeping statement that “the overall effect of cumulative vessel disturbance as a result of construction activities taking place with” the export corridor “is considered to be Minor and not significant”. There seems to be little evidence in support of this statement, especially as the “sensitivity” – which the EIA considers to be Low – is in fact specifically only in the context of the resilience of the local population size (reference Volume 2 Chapter 7 Sections 7.5.4.4 et seq) specifically in relation to noise disturbance from piling operations, and not any other risks.
I would represent that impact and sensitivity should be considered not just as regards noise during construction operations, but from potential physical impacts. These can include – as in the offshore field itself – the movement of mooring lines or the export cables themselves; it can include plumes of sediment caused by trenching operations, or caused by the propulsion of installation vessels in relatively shallow water.

3/ Volume 2 Chapter 7, nor Volume 8 Appendix 27, do not define the time frame of the impact of noise disturbances. Hence, in the same way as cumulative impact of all future projects in the area is considered, the cumulative impact of previous projects should also be considered but isn't; ie the projects that have already happened in the same small geographical area as the Caledonia export corridor. This is considered relevant as vessel disturbances to Bottlenose Dolphins behaviour have an effect that can last for several months for those individuals – perhaps the “medium” impact this EIAR refers to - and that a repeat occurrence of a similar disturbance, remains in memory and can cause a long term behaviour change – and therefore their ability to forage in prime areas. As disturbances did occur during Moray East installation, and with Moray West to be installed before Caledonia, surely this cumulative effect should be considered too.

4/ This EIAR advises that as there is insufficient information on density of cetaceans, it uses a uniform density over the area. While this may be true offshore, there is considerably more data for the coastal corridor than is referenced in Appendix 22. The references given for density in the coastal area are generic references and not site specific.

The Shorewatch program is, as the name suggests, shore based, and therefore specifically looking at, and recording data for, specific sites within the coastal corridor. This program has been running since 2008 in the Moray Firth, and specifically in the area of the Caledonia OECC, there is very substantial data since 2011. Not to consider this database in the assessment of cetaceans for this project would surely call into question the veracity of the conclusions this EIAR makes in relation to the coastal zone.

More information about the Shorewatch program can be found at https://whales.org/Shorewatch
The sightings information from the program are uploaded annually to https://nbnatlas.org/ but all the Shorewatch data may be accessible by emailing data@shorewatch.org

Two other summary references for relevant data are:
https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2021.642386/full
https://www.sciencedirect.com/science/article/pii/S2351989415000396?via%3Dihub

5/ Appendix 31 is a Vessel Traffic Assessment, providing a base case used elsewhere in the EIA.

The Report notes, Section 1.3, that there are a range of vessels that are not included as they are not obliged to carry AIS equipment. The Report correctly says “there may be a proportion of the vessel traffic in the area which is not covered by the AIS data”, but makes no attempt to quantify that proportion, and therefore underestimates the density of vessel traffic.
It would also be wrong to assume that small vessels, under 15m in length, do not go offshore and out of sight of land. Naval vessels of any nation, including Scottish Marine Protection vessels, also do not transmit AIS data, and this is not mentioned in Appendix 31.

This EIA could consider the data included in the following study which quantifies the under-representation of AIS data for areas including the Moray Firth.:
https://www.sciencedirect.com/science/article/pii/S0308597X25001344

I would be happy to further discuss any of these aspects at your or the applicant's convenience.

Best regards
[redacted]

Royal Yachting Association Scotland

| | |
|---|---|
| **From:** | [redacted] |
| **To:** | MD Marine Renewables |
| **Subject:** | RE: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission - Consultation – Response Required by 1 December 2025 |
| **Date:** | 17 October 2025 16:30:34 |
| **Attachments:** | image002.png<br>image003.png |

---

Hi Christine,

I write to inform you that RYA Scotland has no comment that they wish to make on this additional information consultation.

Kind Regards

Pauline

**Pauline McGrow**
**Business Support Lead**

**Royal Yachting Association Scotland**
[redacted]

Scottish & Southern Electricity Networks
Transmission

Scottish Hydro Electric Transmission Plc.
Prime View, Prime Four Business Park
Kingswells Causeway
Aberdeen
AB15 8NY

The Scottish Government
Marine Directorate Licensing and Operations Team
Marine Laboratory
Aberdeen
AB11 9DB

Submitted via email: MD.MarineRenewables@gov.scot

01 December 2025

Dear Marine Directorate, Licensing and Operations Team,

**REF: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms**

Thank-you for the opportunity to provide comment on the Caledonia North and South Offshore Wind Farm EIA additional information documentation.

As the owner of the electricity transmission network in the North of Scotland, Scottish Hydro Electric Transmission plc (trading as Scottish and Southern Electricity Networks (SSEN) Transmission) we are currently progressing over £22bn of investment across our network area both onshore and offshore, enabling the connection of the renewable energy needed to meet Scottish and UK Government 2030 energy targets and beyond: providing greater home-grown energy security and supporting Scotland and the UK's pathway to Net Zero.

SSEN Transmission appreciate the inclusion and consideration of SSEN Transmissions 'Caithness - Moray HVDC Link' throughout the assessments and believe that consideration and reference should also be made to the 'Spittal-Peterhead Subsea Cable Link' as this project has recently received its Marine Licence and has proximity to the Northern array area. Lastly, we highlight that Caledonia's offshore transmission area as detailed in the documentation shared is likely to interact with SSEN Transmissions 'Shetland HVDC link 2' project, which we will continue regular engagement with Caledonia offshore wind regarding this project. Please see the most recent information available for these projects at the following links Shetland HVDC link 2 - SSEN Transmission, Spittal – Peterhead Subsea Cable Link - SSEN Transmission and Caithness - Moray - SSEN Transmission. We continue to encourage regular engagement between the Caledonia North and South project and ourselves with respect to the project and export cable corridors and requirements for proximity and/or crossing agreements as per the International Cable Protection Committee and the European Subsea Cables Association guidelines.

It should also be noted that as providers of critical national infrastructure there is the potential for future projects beyond 2030 to be located within and adjacent to the Caledonia North and South offshore wind farm and transmission corridor, therefore presenting the potential for future interactions.

We remain committed to working with other legitimate users of the sea in a proactive manner, enabling all parties to deliver successful projects wherever reasonably possible. This is especially important where crossing agreements are to be developed, giving due consideration and provision for present and future cables to cross both export and generation sites, maintaining the freedom of the seas for both telecommunications and power cables. We reiterate and encourage regular and proactive engagement as the Caledonia North and South Offshore Wind Farm progresses.

Lastly we highlight and suggest the use of our 'Project map' Project Map - SSEN Transmission as this will provide the most up to date information regarding any developing SSEN Transmission projects.

I am happy to discuss further the comments above should there be any follow-on questions or concerns.

Yours sincerely

Erin Wilson
Assistant Marine Consents and Environment Manager | [redacted]

Scottish Enterprise

| | |
|---|---|
| **From:** | [redacted] |
| **To:** | MD Marine Renewables |
| **Cc:** | [redacted] |
| **Subject:** | RE: [CORR/7056] FW: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited Caledonia Nort h and South Offshore Wind Farms ind Farms – Additional Information Submission - Consultation – Response Required by 1 December |
| **Date:** | 09 December 2025 15:19:10 |
| **Attachments:** | image001.png |

---

Hi Christine

I can confirm nil response from Scottish Enterprise.

Thanks
[redacted]

Scottish Environment Protection Agency

**From:** [redacted]
**To:** MD Marine Renewables
**Cc:** [redacted]
**Subject:** PCS-20007046 SEPA Response to MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013
**Date:** 28 October 2025 14:16:20
**Attachments:** image.png

---

To Whom It May Concern,

Marine (Scotland) Act 2010
MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013
Caledonia North and South Offshore Wind Farms
Approximately 28KM from Wick at its Northmost Point and 48KM from Banff at its Southmost Point

Thank you for the above consultation. Based on the information provided, it appears that this application falls below the thresholds for which SEPA provide site specific advice. Please refer to our standing advice and other guidance which is available on our website.

In addition, please also refer to our SEPA standing advice for the Department for Business, Energy and Industrial Strategy and Marine Scotland on marine consultations available here.

If there is a significant site-specific issue, not addressed by our guidance or other information provided on our website, with which you would want our advice, then please reconsult us highlighting the issue in question and we will try our best to assist.

I trust these comments are of assistance - please do not hesitate to contact me if you require any further information.

Kind regards,
Barbara Olszowy
Planning Officer

sepa Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba
For the future of our environment

Scottish Fishermen’s Federation

Our Ref: OB- MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 /0025/001

Your Ref: MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission - Consultation

1st December 2025

Scottish Fishermen's Federation
24 Rubislaw Terrace
Aberdeen, AB10 1XE
Scotland UK

T: +44 (0) 1224 646944
E: sff@sff.co.uk

**www.sff.co.uk**

Christine McGhie
Marine Directorate – Licensing Operations Team
Scottish Government
E-mail: MD.MarineLicensing@gov.scot

**Response to MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission – Consultation**

The SFF represents over 450 fishing vessels through its constituent associations, including the Anglo Scottish Fishermen's Association, Fife Fishermen's Association, Fishing Vessel Agents and Owners Association, Mallaig & North West Fishermen's Association, Orkney Fisheries Association, Scottish Pelagic Fishermen's Association, the Scottish White Fish Producers Association and Shetland Fishermen's Association. The Chair of the North East Coast Regional Inshore Fisheries Group (NECRIFG) has been consulted and is in agreement with the content of this response.

On behalf of the Scottish Fishermen's Federation (SFF), I write in response to the statutory consultation on the additional information submitted by Caledonia Offshore Wind Farm Limited in relation to the applications for consent under Section 36 of the Electricity Act 1989 and associated marine licences for the Caledonia North and Caledonia South Offshore Wind Farms. Following a review of the Environmental Impact Assessment (EIA) Addendum and supporting documentation, we wish to raise the following points of concern on behalf of our members.

**Key Concerns**

1. **Physical Processes and Stratification**

The additional technical note (Appendix 1) confirms seasonal stratification and frontal systems within the Moray Firth, which are critical for nutrient cycling and primary productivity[1]. These processes underpin fish spawning success and recruitment, particularly for species such as herring and sandeel.

[1] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1001, Volume 8 Additional Information, Appendix 1: Marine and Coastal Processes Stratification Technical Note, Section 2.1 (Regional Overview) and Section 2.4 (Impact Assessment)

The assessment concludes that impacts from wind farm structures on stratification are low magnitude and minor significance but acknowledges substantial uncertainties due to coarse data resolution and lack of fine-scale temporal monitoring[2].
Even minor localised changes in mixing could alter prey availability and spawning conditions[3]. We request clarity on post-construction monitoring commitments for stratification and nutrient fluxes given the acknowledged knowledge gaps and potential ecosystem-level consequences[4].

2. **Burrowed Mud Habitat Loss (Southern Trench ncMPA)**

Frontal features within the Southern Trench NCMPA are designated for biodiversity importance. Any disturbance could indirectly affect fish aggregations and spawning habitats. The significance of effect is assessed as "Minor," but given the "High" sensitivity of this receptor, we recommend precautionary measures and cumulative impact consideration[5].

Appendix 33 confirms that burrowed mud habitats are highly sensitive to physical changes, with low tolerance to hard substrate placement[6]. Cable protection within the Southern Trench NCMPA could result in permanent habitat alteration for the 35-year operational life of the OWF[7], with recovery only possible post-decommissioning and expected to be slow (>5 years for burrowing megafauna to reach sexual maturity)[8]. The worst-case scenario estimates up to 1.315 km² of burrowed mud habitat could be affected, and while this represents 0.15% of available habitat, cumulative impacts from other projects (Moray East, Moray West, Stromar, HVDC cables) indicate additive pressures[9]. We request that mitigation measures, including minimisation of cable protection footprint, be formally considered and agreed with fisheries stakeholders to safeguard benthic habitats critical for Nephrops and associated fisheries.

3. **Herring and Sandeel Spawning Grounds**

NatureScot's concerns regarding cumulative impacts on herring and sandeel remain highly relevant and are shared by the fishing industry. These species are critical both commercially and ecologically forming the foundation of marine food webs and supporting sustainable fisheries. We note the inclusion of the Ecosystem Level Effects report and Herring Additional Information Note and request that these assessments explicitly address:

- Spatial overlap with known spawning grounds and nursery habitats.

---

[2] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1001, Volume 8 Additional Information, Appendix 1: Marine and Coastal Processes Stratification Technical Note, Section 2.4.2.10 – 2.4.2.16 (Impact Assessment and Significance of Effect) and Section 3 (Limitations)

[3] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1001, Volume 8 Additional Information, Appendix 1: Marine and Coastal Processes Stratification Technical Note, Section 2.4. 1.2 (Impact Assessment)

[4] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1001, Volume 8 Additional Information, Appendix 1: Marine and Coastal Processes Stratification Technical Note, Section 3 (Limitations) and Section 4 (Conclusions)

[5] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1001, Volume 8 Additional Information, Appendix 1: Marine and Coastal Processes Stratification Technical Note, Section 2.4.2.13 – 2.4.2.16

[6] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1033, Volume 8 Additional Information, Appendix 33: Marine Protected Area Assessment Update for Burrowed Mud, Section 4.1.1.1

[7] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1033, Volume 8 Additional Information, Appendix 33: Marine Protected Area Assessment Update for Burrowed Mud, Section 4.1.1.3

[8] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1033, Volume 8 Additional Information, Appendix 33: Marine Protected Area Assessment Update for Burrowed Mud, Section 4.1.1.3

[9] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1033, Volume 8 Additional Information, Appendix 33: Marine Protected Area Assessment Update for Burrowed Mud, Section 4.1.1.6

- Potential displacement or behavioural changes arising from underwater noise (UWN), piling activities, and seabed disturbance
  Cumulative and in-combination effects with other offshore wind developments in the Moray Firth and wider North Sea

**Herring:** Substrate-dependent demersal spawners, highly sensitive to seabed disturbance and underwater noise (UWN)[10]. The Buchan and Orkney/Shetland spawning stocks interact with the wider study area which highlights regional sensitivity, even though direct overlap with the Caledonia OWF footprint is minimal. ICES advises that no activities should occur on spawning habitats unless proven non-detrimental[11]. While the Applicant concludes a Low adverse magnitude, it acknowledges potential temporary reductions in reproductive output[12] for a minority of spawning components and recommends strategic monitoring post-consent[13]. We request that this monitoring commitment be formalised and developed in consultation with fisheries stakeholders.

**Sandeel**: Listed as a Scottish Priority Marine Feature (PMF), highly sensitive to sediment disturbance. Some areas of "high" spawning potential overlap with the north of Caledonia OWF; other areas are "medium" or "low." ICES recommends avoiding habitat degradation. The Scottish sandeel fishery ban since March 2024 underscores the importance of safeguarding remaining habitats from additional pressures like OWF constructions[14]. We expect clear mitigation measures to protect PMF habitats and minimise seabed disruption.

**Cumulative and in-combination effects** are all assessed as Medium sensitivity, Low magnitude, and not significant in EIA terms, but still uncertainties remain. Multiple OWFs, combined with climate change and other marine activities, could exacerbate risks to spawning success and prey availability[15]. We strongly recommend a regional cumulative impact framework, including fisheries representation, to address additive pressures and ensure ecosystem resilience.

**Conclusion**
The Scottish fishing industry requires confidence that offshore wind development will not compromise the health and sustainability of marine ecosystems. Specifically, we expect:

- Physical and ecological processes underpinning fish stocks, such as stratification and nutrient cycling, to remain intact and be monitored post-construction.
- Key spawning habitats for herring and sandeel to be safeguarded through robust mitigation and strategic monitoring commitments developed in consultation with fisheries stakeholders.
- Burrowed mud habitats within the Southern Trench NCMPA to be protected, with any unavoidable impacts minimised and cumulative pressures addressed through best practice measures.
- Cumulative and in-combination effects across multiple offshore developments to be fully assessed within a regional framework that includes fisheries representation.

[10] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1002, Volume 8 Additional Information, Appendix 2: Ecosystem Level Effects, Section 3.3.1.2 (Herring)
[11] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1002, Volume 8 Additional Information, Appendix 2: Ecosystem Level Effects, Section 2.3.1.11–2.3.1.12
[12] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1003, Volume 8 Additional Information, Appendix 3: Herring Additional Information Note, Section 3.3.2.5
[13] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1003, Volume 8 Additional Information, Appendix 3: Herring Additional Information Note, Section 3.3.2.5 and Section 4.1.1.3
[14] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1002, Volume 8 Additional Information, Appendix 2: Ecosystem Level Effects, Section 2.3.1.13–2.3.1.14 and 3.3.1.3 (Sandeel)
[15] Caledonia Offshore Wind Farm Additional Information Submission, Code: UKCAL-CWF-CON-EIA-RPT-00008-1002, Volume 8 Additional Information, Appendix 2: Ecosystem Level Effects, Section 3.3.1.10–3.3.1.14, Table 3-1 (In-combination effects), Section 4.2 and 4.3

Failure to address these issues risks undermining marine biodiversity, fisheries sustainability, and the socio-economic resilience of coastal communities. We strongly urge Marine Directorate and the Applicant to adopt a precautionary approach and ensure that monitoring, mitigation, and cumulative impact management are embedded as enforceable conditions of consent.

For and on behalf of the Scottish Fishermen's Federation

[redacted]

Oliwia Biros
**Offshore Consents Assessments Manager**
**Scottish Fishermen's Federation**

Scottish Water

| | |
|---|---|
| **From:** | Planning Consultations |
| **To:** | MD Marine Renewables |
| **Subject:** | DSCAS-0073905-5VG - MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission - Consultation – Response Required by 1 Decemb... |
| **Date:** | 24 October 2025 08:54:09 |
| **Attachments:** | image001.png |

Good morning Christine.

Many thanks for your update on the above noted case.

Please be advised this has been added to the case file and does not alter the original planning response.

I trust the above is acceptable however if you require any further information regarding this matter please contact us on 0800 389 0379 or via the e-mail address below or at planningconsultations@scottishwater.co.uk

Kind regards,
Ruth Kerr
Technical Analyst
North Regional Team
Strategic Development
Development Services
Scottish Water, The Bridge, Buchanan Gate Business Park, Cumbernauld Road, Stepps, Glasgow G33 6FB
[redacted]
My Working Hours: Monday to Friday 8am till 3.35 pm,
Dedicated Freephone Helpline: 0800 389 0379
Managed Email Service DevelopmentOperations@scottishwater.co.uk
Scottish Water.
Trusted to serve Scotland.

# Spey District Fisheries Board

| | |
|---|---|
| **From:** | [redacted] |
| **To:** | MD Marine Renewables |
| **Cc:** | [redacted] |
| **Subject:** | MS-00011014/ MS-00011015/ MS-00011012/ MS-00011013 - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Additional Information Submission |
| **Date:** | 15 December 2025 12:13:41 |

Good Afternoon,

Sincere apologies for not responding to this before December 1st. The SFB would like to add that SFB disagrees with the scoping out of transboundary impacts dur to the potential impact on vulnerable phases of migratory fish such as Atlantic salmon, sea lamprey and european eel. We would also like to see site specific surveys to best advise when the development area is home to these transient lifestages in order to plan mitigation efforts.

Kind regards,

[redacted]

# Transport Scotland

| | |
|---|---|
| **From:** | [redacted] |
| **To:** | MD Marine Renewables |
| **Cc:** | [redacted] |
| **Subject:** | EIA - Caledonia Offshore Wind Farm Limited – Caledonia North and South Offshore Wind Farms – Transport Scotland Consultation Response - 26-Nov-25 |
| **Date:** | 26 November 2025 17:04:52 |
| **Attachments:** | image001.png<br>image002.png<br>image003.png<br>image004.png<br>image005.png<br>image006.png |

---

**FAO Christine McGhie**

Afternoon Christine,

Thank you for the opportunity for Transport Scotland to comment on the Additional Information (AI) submitted in support of the Caledonia North and South Offshore Wind Farms. Transport Scotland was consulted on the EIAR prepared by Ocean Winds and provided comment in our letter dated 13th February 2025. In this, we sought Conditions be placed upon any consent that may be granted.

Having reviewed the AI, I note that this relates to marine mammals, ornithology, physical processes, and herring receptors. As this information has no bearing on the potential impact on the trunk road network, Transport Scotland has no comment to make on the AI itself, and I can confirm that the conclusions of our previous response remain valid.

Kind regards,

Iain

Development Management
Network Operations
Roads Delivery Directorate

transport.gov.scot

Transport Scotland, 177 Bothwell Street, Blythswood New Town, Glasgow, G2 7ER

TRANSPORT SCOTLAND
CÒMHDHAIL ALBA

Transport Scotland, the national transport agency
*Còmhdhail Alba, buidheann nàiseanta na còmhdhail*