

# Aberdeen City Council

**From:** [Redacted]  
**To:** [MD Marine Renewables](#)  
**Cc:** [PI](#); [EPConsultations](#)  
**Subject:** RE: MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – EIA Section 36 consent and Marine Licence Applications - Consultation – Response Required by 23 October 2025 - Mail Id - 50421  
**Date:** 01 October 2025 15:38:36  
**Attachments:** [image001.png](#)

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Good afternoon

I refer to your email dated 08/09/25. Thank you for engaging with the Council in relation to the above proposal.

Given that the proposed generating site lies a considerable distance outwith the administrative boundary of the City Council and that no associated land or marine based infrastructure works are anticipated within this administrative area I can confirm, using delegated powers, that the planning authority have no comments to make in response to the consultation. I trust that this is of assistance.

Yours sincerely

Robert Forbes MRTPI  
Senior Planner

Development Management  
Strategic Place Planning | City Regeneration & Environment  
Aberdeen City Council  
Business Hub 4  
Marischal College  
Broad Street  
Aberdeen  
AB10 1AB

T: [Redacted]  
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# Aberdeenshire Council

Our Ref: ENQ/2025/1313

Your Ref:

Ask for: Lindsey Geddes

Tel: [Redacted]

Email: [Redacted]

Marine Directorate - Licensing Operations Team  
Scottish Government  
Victoria Quay  
Edinburgh  
EH6 6QQ

30 September 2025

Dear Sirs

**Marine Licence Consultation (MLC) for Construction of Offshore Transmission Infrastructure (Ref: 00011410) and Construction of Generating Station (Ref: 00011409) at Aspen Offshore Wind Farm, Central North Sea, 84 Km East Of Peterhead**

Thank you for your consultation request in relation to the above proposal. Having consulted with internal consultees with an interest in this development I can provide the following comments at this time:

Natural Heritage

The consultee notes that MLC is related to the off-shore elements of the proposed windfarm (seaward of Mean High Water Springs) and as such the consideration and subsequent compensation/ mitigation of impacts will be dealt with by Marine Scotland.

However, it asks that the following points are noted:

*Proposed compensation for offshore impacts on birds* – It notes that some of the mitigation proposed may be on-shore at Buchan Ness and Fowlsheugh in Aberdeenshire and Cove Bay in Aberdeen City.

*Onshore Protected sites* – It notes that the area shown for landfall is covered by one Site of Special Scientific Interest and two Local Nature Conservation Sites (details of LNCS in Appendix). It is noted that it is proposed that horizontal directional drilling will be used to come onshore.

In relation to matters of access, it notes that coastal paths are present along several sections of the coastline where the transmission cables would come onshore.

Archaeology

The consultee confirms that having reviewed the submitted information, a Programme of Archaeological works would be required, as outlined in the submitted WSI (“*Volume 3, Appendix 13: Written Scheme of Investigation and Protocol for Archaeological Discoveries*”). This includes geophysical survey, further archaeological assessment, walkover survey and watching briefs as required. It therefore recommends that the following condition is applied should the application be minded for approval:

No works in connection with the development hereby approved shall commence unless an archaeological written scheme of investigation (WSI) has been submitted to and approved in writing by the planning authority and a programme of archaeological works has been carried out in accordance with the approved WSI. The WSI shall include details of how the recording and recovery of archaeological resources found within the application site shall be undertaken, and how any updates, if required, to the written scheme of investigation will be provided throughout the implementation of the programme of archaeological works. Should the archaeological works reveal the need for post excavation analysis the development hereby approved shall not be occupied or brought into use unless a post-excavation research design (PERD) for the analysis, publication and dissemination of results and archive deposition has been submitted to and approved in writing by the planning authority. The PERD shall be carried out in complete accordance with the approved details.

Reason: To safeguard and record the archaeological potential of the area.

Subject to the above, Aberdeenshire Council offer no objection to this proposal as contained within the provided consultation. Do not hesitate to contact me should you wish to discuss any matters further.

Yours faithfully  
[Redacted]

Paul Macari  
Head of Planning and Economy

ENC – Appendix 1 Details of the LNCS that may be potentially impacted

## **Appendix 1 Details of the LNCS that may be potentially impacted**

**Portlethen to Muchalls Coast LNCS** stretches from Portlethen Village in the north, southwards along the coast to Muchalls. The coastline is predominantly steep and rocky with a few small bays, most of which are difficult to access. On the cliff tops coastal heathland and maritime grasslands are present with rough grassland and scrub on the slopes. Inland from the site the land is managed for arable and pasture. Two watercourses reach the sea along this stretch of coastline down steep sided valleys.

The coastal heathland is dominated by heather (*Calluna vulgaris*) with crowberry (*Empetrum nigrum*), bell heather (*Erica cinerea*), matt grass (*Nardus stricta*), tormentil (*Potentilla erecta*) and heath spotted orchid (*Dactylorhiza maculata*). In wetter areas salix (*S. repens*) scrub is present. The maritime grasslands contain thrift (*Armeria maritima*), bloody crane's-bill (*Geranium sanguineum*) and rockrose (*Helianthemum nummularium*). On the slopes cocksfoot (*Dactylis glomerata*) and false oat grass (*Arrhenatherum elatius*) dominate with cow parsley (*Anthriscus sylvestris*), bracken (*Pteridium aquilinum*) and rose. The cliffs are of interest for seabirds.

**Muchalls to Stonehaven Bay LNCS** comprises a stretch of rocky cliffs and shore from north of Muchalls southwards to the southern end of Stonehaven Bay. The coastal cliffs along this stretch of coastline support a rich coastal flora with a good diversity of species on the cliffs and cliff top grasslands. Heathland is present on some of the headlands with bell heather (*Erica cinerea*). In the more exposed coastal cliffs maritime grassland is present with Scot's lovage (*Ligusticum scoticum*), thrift (*Armeria maritima*), wood vetch (*Vicia sylvatica*), and meadow saxifrage (*Saxifraga granulata*). A number of species associated with base-rich soils are present along this stretch including carline thistle (*Carlina vulgaris*), common rock rose (*Helianthemum nummularium*) and bloody crane's-bill (*Geranium sanguineum*).

Small areas of sand dune, shingle, flush and salt marsh are present along the shore. The shores around Garron Point/Skatie Shore stretch of coastline has good examples of wave-cut platforms which are flat-lying expanses of rock that stretch out to sea from the bases of the cliffs, and these support diverse populations of marine algae. The diversity of plants supports a very rich insect fauna and this site is a key site for lime loving insects. Skatie Shore, a relatively sheltered inlet, supports a number of localised insect species including the small blue butterfly (not recorded for some years) and the northern brown argus butterfly. Brown bordered lacewing is another notable species along this stretch of coastline. The cliff grasslands in the southern part of the sites are the habitat of an important population of a rare whorl snail. The rare narrow-mouthed whorl snail *Vertigo angustior* is found in two small areas near the base of the cliffs, with an estimated population of tens of thousands. This is the northernmost population in the UK and one of two in Scotland.

Cliff nesting House Martins are present in Stonehaven Bay and nesting Black Guillemots are found here at their most southerly point on the north coast.

This section contains the coastal outcrop of the Highland Boundary Fault, which marks the southern geological boundary of the Scottish Highlands.

Just south of Muchalls there is a well-developed system of glacial meltwater channels running sub-parallel to the coast. The trend of these is considered to relate to the northward movement of late-glacial ice from Strathmore towards Aberdeenshire and the Ellon area in particular. Although this ice flowed over the bed of what is now the North Sea parallel to the coast, it was thick enough to lap onto the land, depositing red clay-rich sediments which mark its landward extent. The Bridge of Muchalls meltwater system is one of the best landform systems relating to that event to be found between Stonehaven and Aberdeen. Part of the site is covered by the Garron Point SSSI which is designated for its geological and biological interest (habitats and invertebrates). The site is also designated as a SAC for the narrow-mouthed whorl snail (*Vertigo angustior*). LNCS site boundaries can be found at [Aberdeenshire Map Layers - Aberdeenshire](#).

Department of  
Agriculture,  
Environment and  
Rural Affairs

**From:** [DAERA Marine Information Requests](#)  
**To:** [MD Marine Renewables](#)  
**Subject:** RE: URGENT - MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – EIA Section 36 consent and Marine Licence Applications - Consultation – Response Required by 14 November 2025  
**Date:** 21 November 2025 11:34:45  
**Attachments:** [image001.png](#)  
[image002.png](#)

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Hi  
Apologies for the confusion.

DAERA Marine Conservation has reviewed the provided RIAA and is content with the conclusions.

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  
**Contact:** [ | **Tel:** [Redacted] | **DD:** [Reda



*Sustainability at the heart of a living, working, active landscape valued by everyone.*

# Edinburgh Airport

**From:** [Safe Guarding](#)  
**To:** [MD Marine Renewables](#)  
**Cc:** [Safe Guarding](#)  
**Subject:** MS-00011410 and MS-00011409 Cerulean Winds Aspen Project Limited - Aspen Offshore Wind Farm  
**Date:** 19 September 2025 13:14:44  
**Attachments:** [image001.png](#)

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Good afternoon,

In respect of the above, I can confirm the location of this development falls out with our Aerodrome Safeguarding zone for Edinburgh Airport therefore we have no objection/comment.

With best regards,  
Claire

**Claire Brown**  
Aerodrome Safeguarding & Compliance Officer



t: [Redacted]

My working hours are Monday-Friday  
[www.edinburghairport.com](http://www.edinburghairport.com)

Edinburgh Airport Limited  
Room 3/54, 2<sup>nd</sup> Floor Terminal Building  
EH12 9DN, Scotland

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# Fisheries Management Scotland



T: +44 (0)131 221 6567

E: [Redacted]

Licensing Operations Team  
Marine Directorate  
By e-mail

13 November 2025

Dear Sir/Madam,

**Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – EIA Section 36 consent and Marine Licence Applications**

Fisheries Management Scotland is the representative body for Scotland's District Salmon Fishery Boards, the River Tweed Commission and charitable Rivers and Fisheries Trusts. Our members work to conserve Scotland's valuable and iconic wild salmon and freshwater fish and fisheries and the aquatic environment on which they depend.

Offshore renewable energy has an important role to play if the Scottish Government are to meet their commitment for Scotland to reach net-zero emissions of all greenhouse gases by 2045. However, there remain a number of outstanding questions and concerns about the potential negative effects on diadromous fish, including Atlantic salmon and sea trout.

Our response is primarily focussed on Chapter 10 – fish and shellfish ecology. We have based our response on Table 10.2 and referenced section of the EIA (primarily section 10.7).

We welcome the commitment of the developer to fill evidence gaps as a specific condition of consent. We would like a clearer understanding of the means by which evidence gaps will be filled and the contribution that the developer is committed to making.

The applicant has changed the reference to 'The Association of District Salmon Fishery Boards' has been updated to the 'Association of Salmon Fishery Boards' (ASFB). As we stated in our original response, ASFB ceased to exist in 2017 and was superseded by Fisheries Management Scotland. Given that the applicant quoted our response, it is unclear why they have chosen to persist with a reference to ASFB.

## **Mortality, Injury, Behavioural Impacts and Auditory Masking Arising from Noise and Vibration (construction)**

We note the statements relating to Group 2 VERs, which include Atlantic salmon and sea trout. Despite noting that noise can act as both a physical and psychological barrier, which may result in delays or prolonged migration periods, increased energetic costs, reduced reproductive success and increasing the vulnerability of diadromous species to predation (section 10.7.33-10.7.34) the developer then, in common with most other proposals for offshore wind that we have reviewed, goes on to state that lack of evidence on migration routes limits the ability to determine the full extent of UWN impacts. Despite this uncertainty, the developer concludes that the magnitude of impact will be low and the significance will be minor. We do not agree with this conclusion, and we do not believe that it has been properly justified, particularly when considering impacts on an endangered species.

## **Electromagnetic Field (EMF) Effects Arising From Cables**

Chapter 10 notes that there have been suggestions (Gill and Kimber, 2005) that the presence of magnetic fields generated by cables may interrupt navigation and consequently migration. It also notes that there is a limited understanding of the EMF impacts of cables suspended in the water column as will be the configuration for floating WTG intra-array cables (Gill and Desender, 2020; Hutchison *et al.*, 2020) and that this proximity of the suspended cables to pelagic species means there is potential for greater interaction and impact compared to buried cables. 10.7.84 makes reference to work undertaken in the marine laboratory by Marine Directorate SED. However, this tank-based work investigated startle responses, and did not consider the potential for EMFs from cables to disrupt migration cues. Again, we are disappointed at the level of consideration of this impact and we don't believe that it is possible, with the evidence presented, to conclude that this impact is minor. For the same reasons, we don't agree with the conclusions related to cumulative effects of EMFs. We consider that more work is required, funded by the sector, to address the evidence gaps identified by ScotMER and alleviate concerns regarding disruption of migration for both post-smolts and returning adults.

## **Colonisation of Hard Substrates**

Section 10.7.52 states that any effects on fish and shellfish ecology arising from the introduction of hard substrates will likely be localised to the Aspen Array Area. It then goes on to discuss artificial reef effects in terms of refuge and niche pace, boosting species richness. Section 10.7.67 attempts to consider this impact, but we are disappointed at the

speculative nature in which this is dismissed. We are unclear how the developers have concluded that post smolts from rivers on the east coast of Scotland and included to migrate eastward, through the Moray Firth. Whilst this is true for rivers located in the southern Moray Firth, the tracking studies that provided this information did not track fish out with the boundaries of the Moray Firth. It is entirely conceivable that post-smolts from east coast rivers do pass through the proposed developments, in addition to other proposed and operational developments which are already in place. Statements such as 'it seems improbable' are not sufficient to alleviate our significant concerns. Our concern is that such aggregations of fish and other species will inevitably result in an aggregation of predators. For migratory fish, such as salmon, this will result in additional (and significant when cumulative effects are considered) predation hotspots on key migration routes where none previously existed. This is a fundamental and potentially highly significant change to marine ecology, which has not been properly considered to date. We do not agree that salmon populations, particularly given their current status, have medium vulnerability or high recovery from potential predation events associated with colonisation of hard substrate.

## **Visual impacts**

We consider that there are potential adverse effects on salmon arising from two distinct visual cues:

- Direct visual cues generated by light reflected from moving turbine blades and perceived by fish within the river; and
- Shadow flicker generated on the occasions when the sun, a mobile turbine blade and fish within the river are aligned.

It is important to recognise that shadow flicker is the less pervasive potential impact. Unfortunately, the developer has only focussed on shadow flicker, and the more important issue of dynamic visual cues originating from moving turbine blades and propagating through the air-water interface into the sub-surface aquatic environment has not been adequately addressed. The developer makes reference to a CREW report (Dodd and Briers, 2021) but the scope of this report was also limited to shadow flicker. Despite this, they were unable to refute any biological or ecological impact on Atlantic salmon, albeit in the context of a terrestrial windfarm adjacent to a river.

On the basis of the above, the developer has not adequately addressed our concerns.

As we have previously stated, District Salmon Fishery Boards have a statutory duty to protect and improve salmon and sea trout fisheries. In assessing marine renewable energy developments (wind, wave or tidal), it is important that DSFBs and Fisheries Trusts, can be

assured that all potential negative impacts have been assessed in full, and mitigations put in place. Where uncertainty remains, the developer should be required to contribute to research which will help fill these evidence gaps, as a condition of their operational consent. In addition, and in the light of the nature crisis, we believe that all developers should contribute to projects designed to conserve and restore important habitat at a catchment scale.

We would emphasise that to date, and as detailed above, there remains considerable uncertainty around evidence of impacts on salmon and other diadromous species. We therefore expect to see proposals for strategic research **and** mitigation. In the case of mitigation, this should be focussed, in line with international advice via NASCO, on projects which improve freshwater conditions and increase the number of healthy wild salmon and sea trout smolts leaving Scotland's rivers.

## Conclusion

It should be emphasised that we have no wish to prevent or delay any proposed development unnecessarily and we remain keen to work constructively with the developers and the Marine Directorate to identify appropriate monitoring programmes which will allow us to be able to assess the acknowledged risks of this development, and other proposed developments in a more appropriate manner. There is a clear and urgent need to fund, plan and start strategic research on the movement, abundance, swimming depth, feeding behaviour and impact pathways relevant to diadromous fish. Such research would clearly feed into the potential mitigation measures that might be deemed appropriate, and the conditions under which such mitigation should be enacted. Developers should be required to work together to fund strategic monitoring, in order to allow more certainty for all involved.

In the light of the ongoing failure to understand, quantify and address concerns relating to impacts on diadromous fish, we object to the proposal as currently set out. Should the developer make a clear and costed commitment to contributing to strategic research to address these information gaps, as a specific condition of consent, and also commit to supporting projects relevant to the conservation and restoration of diadromous fish populations, we may be in a position to lift our objection.

Yours faithfully,  
[Redacted]

Alan Wells  
CEO, Fisheries Management Scotland

**Highland and  
Islands Airports  
Limited**

**From:** [Safeguarding](#)  
**To:** [MD Marine Renewables](#)  
**Cc:** [Safeguarding](#)  
**Subject:** Re: MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – EIA Section 36 consent and Marine Licence Applications - Consultation – Response Required by 23 October 2025  
**Date:** 02 October 2025 16:11:26  
**Attachments:** [image001.png](#)  
[values2025\\_49f0881e-b581-44a4-b961-1aecd2620b56.png](#)

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OFFICIAL

**Your Ref: MS-00011410 and MS-00011409**

**Our Ref: 2025/194/INV**

**Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – Approximately 84km east of Peterhead.**

With reference to the above proposal, this development falls outwith the safeguarding criteria for all 11 Highlands and Islands Airports Limited (HIAL) Airports.

Therefore, HIAL have **No Objection, with Condition.**

Due to the proximity of Wick and Inverness Airports to Marine Ports, the construction/transportation phase of this development could conflict with safeguarding criteria for these Airports unless any planning permission granted **is subject to the following condition:**

**A construction management strategy must be submitted for the proposed development. This should include the following details:**

- **Details of the construction of the Wind Turbines onshore**
- **Turbine route map from onshore to the offshore location**

Development shall not begin until a construction management strategy has been submitted to and approved in writing by the Highlands and Islands Airport covering the application site and any adjoining land which will be used during the construction period. Such a strategy shall include the following matters:

- *details of the area(s) subject to construction activity and the storage of materials and equipment*
- *details of cranes and other tall construction equipment (including the details of obstacle lighting)*
- *control of activities likely to produce dust and smoke etc*
- *details of temporary lighting*
- *height of storage areas for materials or equipment*
- *control and disposal of putrescible waste to prevent attraction of birds- site restoration.*

The approved strategy (or any variation) approved in writing by HIAL shall be implemented for the duration of the construction period.

Reason: To ensure that construction work and construction equipment on the site and any adjoining land does not breach the Obstacle Limitation Surface (OLS) surrounding the Airport and endanger aircraft movements and the safe operation of the aerodrome.

Therefore, Highlands and Islands Airports Limited (HIAL) have **no objection to this proposal**, provided that the **above condition** is applied to any planning permission.

It is important that any conditions requested in this response are applied to a planning approval. Where a Planning Authority proposes to grant permission against the advice of HIAL, or not to attach conditions which HIAL has advised, it shall notify HIAL, and the Civil Aviation Authority and the Scottish Ministers as specified in the Safeguarding of Aerodromes Direction 2003.

Kind regards

Michael Balmain



**Safeguarding**  
Highlands and Islands Airports Ltd  
Inverness Airport Dalcross IV2 7JB  
[www.hial.co.uk](http://www.hial.co.uk)

**Our Values**



# Historic Environment Scotland



HISTORIC  
ENVIRONMENT  
SCOTLAND

ÀRAINNEACHD  
EACHDRAIDHEIL  
ALBA

By email to:

[MD.MarineRenewables@gov.scot](mailto:MD.MarineRenewables@gov.scot)

Marine Directorate  
Licencing Operations Team  
Scottish Government  
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EH6 6QQ

Longmore House  
Salisbury Place  
Edinburgh  
EH9 1SH

[HMConsultations@hes.scot](mailto:HMConsultations@hes.scot)

T: 0131 651 6787

Our case ID: 300069863

Your ref: MS-00011410

MS-00011409

23 September 2025

Dear Marine Directorate

[Cerulean Winds Aspen Project Limited - Aspen Offshore Wind Farm - Section 36 Consent and Marine Licence Application, Aspen Offshore Wind Farm Approximately 84km East of Peterhead](#)

Thank you for your consultation which we received on 8 September 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.

You should also seek advice from the Aberdeenshire Council archaeology and conservation service for matters including non-designated archaeology and Category B and C listed buildings.

### [Our Advice](#)

We are content that the EIA report provides sufficient information to come to a view on the application. We do not object to the application.

Our comments are provided as a material consideration, and this advice should be taken into account in your decision making. Our decision not to object 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.

Please note that 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

Historic Environment Scotland – Longmore House, Salisbury Place, Edinburgh, EH9 1SH

Scottish Charity No. **SC045925**

VAT No. **GB 221 8680 15**



Discoveries. For EIA projects, you must ensure that you have access to sufficient expertise to examine the EIA Report in accordance with the relevant regulations.

#### Further information

Decisions that affect the historic environment should take the [Historic Environment Policy for Scotland \(HEPS\)](#) into account as a material consideration. HEPS is supported by our [Managing Change guidance series](#).

We hope this is helpful. If you would like to submit more information about this or any other proposed development to us for comment, please send it to our consultations mailbox, [hmconsultations@hes.scot](mailto:hmconsultations@hes.scot). [Redacted]

Yours faithfully

**Historic Environment Scotland**



## Annex

### Proposed development

The Aspen Offshore Wind Farm is located in the central North Sea, approximately 84km east of Peterhead. We understand that the proposed development comprises the construction and operation of the following components:

- Up to 72 offshore Wind Turbine Generators (WTGs) with a maximum blade tip height of 310m, and associated infrastructure (nacelle and blades), Floating Foundations, Foundation Moorings and Anchors;
- Up to 3 Offshore Substation Platforms (OSPs) and foundations;
- Intra-array Cables – Cables which link the WTGs to each other and to the OSPs within Aspen Array Area;
- Offshore Transmission Cable – The subsea electricity cable running from Landfall to the OSP(s) in Aspen Array Area;
- Cable Protection on unburied or shallow buried sections of cables and at cable crossings as and when required; and
- Onshore transmission infrastructure to facilitate connection of the Project to the National Grid.

All additional onshore elements of the proposed development will form a separate application with Aberdeenshire Council. At this stage, we have not had any consultation on this aspect of the proposed development.

### Background

#### Scoping Workshop (19 January 2024)

We attended a scoping workshop with the applicant, in which they introduced the project and requested comments on their proposed approach to the EIA report. We highlighted the potential for impacts on assets at the proposed landfall area and requested that we were updated on any changes to this location.

#### Scoping Report (27 February 2025)

We responded to the Marine Directorate on the scoping report for the proposed development. The proposals comprised 67 wind turbines, with associated infrastructure. We welcomed reference to our EIA handbook, and stated that due to the distance of the turbine array from terrestrial assets in our remit, we were content with the setting impacts from the offshore element to be scoped out of any subsequent assessment. We also



noted that as of the 1<sup>st</sup> January 2025, we no longer provided advice on undesignated underwater cultural heritage.

#### Pre-application (19 June 2025)

We were approached by the applicants consultants who indicated that the proposed development had increased in scale from 67 turbines to 72 turbines. In addition, the turbine height had increased from 283m to 310m maximum tip height. We confirmed that we were content that the impacts from the offshore array element of the proposed development could be scoped out of any further assessment. We also noted that the terrestrial setting impacts from onshore elements of the proposed development would be included in a separate forthcoming Onshore EIA report.

#### EIA Report

The marine archaeology and cultural heritage assessment is included in *'Volume 2, Chapter 16: Marine Archaeology and Cultural Heritage'* and is supported by a number of figures and a technical report. We welcome that a full assessment has been provided within the application. As identified during scoping stages and through pre-application, the potential impacts of the proposed development on our interests have been scoped out of any further assessment. Following our review of the submitted application and the accompanying EIA report we are satisfied that impacts on those sites are below the level which would raise issues in the national interest. We have no further comments to make for those assets.

We do, however, note that as a result of the change in responsibilities between HES and Marine Directorate, information in the EIA report and its supporting documents relating to those roles and responsibilities is incorrect, e.g. Table 16.1 of *'Volume 2, Chapter 16: Marine Archaeology and Cultural Heritage'* and section 2.2.1 of *'Volume 3, Appendix 16.1: Marine Archaeology and Cultural Heritage Technical Report'*. This appears to be a minor technical issue and should not affect the detailed technical information or conclusions of the report.

The applicant confirmed during pre-application consultation, that terrestrial setting impacts from onshore elements of the proposed development would be included in a separate forthcoming Onshore EIA report. There remains the potential for impacts on designated assets from the terrestrial elements of the proposed development. This issue is still outstanding. Whilst it relates to the onshore elements and falls outwith the scope of this consultation, we note that it has potential to affect the offshore landfall area should it remain unresolved.



HISTORIC  
ENVIRONMENT  
SCOTLAND

ÀRAINNEACHD  
EACHDRAIDHEIL  
ALBA

## Our Position

We are satisfied that an assessment of the potential impacts from the proposed development has been undertaken, and this has allowed us to come to a view on the application. Following our review of the EIA report, we are of the opinion that the offshore elements of the development proposals do not raise historic environment issues in the national interest and therefore we do not object.

**Historic Environment Scotland**  
23 September 2025

# Hywind Scotland

**From:** [Redacted]  
**To:** [MD Marine Renewables](#)  
**Cc:** [Redacted]  
**Subject:** RE: MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – EIA Section 36 consent and Marine Licence Applications - Consultation – Response Required by 23 October 2025  
**Date:** 24 October 2025 13:02:12  
**Attachments:** [image001.png](#)

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Good afternoon

Apologies for missing this. Please find Hywind Scotland's response below:

*The Hywind Scotland project has no comments on the proposals at this stage. We welcome that the project has acknowledged the need for consideration of our operational activities when planning works and request we are kept informed of further developments with an opportunity to comment in future.*

Thanks

Reinier

Reinier Zoutenbier

Operational Consents Manager – Dudgeon, Sheringham Shoal & Hywind Scotland

[Equinor](#)

[Redacted]

[equinor.com](http://equinor.com)

# Joint Radio Company

**From:** [Joint Radio Company](#)  
**To:** [MD Marine Renewables](#)  
**Cc:** [Redacted]  
**Subject:** Re: Aspen Offshore Wind Farm - Cerulean Winds Aspen Project Limited - Application  
**Date:** 15 September 2025 11:53:57

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**If any details of this proposal change, particularly the disposition or scale of any turbine(s), this clearance will be void and re-evaluation of the proposal will be necessary.**

Dear Amy

**Planning Ref:** MS-00011410 and MS-00011409

**Name/Location:** Aspen Offshore Wind Farm

Thank you for the opportunity to comment on this application. We have noted the changes in turbine size and number of turbines, since the scoping application.

**Site Centre:**



**Development Description:** 72 wind turbines on floating foundations.

*NB. Onshore elements of this development are not included in this application, and as such have not been included or assessed by JRC; separate clearance will need to be sought for any onshore structures due to protected links in proximity to the intended landfall site.*

**Max. Tip Height:** 310m

**Max. Hub Height:** 170m (calc.)

**Max. Rotor Radius:** 140m

This proposal is **cleared within the design envelope above - subject to 50m Micrositing\*** - with respect to radio link infrastructure operated by the local energy networks.

JRC analyses proposals for wind farms on behalf of the UK Fuel & Power Industry. This is to assess their potential to interfere with radio systems operated by utility companies in support of their regulatory operational requirements.

In the case of this proposed wind energy development, JRC does not foresee any potential problems based on known interference scenarios and the data you have provided. However, if any details of the wind farm change, particularly the disposition or scale of any turbine(s), it will be necessary to re-evaluate the proposal.

In making this judgement, JRC has used its best endeavours with the available data, although we recognise that there may be effects which are as yet unknown or inadequately predicted. JRC cannot therefore be held liable if subsequently problems arise that we have not predicted.

It should be noted that this clearance pertains only to the date of its issue. As the use of the spectrum is dynamic, the use of the band is changing on an ongoing basis and consequently, developers are advised to seek re-coordination prior to considering any design changes.

Regards

Wind Farm Team

Friars House  
Manor House Drive  
Coventry CV1 2TE  
United Kingdom

Office: 02476 932 185

JRC Ltd. is a Joint Venture between the Energy Networks Association (on behalf of the UK Energy Industries) and National Grid.

Registered in England & Wales: 2990041

[About The JRC](#) | [Joint Radio Company](#) | [JRC](#)

***We maintain your personal contact details and are compliant with the Data Protection Act 2018 (DPA 2018) for the purpose of 'Legitimate Interest' for communication with you. If you would like to be removed, please contact [Redacted]***

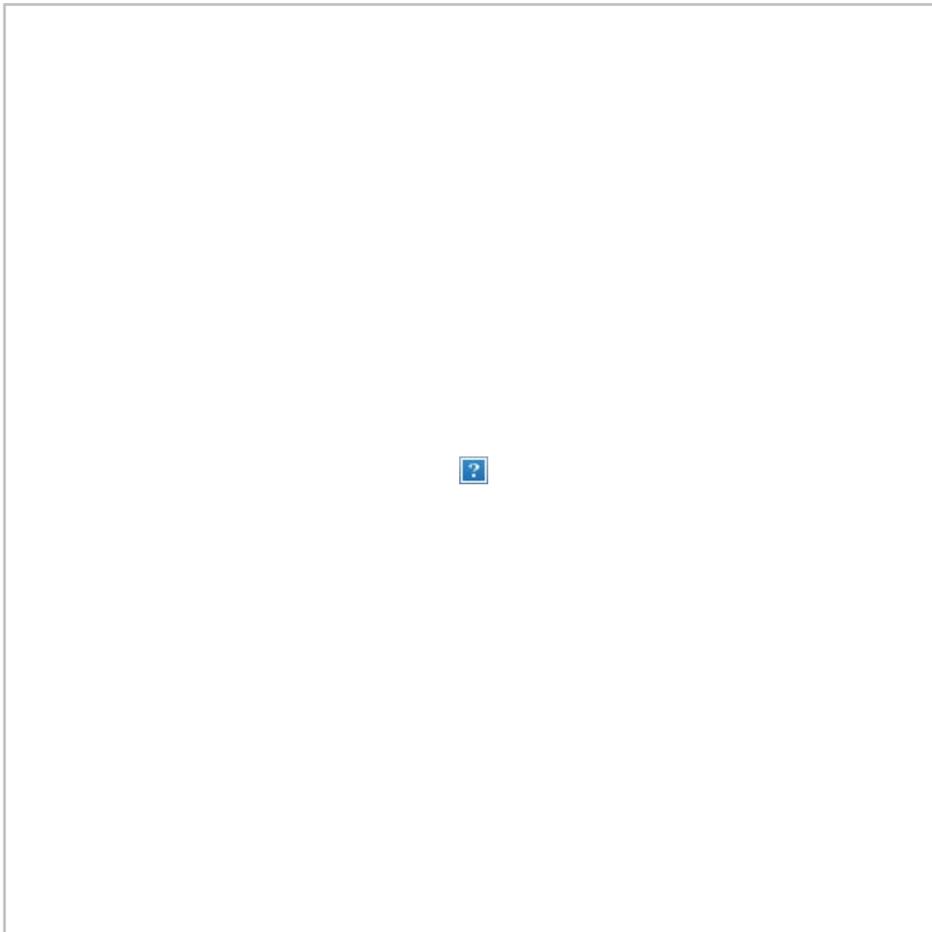
On Thu, 26 Jun at 2:00 PM , Joint Radio Company <wftracker@jrc.co.uk> wrote:

Dear Lauren,

**Planning Ref: SCOP-0066**

**Site Name:** Aspen Offshore Wind Farm

**Site Centre at location:**



**Number of Wind Turbines: 72**

**Tip Height:** 310m

This offshore proposal is **\*cleared\*** - **subject to 50m Micrositing** - with respect to radio link infrastructure operated by the local energy networks.

NB: Any onshore structures associated with this development will need to be submitted for clearance.

**This clearance applies only to the offshore elements of this development.**

JRC analyses proposals for wind farms on behalf of the UK Fuel & Power Industry. This is to assess their potential to interfere with radio systems operated by utility companies in support of their regulatory operational requirements.

In the case of this proposed wind energy development, JRC does not foresee any potential problems based on known interference scenarios and the data you have provided. However, if any details of the wind farm change, particularly the disposition or scale of any turbine(s), it will be necessary to re-evaluate the proposal. Please note that due to the large number of adjacent radio links in this vicinity, which have been taken into account, clearance is given specifically for a location within the declared grid reference (quoted above).

In making this judgement, JRC has used its best endeavours with the available data, although we recognise that there may be effects which are as yet unknown or inadequately predicted. JRC cannot therefore be held liable if subsequently problems arise that we have not predicted.

It should be noted that this clearance pertains only to the date of its issue. As the use of the spectrum is dynamic, the use of the band is changing on an ongoing basis and consequently, you are advised to seek re-coordination prior to submitting a planning application, as this will negate the possibility of an objection being raised at that time as a consequence of any links assigned between your enquiry and the finalisation of your project.

JRC offers a range of radio planning and analysis services. If you require any assistance, please contact us by phone or email.

Regards

Wind Farm Team

Friars House  
Manor House Drive  
Coventry CV1 2TE  
United Kingdom

Office: 02476 932 185

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***We maintain your personal contact details and are compliant with the Data Protection Act 2018 (DPA 2018) for the purpose of 'Legitimate Interest' for communication with you. If you would like to be removed, please contact [Redacted]***

On Mon, 16 Jun at 10:53 AM ,  
Good morning,

[Redacted]

wrote:

I am writing to you today on behalf of Cerulean Aspen Project Limited with regards to the Aspen Offshore Wind Farm. Thank you for responding to the Aspen OWF Scoping Report, we appreciate your consideration. The drafting of the Environmental Impact Assessment Report is now in progress, and as such we would like to share some updates to certain parameters associated with the project as the design develops.

A number of design parameters have been refined since the production of the Scoping Report, both in response to the assessment process for the Environmental Impact Assessment, but also in response to further engagement with component suppliers in order to accommodate the necessary degree of design flexibility to support ongoing engineering works. A description of the changes and the reasoning for each is presented in the table below.

<b>Design Parameter</b>	<b>Scoping Parameter</b>	<b>EIAR Parameter</b>	<b>Reasoning</b>
Wind Turbine Generator maximum tip height	283 m	310 m	The Scoping Report was based on standard parameters provided by manufacturers in an initial request for information. Following detailed discussions with suppliers, an additional degree of flexibility is required to accommodate possible variations in maximum blade lengths due to site conditions, which would be confirmed during detailed engineering design after the consent application. As such, it has been necessary to increase the maximum top height for the turbines to accommodate the increase in blade lengths.
Maximum number of Wind Turbine Generators	67	72	The maximum number of turbines in the Scoping Report was based on an assumed use of 15MW rated WTGs to achieve the nominal generation capacity for Aspen of 1,008MW. Following further engagement with turbine suppliers, it has been necessary to include an option for a reliance on a 14MW rated WTG (depending on final turbine supplier). To still achieve the nominal generation capacity, it is necessary to increase the maximum number of WTGs for Aspen to 72.

Whilst the Applicant considers that these are changes are minor and would not change the conclusions of the Scoping Report, please could you review the revised parameters against your original response and confirm whether your previous remains valid?

If you require any further information, please do not hesitate to get in contact.

Kind regards,

Nicole



[www.gobeconsultants.com](http://www.gobeconsultants.com)

Nicole Clark

Consultant, GoBe Consultants

DD:

HQ: 01626 323890

Microsoft Teams

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**Marine  
Directorate –  
Science,  
Evidence, Data  
and Digital**



[Redacted]

**AMY WOODWARD**  
**MARINE LICENSING AND CONSENTING CASEWORK OFFICER**  
**LICENSING OPERATIONS TEAM**  
**MARINE DIRECTORATE**  
**SCOTTISH GOVERNMENT**

**23/10/2025**

**RE: MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – EIA Section 36 consent and Marine Licence Applications**

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

### **Commercial Fisheries Advice**

To summarise the impact assessment, the EIA found potential significant impacts during the construction and decommissioning phase for demersal otter trawl (array area and export cable corridor) and for scallop dredge and potting (export cable corridor).

The EIA also found potential significant impacts during the operational phase for demersal otter trawl (array area).

The residual impacts are assessed as non-significant in EIA terms after the application of further mitigation.

For the potential significant impacts during the construction phase, the mitigation measures proposed are disruption agreements (including co-operation payments), and Obstacle Free Zones within the array area. The mitigation measure proposed for the potential significant impact during the operational phase is the Obstacle Free Zones. Mitigation measures proposed for the decommissioning phase are the same as for construction.



MD-SEDD advise LOT that the disruption agreements are a form of compensation. The Scottish Government have no remit on compensation for fisheries and therefore have no control over the use of this method to reduce the potential significant impacts to not significant in EIA terms. MD-SEDD therefore advise careful consideration of the disruption agreements as the sole method to reduce the significance of the potential impacts from moderate (significant) to minor (not significant) along the cable corridor during the construction phase.

The two Obstacle Free Zones (OFZs) are proposed to take up 12% of the array area, and are designed to avoid grounds identified as important to the demersal otter trawl fishery targeting *Nephrops*. The OFZs will contain no infrastructure above the seabed and the FMMCP states this will allow access to key tow paths and limit disruption to fishing patterns for the demersal otter trawl fleet. MD-SEDD agree that the OFZs will reduce the impact to the demersal otter trawl fishery during the operational phase. However, the developers have stated that construction activities may occur within the OFZs during the construction phase, but that these will be temporary and highly localised and do not change the ability of this mitigation measure to reduce the potential significance of impacts during construction. MD-SEDD advise that it is made clear in the FMMCP that the default position will be that fishing may continue within the OFZs during the construction phase, and further details are given on how temporary construction activities within the OFZs will be communicated with the fishing industry. The developers have also stated sections of the OFZ may or may not be deemed suitable for vessel shelter and that the OFZs will not influence the decision-making process regarding the location of shelter areas. MD-SEDD advise that the temporary and localised construction activities and the potential use of the OFZs for vessel shelter may make the OFZs unavailable for fishing during some periods of the construction phase. These factors may therefore impact the ability of the OFZs to reduce the potential significance of the impact during the construction phase.

The developers have committed to monitoring of fisheries activity pre, during and post-construction using existing data sources, Offshore FLO observations and industry consultation. The results of the monitoring may inform updates to the FMMCP as necessary. MD-SEDD agree with the decision that the monitoring is not being used as a mitigation to reduce the significance of impacts.



### *Cumulative impact assessment:*

The cumulative impact assessment concluded potential significant impacts during the construction, operational and decommissioning phases for all fisheries receptors. MD-SEDD note that no further secondary mitigation is being proposed beyond project alone mitigation, and as such the impacts identified remain significant in EIA terms. MD-SEDD acknowledge the developer's commitment to participate in a Regional Commercial Fisheries Working Group and support potential regional-scale monitoring initiatives for cumulative effects.

### *Errors in EIA commercial fisheries chapter:*

In Table 13.38 Summary of Assessment of Effects on Commercial Fisheries – Impact 1 and Impact 6 list incorrect significance compared to the text. MD-SEDD have on this occasion assumed the text is correct and based our advice on this. However, MD-SEDD advise the table should be corrected to avoid confusion over which receptors have significant effects.

## **Physical Processes Advice**

The MD-SEDD oceanography advisor has reviewed the following chapters/sections of the EIA focusing on physical processes:

- Chapter 7: Marine and Coastal Processes
- Chapter 8: Marine and Water Sediment Quality
- Appendix 7.1: Marine and Coastal Processes Technical Report

The baseline physical processes and conditions were not characterised by any survey data collected by the applicant. The baseline description was based on general understanding obtained from sources such as public domain hindcast numerical modelling for waves, tides and water column characteristics for the development area and other developments in the wider area, and observational data presented by documentation submitted for licence applications for other developments, in particular the Muir Mhòr offshore wind farm (OWF).



MD-SEDD advise that the baseline wave and tidal conditions, and seabed characteristics, to be suitably characterised by the EIAR. The baseline water column structure description at the proposed development area (Aspen array) is based on hindcast numerical modelling output from CMEMS for the area and observational data archived at BODC for the Muir Mhòr OWF area, which is shallower and closer inshore. Although the applicant stated that CMEMS model output within the centre of the Array Area supports the BODC profiles data from Muir Mhòr Array Area, there are differences between the reported thermocline depth of  $\leq 10$  m to 50 m in Muir Mhòr and the 10-year average of  $10 \text{ m} \pm 3 \text{ m}$  depth during spring and summer months derived from the model. In the absence of (archived or survey) observational data presented for the Aspen array area and of any information about the spatial distribution of stratification over the wider area (e.g. seasonal maps of potential energy anomaly), it is not possible to assess, based on the information provided, if the discrepancies are a result of differences in data sources (e.g. model vertical resolution), water depth (the Aspen area is deeper than Muir Mhòr) or location (the Aspen array area is further offshore and situated along the path of the Dooley Current, which transports warm and saline Atlantic water into the northern North Sea). However, irrespective of how adequately the detailed patterns of water column structure are described by the baseline information provided, the Aspen array would be located in an area of strong seasonal stratification.

MD-SEDD consider the assessment of the impact of the proposed development on seabed morphology and sediment processes to be suitably addressed by the EIAR.

The LSE on marine and coastal processes has been assessed using the evidence provided by numerical modelling conducted at the Muir Mhòr OWF, based on the relative proximity of both proposed developments. The applicant states that any differences in the environmental conditions between the two sites and in the characteristics of the proposed developments are such that any effects on physical processes (e.g. tides, fronts and stratification) shown in the numerical modelling carried out at Muir Mhòr would be highly conservative, relative to Aspen. However, MD-SEDD advise that it is an oversimplification to state that the hydrodynamic modelling conducted for Muir Mhòr OWF will be highly conservative, and the effects are likely to be larger in scale compared to the Proposed Development. It seems that the cross-sectional area of Muir Mhòr turbines' flotation will be larger and have a greater draught (max. 40 m not 50 m in Table 3.3 of their EIA Chapter 3 – Project Description, although on section 7.7126 of Volume 2, Chapter 7 they quote 25 m minimum draught for



modelling their effect on tidal flow) than the Proposed Development (20 m), but there will be fewer turbines in the Muir Mhòr OWF, although they may be more closely spaced together. Even though it is possible that the hydrodynamic modelling conducted for Muir Mhòr OWF will be more conservative, differences in the location and characteristics of the two areas, in addition to significant differences in the design of the structures, question the validity of this claim without a quantitative analysis of detailed numerical modelling. Notwithstanding the above, MD-SEDD agrees that the magnitude of the proposed development on the tidal regime is likely to be low and relatively localised.

MD-SEDD recommended, in the scoping advise, a semi-quantitative approach (e.g. after Carpenter et al. 2016) as a suitable method for the impact assessment on stratification and fronts, depending on the baseline analysis. MD-SEDD advise that the baseline analysis presented in the EIAR (as stated above) is not sufficiently detailed, but its outcome demonstrates clearly that the proposed development is in an area which seasonally stratifies. The EIAR refers to published work (Floeter et al., 2017; Hammar et al., 2010) in support of a very small increase in turbulent mixing in the proposed development area. Whilst those studies were conducted in very different circumstances (water depth, water column structure, foundation type) to the proposed development, MD-SEDD do agree with the argument that the impact of the structures on stratification/water column structure will be diluted due to the natural transport of turbulence away from the site, and note that this is an area of active research with significant evidence gaps and uncertainties. MD-SEDD agree with the conclusion that the overall magnitude of impact is likely to be low, but note that this outcome is based on expert opinion rather than quantitative evidence, and the conclusion that any effects will be restricted to the near field is less clear, particularly regarding the effect of wind energy extraction.

Given the uncertainties regarding how the presence of structures in the water column and wind energy extraction from the atmosphere may alter the nature of stratification at the development site and wider area, and also considering uncertainties regarding the baseline assessment of the water column structure presented in this EIAR, MD-SEDD advise that it is not fully clear how the proposed development may affect the duration, onset and characteristics of stratification in the area, and consequently primary and secondary production. Consequently, MD-SEDD recommends that the applicant monitors the water column structure in the pre-development, construction, and for some time during the

operational phases. This would adequately characterise the baseline and subsequent monitoring would help reduce the considerable uncertainty about potential impact on physical processes and, consequently, biological productivity.

Yours sincerely,

**Renewables and Ecology Team**

Marine Directorate – Science, Evidence, Data and Digital



**Marine  
Directorate –  
Marine  
Analytical Unit**

## Aspen Offshore Wind Farm

### **Marine Analytical Unit Response** **Marine Directorate**

The Aspen Offshore Wind Farm Environmental Impact Assessment (“EIA”) report includes descriptions of a range of potential impacts. This response focuses only on the assessment of social and economic impacts.

We note some drafting errors throughout the report. For instance the document references the use of the ‘Rochdale Envelope’ “in line with guidance from the Scottish Government (2022)” (pg 51), however the document with that reference is Scotland's National Strategy for Economic Transformation - Delivery Plans October 2022 which is not a guidance document. In addition there are instances in which there are references to “Northern Ireland” which are discussing “North of Scotland” (e.g. 17.5.26 discussing table 17.7 (pg 31-32). This appears to be an error.

### **Methodology**

The developer states that the epicentres of socio-economic activity are expected to be the ports used during the construction and operation and maintenance phase. Ardersier has been named as the port for construction, whilst the North of Scotland (Aberdeenshire, Highland and Moray) has been used for the operation and maintenance phase as the port is not currently known but it’s likely to be in this area. It’s preferable that a shortlist of likely ports are outlined rather than analysing the data at a local authority or higher level. The shortlist of most likely ports should not exceed 4-5 ports per stage of the project.

The developer has considered the following socioeconomic study areas:

- Highland
- The North of Scotland (defined as Aberdeenshire, Highland and Moray)
- Scotland
- The United Kingdom

In addition, the tourism and recreation study areas are the electoral wards of Stonehaven and Lower Deeside.

The assessment uses magnitude and significance methodology. The magnitude is determined by the importance of the receptor (economic, social or tourism and recreation). The sensitivity is determined by the ability of the study area to absorb the change. The magnitude and sensitivity are combined to identify the significance of the effect, with a significant effect defined as a major or moderate effect, which is intermediate to a very large change in receptor condition, which are likely to be an important consideration to the study area.

## Assessment of impacts

All socio-economic impacts listed at the scoping stage were assessed. The assessment was carried out for all stages of the project. Socio-cultural impacts were not assessed despite MAU advice to do so during the scoping stage.

The assessment considered the following potential effects:

- Change in Gross Value Added (“GVA”) levels;
- Change in employment levels;
- Change in demographics
- Change in housing demand and availability;
- Change to other local services;
- Change to marine recreation;
- Change to onshore recreation;
- Changes to commercial fisheries; and
- Changes to shipping

### Impacts

The assessment anticipates a moderate (significant) beneficial effect for Highland and the North of Scotland in terms of employment and GVA impacts for Scotland during the construction phase. Furthermore, the assessment anticipates a moderate (significant) beneficial impact in the offshore wind supply chain for Highland and the North of Scotland during the construction stage in terms of cumulative impacts (i.e. the impact of the construction of Aspen offshore wind farm as well as other, nearby offshore wind farms).

With regards to social impacts, the assessment anticipates major (significant) beneficial impacts with regards to demographics, housing demand and availability, and other local services during the construction phase, whilst during the operation and maintenance phase, moderate (significant) beneficial impacts are anticipated with regards to demographics, housing demand and availability and other local services for the operation and maintenance stage. MAU would note that benefits arising changes in housing demand would likely be uncertain, and benefits to some groups may be costs to other groups. In terms of cumulative social impacts, the assessment anticipates a major (significant) beneficial impact with regards to demographics, housing demand and availability and other local services for the construction phase.

MAU cannot robustly comment on the cumulative social impacts during the operation and maintenance phase in terms of benefits or losses as the applicant has not included impact analysis for this stage, citing lack of information on specific ports.

A number of mitigation measures have been outlined within the socioeconomic impact assessment. The MAU cannot comment on the suitability of the mitigations themselves, however developers should endeavour to include affected communities in decision making, in line with the MAU’s advice on best practice.

In reference to the scoping out of socio-cultural impacts, the applicant states that they will support ‘sector wide primary research’. MAU cannot comment on work

conducted outside of this individual assessment, however we would remind applicants that broader external work/research does not negate the need for developers to assess the location and community-based impacts specific to their individual wind farm applications.

### **Consultation and engagement**

The Applicant states that they hosted events and engaged with local throughout the consultation process. The Applicant also states that they engaged with stakeholders as part of a PAC event held in June 2025. However the developer has not appeared to engage further with local communities beyond some activities identified in their pre-application consultation report. For a project of this scale, some primary research would have helped improve the robustness of the analysis.

The developer states that *“To avoid survey fatigue and ensure meaningful interactions, stakeholder engagement will occur post application as decisions are made regarding the location of key activities, such as ports which will feed the development, and will be completed in collaboration with other offshore wind developers in Scotland”*. The MAU cannot comment on post consent stakeholder engagement, especially when details of said engagement are not provided.

### **Summary**

Overall, the assessment of socio-economic impacts is conducted to a satisfactory standard. An appropriate range of economic and social impacts were assessed, however the applicant did not assess socio-cultural impacts despite MAU advise during the scoping stage. Further, it would be preferable that a shortlist of ports (4-5 potential ports) would be shown for the operation and maintenance phase, rather than showing 3 combined local authorities to better showcase the benefits and costs of this application.

# Maritime and Coastguard Agency



Maritime &  
Coastguard  
Agency

Vaughan Jackson  
**Maritime and Coastguard Agency**  
UK Technical Services Navigation  
105 Commercial Road  
Southampton  
SO15 1EG

[www.gov.uk/mca](http://www.gov.uk/mca)  
19<sup>th</sup> September 2025

Licensing Operations Team,  
Marine Directorate,  
Scottish Government,  
Victoria Quay,  
Edinburgh,  
EH6 6QQ.

By email to [MD.MarineRenewables@gov.scot](mailto:MD.MarineRenewables@gov.scot)

Dear Marine Directorate,

**APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 AND A MARINE LICENCE UNDER PART 4 OF THE MARINE (SCOTLAND) ACT 2010 AND PART 4 OF THE MARINE AND COASTAL ACCESS ACT 2009 BY CERULEAN WINDS ASPEN PROJECT LIMITED TO CONSTRUCT AND OPERATE THE ASPEN OFFSHORE WIND FARM.**

Thank you for the opportunity to comment on the application for consent under Section 36 of the Electricity Act 1989 and marine licence under the Marine (Scotland) Act 2010 from Cerulean Winds Aspen Project Limited for the Aspen Offshore Windfarm.

The Maritime and Coastguard Agency (MCA) is an Executive Agency of the Department for Transport and is responsible throughout the UK for implementing and developing the UK Government's maritime safety and environmental protection policy. This includes co-ordinating maritime Search and Rescue (SAR) through His Majesty's Coastguard 24 hours a day and checking that ships meet UK and international safety rules. The MCA works to prevent the loss of lives at the coast and at sea, to ensure that vessels are safe, and to prevent coastal pollution. The UK Technical Services Navigation Branch is responsible for UK radiocommunication and navigation policy. This primarily covers SOLAS Convention (Safety of Life at Sea Convention 1974, as amended) Chapters IV and V; the COLREG Convention (International Regulations for Preventing Collisions at Sea 1972, as amended); and the ITU Convention (International Telecommunications Convention 1932, as amended).

The Navigation Risk Assessment (NRA) and the shipping and navigation elements of the Environmental Impact Assessment Report have been reviewed and we would like to comment as follows:

**Navigation Risk Assessment**

Nash Maritime has undertaken a detailed NRA in accordance with MCA guidance (MGN 654) which includes two 14-day marine vessel traffic surveys in summer 2024 (August 24<sup>th</sup> to September 7<sup>th</sup>) and winter 2024 (November 18<sup>th</sup> to December 5<sup>th</sup>). In addition, to inform the export cable corridor

study area and to validate the observed traffic data, 12 months of Automatic Identification System (AIS) data for January to December 2024 has also been collected. Adverse weather routing has been considered in section 6.4 of the NRA. We are content that the applicant has provided a detailed and relevant MGN 654 compliant traffic survey and analysis.

The MCA is also content that the hazard log presented in Annex A of the NRA is a reasonable and proportional assessment of the risks. A MGN 654 checklist has also been provided in Annex C. We note in section 4.6 of the checklist, that the applicant has indicated that the Chamber of Shipping and other shipping company consultation has not been carried out. However, in the comments they have confirmed that they have and have signposted the relevant section in the NRA. We are content that this item is complete.

Finally on the checklist, section 4.11, part c, concerning Search and Rescue (SAR) the applicant has left the check box blank. It is clear however that according to the comments column, MCA contact with the applicant, included signposting to section 8.8 of the NRA and the Embedded Mitigation measures (C-OFF-26 and C-OFF-55) that this too is complete.

### **Emergency Response and Search and Rescue**

A SAR checklist based on the requirements in MGN 654 Annex 5 will need to be completed in agreement with MCA before construction starts. This will include the requirement for an approved Emergency Response Co-operation Plan (ERCoP) and will be incorporated as a condition of the Marine Licence.

During SAR discussions, particular consideration will need to be given to the implications of the site size and location. Attention should be paid to the level of radar surveillance, AIS and shore-based VHF radio coverage and give due consideration for appropriate mitigation such as radar, AIS receivers and in-field, Marine Band VHF radio communications aerial(s) (VHF voice with Digital Selective Calling (DSC)) that can cover the entire wind farm sites and their surrounding areas.

### **Cumulative Impacts**

A Cumulative Effects Assessment (CEA) has been made based on existing and proposed developments in the study area to the methodology presented in Volume 1 Chapter 4, section 4.10. This is presented in the NRA in section 10 and section 14.8 of Volume 2, chapter 14: Shipping and Navigation. The assessment also summarises the main commercial routes and those with potential for deviations. 21 commercial routes are identified with 14 of those anticipated to potentially require a deviation. These routes are presented in Figure 62 of the NRA with a commercial routing interaction summary in Table 32. We are content with this approach to the CEA at this stage.

### **Layout Design**

The turbine layout design will require MCA and Northern Lighthouse Board (NLB) approval prior to construction to minimise the risks to surface vessels, including rescue boats, and search and rescue aircraft operating within the site. The MCA will seek to ensure all structures are aligned in straight rows and columns with a minimum of two lines of orientation. Further advice will be provided to the project once the layout discussions have started.

### **Marking, Lighting and Construction Programme**

The MCA will seek to ensure the turbine numbering system follows a 'spreadsheet' principle and is consistent with other windfarms in the UK. All lighting and marking arrangements will need to be agreed with the MCA and the NLB. The MCA requires all aviation lighting to be visible 360° and compatible with night vision imaging systems, as detailed in CAP 764 and MGN 654 Annex 5. We would also expect to see some form of linear progression of the construction programme avoiding

disparate construction sites across the development area, and the consent needs to include the requirement for an agreed construction plan to be in place ahead of any works commencing.

### **Wet Storage**

It is stated in Volume 1, Chapter 3 Project description section 3.6.34 that: *‘to manage the large dimensions of Floating Foundations, the Applicant intends to develop a “production line” approach to the assembly of the WTGs and foundations, whereby each WTG (including foundation) is assembled, it is then floated out to the array area for installation, with minimal need for any “wet-storage”’*. It is also intended that through careful consideration of port facilities that dry storage solutions will be pursued to help reduce wet storage operations.

It is, however, accepted by the applicant that wet storage options will still need to be considered. As stated in Section 4.7 of the NRA: *‘Were the wet storage area within a port or harbour, it would be assessed and managed by the relevant port authority as per the Port Marine Safety Code; and Were the wet storage outside of a port or authority, the MCA would require a separate NRA to assess the impacts of that proposal and identify appropriate mitigation measures’*. Although no assessment is made in this application regarding potential wet storage, we note and welcome the commitment from the applicant in Volume 3 appendix 4.2: Commitments Register, the mitigation measure C-OFF-49 which lays out the intention for the development of a Wet Storage Plan (WSP).

The MCA agree that wet storage options, especially around fully constructed floating WTGs, are yet to be fully explored and we would encourage the applicant when discussing any potential options to consult other relevant maritime stakeholders including the MCA and NLB.

Regarding the storing of any components on the seabed within the array area, as the charted depths range from approximately 85m-120m, it is not expected that any storage would increase the risk to surface navigation. However, the MCA will need to be informed of materials to be stored within the array (and along the export cable corridor) and made aware of any that will exceed a 5% reduction in surrounding depth referenced to Chart Datum.

### **Mooring Arrangements**

Third Party Verification of the mooring arrangements for all floating devices will be required prior to construction to provide assurance against loss of station. Ideally this will be a condition of the marine licence. Guidance on regulatory expectations on mooring arrangements can be found on our website: <https://www.gov.uk/guidance/offshore-renewable-energy-installations-impact-on-shipping>.

We note that the applicant has referenced this document in chapter 14, section 14.3.3 and refers to it in section 8.7 of the NRA. Adherence to the document is also listed as mitigation measure C-OFF-31 in the Commitments Register (Volume 3, Appendix 4.2).

The applicant has acknowledged in section 8.7 that loss of station has formed part of the scope of assessment. As such, there is an expectation from the MCA that a system of continuous monitoring for each individual floating WTG to be incorporated. There is further acknowledgment that: *‘a response plan will be included within the ERCoP with additional measures such as failure warning measures and tracking devices as well as response and recovery procedures. Continuous monitoring by the Marine Coordination Centre and use of tracking alarms would ensure immediate detection of such a situation and a timely response’*. Currently there is no overview of what the applicant’s system may include. The use of GPS in this system would be expected but inclusion of AIS on all floating structures, the overall particulars of this system and recovery arrangements in case of a loss of station will need further discussion with the MCA and NLB prior to construction.

## Hydrographic Surveys

MGN 654 requires that hydrographic surveys should fulfil the requirements of the International Hydrographic Organisation (IHO) Order 1a standard, with the final data supplied as a digital full density data set, and survey report to the MCA Hydrography Manager. Further information can be found in MGN 654 Annex 4 supporting document titled 'Hydrographic Guidelines for Offshore Developers', available on our website: <https://www.gov.uk/guidance/offshore-renewable-energy-installations-impact-on-shipping>. This includes surveys during the pre-construction, post-construction and post-decommissioning stages. We would like to highlight the need to provide the data in either GSF or CARIS format and that Total Vertical and Horizontal Uncertainty (TVU & THU) calculations must be provided.

## Cable Routes

It is noted in table 8 of the NRA and in table 14.9 in the shipping and navigation chapter, that a Cable Burial Risk Assessment (CBRA) is to be carried out and a cable plan (CaP) produced. This is recorded as Embedded Mitigation measure C-OFF-04. Any consented cable protection works must ensure existing and future safe navigation is not compromised. The MCA would be willing to accept a 5% reduction in surrounding depths referenced to Chart Datum. This will be particularly relevant where depths are decreasing towards shore and potential impacts on navigable water increase, such as at the HDD location

As stated in Volume 1, Chapter 3: Project Description, the Inter Array Cables (IACs) and export cables to shore are proposed to be High Voltage Alternating Current (HVAC). As a result, the effects on ships magnetic compasses of these cables are expected to be negligible and therefore a pre-construction compass deviation study will not be required for these.

## Safety Zones

The requirement and use of safety zones as detailed in the application, specifically as mitigation measure C-OFF-23 in Volume 3, Appendix 4.2, is noted. MCA supports the use of safety zones and will comment on the safety zone application once submitted, as a statutory consultee.

## Liaison with local MCA Marine Office

The applicant should be reminded that their contractors and subcontractors must have the required certification for all vessel operations, and early engagement with the local MCA Marine Office should be undertaken where necessary to ensure there are no issues with regards to survey and inspections, towage, and safety requirements. Various additional certificates including a loadline exemption for the turbine platforms will be required prior to any towage to site and the applicant must ensure any ballast water requirements are addressed.

## Embedded Mitigation

We have the following comments on the proposed risk controls in Volume 3, Appendix 4.2, the NRA and Chapter 13: Shipping and Navigation:

1. Cable Burial Risk Assessment (Cable Plan), C-OFF-04.
  - In case of damage to, or destruction or decay of, the authorised project seaward of MHWS or any part thereof, excluding the exposure of cables, notification must be issued to MCA, NLB, the Kingfisher Information Service of Seafish and the UKHO within 24 hours of becoming aware.
  - In case of exposure of cables on or above the seabed, the undertaker must within three days following identification of a potential cable exposure, notify mariners and inform Kingfisher Information Service of the location and extent of exposure. Copies of all notices must be provided to the MCA, NLB, and the UKHO within 5 days.

- The plan must include proposals for monitoring offshore cables including cable protection during the operational lifetime of the authorised scheme which includes a risk-based approach to the management of unburied or shallow buried cables.
- Attention should be paid to cabling routes and where appropriate burial depth for which a Burial Protection Index study should be completed and subject to the traffic volumes, an anchor penetration study may be necessary.

## 2. Navigation Safety Plan (NSP), C-OFF-20.

- Local notification to mariners must be issued at least 14 days prior to the commencement of the authorised project or any part thereof advising of the start date of each work and the expected vessel routes from the construction ports to the relevant location. They must be updated and reissued at weekly intervals during construction activities and at least 5 days before any planned operations (or otherwise agreed) and maintenance works and supplemented with VHF radio broadcasts agreed with the MCA.
- The Kingfisher Information Service of Seafish, must be informed of details of the vessel routes, timings and locations relating to the construction of the authorised project or any part thereof by email to [kingfisher@seafish.co.uk](mailto:kingfisher@seafish.co.uk) :-
  - i. at least 14 days prior to the commencement of offshore activities, for inclusion in the Kingfisher Fortnightly Bulletin and offshore hazard awareness data, and;
  - ii. as soon as reasonably practicable and no later than 24 hours of completion of all offshore activities.
- Post construction monitoring is required and must include vessel traffic monitoring by automatic identification system for a duration of three consecutive years following the completion of construction of the authorised project. An appropriate report must be submitted to the MCA and NLB at the end of each year of the three-year period.

## Conclusion

The comments detailed above are not considered to be blocks to development, but they are provided to highlight any areas which may require further discussion. Subject to the applicant meeting requirements addressed in this letter, and meeting licence conditions which will be provided to Marine Directorate, it provides a cautious acceptance of the application for consent.

Yours faithfully,

[Redacted]

Vaughan Jackson  
Offshore Renewables Project Lead  
UK Technical Services – Navigation

**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  
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Application Ref: MS-00011410 and MS-00011409

Our Reference: DIO10066295

E-mail: [DIO-Safeguarding-Wind@mod.gov.uk](mailto:DIO-Safeguarding-Wind@mod.gov.uk)

Amy Woodward  
Scottish Government  
Licensing Operations Team  
Marine Directorate  
Victoria Quay  
EDINBURGH  
EH6 6QQ

23 October 2025

Dear Amy

## **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*

MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – Approximately 84km east of Peterhead.

Thank you for consulting the Ministry of Defence (MOD) in relation to the above Section 36 application and Marine Licences through your communication dated 8 September 2025.

The Defence Infrastructure Organisation (DIO) Safeguarding Team represents the MOD as a consultee in UK planning and energy consenting systems to ensure that development does not compromise or degrade the operation of defence sites such as aerodromes, explosives storage sites, air weapon ranges, and technical sites or training resources such as the Military Low Flying System.

I write to advise the safeguarding position of the MOD in relation to the above applications to construct and operate the Aspen Offshore Wind Farm.

This scheme will comprise of:-

- up to 72 wind turbines, with a maximum height to blade tip of up to 310 metres above Mean Sea Level (MSL), located approximately 84km offshore of the Aberdeenshire coast, east of Peterhead;

- up to three Offshore Substation Platforms (OSPs) with a maximum height of 80 metres above Lowest Astronomical Tide (LAT);
- interconnector cables; and
- up to four offshore export cables connecting the OSPs to the landfall on the Aberdeenshire coast between Portlethen and North Stonehaven.

The onshore components are subject to a separate application for planning permission from Aberdeenshire Council.

The principal concerns of the MOD with respect to this proposed wind farm relate to the impact of the development on the operation and capability of air defence radar systems and the potential to create a physical obstruction to air traffic movements.

At this time the MOD must **object** to the proposed development on the basis that the scheme would have a significant and detrimental impact on the effective operation and capability of air defence radar deployed at Remote Radar Head (RRH) Buchan.

### **Air Defence (AD) radar**

The proposed turbines would be located approximately 88.6km from, detectable by, and will cause unacceptable interference to the AD radar deployed at RRH Buchan.

Wind turbines have been shown to have detrimental effects on the operation of radar. These include the desensitisation of radar in the vicinity of the turbines, and the creation of “false” aircraft returns. The probability of the radar detecting aircraft flying over or in the vicinity of the turbines would be reduced, hence turbine proliferation within a specific locality can result in unacceptable degradation of the radar’s operational integrity. This would reduce the RAF’s ability to detect and deter aircraft in United Kingdom sovereign airspace, thereby preventing it from effectively performing its primary function of Air Defence of the United Kingdom.

Our assessments have determined that, when operational, the proposed wind farm will cause unacceptable and unmanageable interference to the effective operation of an air defence radar deployed at RRH Buchan.

The need to mitigate the impacts of the proposed development upon the effective operation of RRH Buchan has been recognised by the applicant and is set out in Volume 2, Chapter 15 and Volume 3, Appendix 15.1 of the Environmental Impact Assessment Report (EIAR) dated August 2025. The applicant has not proposed a suitable mitigation but has stated in Chapter 15 that they are willing to engage with the MOD on mitigation. The MOD would welcome this engagement.

Therefore, on the basis of the information provided, and until a suitable mitigation scheme has been submitted, assessed, and accepted, the MOD must object to this proposal due to the impact it will have on the AD radar deployed at RRH Buchan.

### **Air Traffic Control (ATC) Radar**

Section 15.5.33 in Chapter 15 of the EIAR identifies that the Array Area is outside the operational range of the ATC radar at RAF Lossiemouth. MOD operational assessments have identified no reason to disagree with this finding.

### **Physical Obstruction**

In this case the development falls within Low Flying Area 14 (LFA 14). Within this area fixed wing aircraft may operate as low as 250 feet or 76.2 metres above surface level to conduct low level flight training. The

addition of turbines and other structures in this location would introduce a physical obstruction to low flying aircraft operating in the area.

In the event that the applicant is able to overcome the objections listed above regarding air defence radar the MOD would require that conditions are added to any consent issued requiring the submission, approval and implementation of an aviation lighting scheme, and that sufficient data is submitted to ensure that structures can be accurately charted to allow deconfliction. The Applicant has acknowledged the MOD requirement for MOD accredited aviation safety lighting and the need to submit sufficient data to enable charting of the structures at paragraph 15.6.2 in Volume 2, Chapter 15 and in Volume 3, Appendix 4.2 "Commitments Register" of the EIA.

As this development includes structures other than wind turbine generators that exceed a height of 50m above LAT these structures would be subject to the lighting requirements set out in the Air Navigation Order 2016. In addition to any CAA requirements, the MOD will require the submission, approval, and implementation of an aviation safety lighting specification that details the installation of MOD accredited aviation safety lighting.

### **Interconnector and Export Cables**

The interconnector cables and the export cables will make landfall between Portlethen and North Stonehaven on the Aberdeenshire coast. The onshore landfall element of the development does not pass through or occupy any MOD statutory safeguarding zones.

The offshore elements do coincide with MOD highly surveyed routes but assessments completed by the MOD have identified the development to have no detrimental impact on MOD activities to support national defence requirements. There are also no concerns with regard to the safeguarding of military Practice and Exercise Areas and Danger Areas.

The MOD acknowledges that the submitted EIA Report does not consider the Onshore Export Cable Corridor or Grid Connection for the proposed development and notes that the MOD must be consulted as a Statutory Consultee once the onshore details are available.

### **Summary**

For the avoidance of any doubt, MOD must **object** to the proposal on the grounds of the unacceptable impact that the development would have on air defence radar systems deployed at RRH Buchan.

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

# National Air Traffic Services

**From:** [NATS Safeguarding](#)  
**To:** [MD Marine Renewables](#)  
**Cc:** [Redacted]  
**Subject:** RE: MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – EIA Section 36 consent and Marine Licence Applications - Consultation – Response Required by 23 October 2025 [SG37075]  
**Date:** 10 September 2025 14:06:57  
**Attachments:** [image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)  
[image007.png](#)  
[image008.png](#)  
[Aspen Offshore Wind Farm - TOPA Issue 2.pdf](#)

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Our Ref: SG37075

Dear Sir/Madam

We refer to the application above. The proposed development has been examined by our technical safeguarding teams and conflicts with our safeguarding criteria.

Accordingly, NATS (En Route) plc objects to the proposal. The reasons for NATS's objection are outlined in the attached report TOPA SG37075.

We would like to take this opportunity to draw your attention to the legal obligation of local authorities to consult NATS before granting planning permission. The obligation to consult arises in respect of certain applications that would affect a technical site operated by or on behalf of NATS (such sites being identified by safeguarding plans that are issued to local planning authorities).

In the event that any recommendations made by NATS are not accepted, local authorities are obliged to follow the relevant directions within Planning Circular 2 2003 - Scottish Planning Series: Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas) (Scotland) Direction 2003 or Annex 1 - The Town And Country Planning (Safeguarded Aerodromes, Technical Sites And Military Explosives Storage Areas) Direction 2002.

These directions require that the planning authority notify both NATS and the Civil Aviation Authority ("CAA") of their intention. As this further notification is intended to allow the CAA to consider whether further scrutiny is required, the notification should be provided prior to any granting of permission.

It should also be noted that the failure to consult NATS, or to take into account NATS's comments when determining a planning application, could cause serious safety risks for air traffic.

Should you have any queries, please contact us using the details below.

Yours faithfully

**NATS**

NATS Safeguarding  
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NATS Internal

# Technical and Operational Assessment (TOPA)

For Aspen Offshore  
Wind Farm Development

NATS ref: SG37075

Issue 2

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## Publication History

Issue	Month/Year	Change Requests and summary
1	May 2025	Scoping Request
2	September 2025	Planning Application

## Document Use

External use: Yes

## Referenced Documents

# 1. Background

## 1.1. En-route Consultation

NATS en-route plc is responsible for the safe and expeditious movement in the en-route phase of flight for aircraft operating in controlled airspace in the UK. To undertake this responsibility it has a comprehensive infrastructure of RADAR's, communication systems and navigational aids throughout the UK, all of which could be compromised by the establishment of a wind farm.

In this respect NATS is responsible for safeguarding this infrastructure to ensure its integrity to provide the required services to Air Traffic Control (ATC).

In order to discharge this responsibility NATS is a statutory consultee for all wind farm applications, and as such assesses the potential impact of every proposed development in the UK.

The technical assessment sections of this document define the assessments carried out against the development proposed in section 3.

## 2. Scope

This report provides NATS En-Route plc's view on the proposed application in respect of the impact upon its own operations and in respect of the application details contained within this report.

Where an impact is also anticipated on users of a shared asset (e.g. a NATS RADAR used by airports or other customers), additional relevant information may be included for information only. While an endeavour is made to give an insight in respect of any impact on other aviation stakeholders, it should be noted that this is outside of NATS' statutory obligations and that any engagement in respect of planning objections or mitigation should be had with the relevant stakeholder, although NATS as the asset owner may assist where possible.

### 3. Application Details

Scottish Government submitted a request for a NATS technical and operational assessment (TOPA) for the development at Aspen Offshore Wind Farm. It will comprise up to 72 turbines each up to 310m tall contained within the boundary points detailed below and shown in the diagrams contained in Appendix B.

Point	Lat	Long	East	North
a1	57.7624	-0.4408	492870	875815
a2	57.8025	-0.3084	500636	880467
a3	57.8271	-0.1806	508156	883399
a4	57.8409	-0.1350	510823	885012
a5	57.7707	-0.0380	516804	877356
a6	57.7232	-0.0385	516928	872075
a7	57.6974	-0.0774	514693	869139
a8	57.6299	-0.2993	501659	861269

**Table 1 – Development Details**

### 4. Assessments Required

The proposed development falls within the assessment area of the following systems:

En-route Surv	Lat	Long	nm	km	Az (deg)	Type
Alanshill Radar	57.6431	-2.1655	56.0	103.7	86.4	CMB
Perwinnes Radar	57.2123	-2.1309	64.0	118.4	71.7	CMB
En-route Nav	Lat	Long	nm	km	Az (deg)	Type
None						
En-route AGA	Lat	Long	nm	km	Az (deg)	Type
None						

**Table 2 – Impacted Infrastructure**

## 4.1. En-route RADAR Technical Assessment

### 4.1.1. Predicted Impact on Allanshill RADAR (only that portion of the development within 60nm)

Using the theory as described in Appendix A and development specific propagation profile it has been determined that the terrain screening available will not adequately attenuate the signal, and therefore this development is likely to cause false primary plots to be generated. A reduction in the RADAR's probability of detection, for real aircraft, is also anticipated.

### 4.1.2. Predicted Impact on Perwinnes RADAR Perwinnes (entire development)

Using the theory as described in Appendix A and development specific propagation profile it has been determined that the terrain screening available will not adequately attenuate the signal, and therefore this development is likely to cause false primary plots to be generated. A reduction in the RADAR's probability of detection, for real aircraft, is also anticipated.

### 4.1.3. En-route operational assessment of RADAR impact

Where an assessment reveals a technical impact on a specific NATS' RADAR, the users of that RADAR are consulted to ascertain whether the anticipated impact is acceptable to their operations or not.

Unit or role	Comment
Prestwick Centre ATC	Unacceptable
Aberdeen ATC	Unacceptable
Military ATC	Unacceptable

*Note: The technical impact, as detailed above, has also been passed to non-NATS users of the affected RADAR, this may have included other planning consultees such as the MOD or other airports. Should these users consider the impact to be unacceptable it is expected that they will contact the planning authority directly to raise their concerns.*

## 4.2. En-route Navigational Aid Assessment

### 4.2.1. Predicted Impact on Navigation Aids

No impact is anticipated on NATS' navigation aids.

## 4.3. En-route Radio Communication Assessment

### 4.3.1. Predicted Impact on the Radio Communications Infrastructure

No impact is anticipated on NATS' radio communications infrastructure.

## 5. Conclusions

### 5.1. En-route Consultation

The proposed development has been examined by technical and operational safeguarding teams. A technical impact is anticipated, this has been deemed to be unacceptable.

## Appendix A – Background RADAR Theory

### Primary RADAR False Plots

When RADAR transmits a pulse of energy with a power of  $P_t$  the power density,  $P$ , at a range of  $r$  is given by the equation:

$$P = \frac{G_t P_t}{4\pi r^2}$$

Where  $G_t$  is the gain of the RADAR's antenna in the direction in question.

If an object at this point in space has a RADAR cross section of  $\sigma$ , this can be treated as if the object re-radiates the pulse with a gain of  $\sigma$  and therefore the power density of the reflected signal at the RADAR is given by the equation:

$$P_a = \frac{\sigma P}{4\pi r^2} = \frac{\sigma G_t P_t}{(4\pi)^2 r^4}$$

The RADAR's ability to collect this power and feed it to its receiver is a function of its antenna's effective area,  $A_e$ , and is given by the equation:

$$P_r = P_a A_e = \frac{P_a G_r \lambda^2}{4\pi} = \frac{\sigma G_t G_r \lambda^2 P_t}{(4\pi)^3 r^4}$$

Where  $G_r$  is the RADAR antenna's receive gain in the direction of the object and  $\lambda$  is the RADAR's wavelength.

In a real world environment this equation must be augmented to include losses due to a variety of factors both internal to the RADAR system as well as external losses due to terrain and atmospheric absorption.

For simplicity these losses are generally combined in a single variable  $L$ .

$$P_r = \frac{\sigma G_t G_r \lambda^2 P_t}{(4\pi)^3 r^4 L}$$

## Secondary RADAR Reflections

When modelling the impact on SSR the probability that an indirect signal reflected from a wind turbine has the signal strength to be confused for a real interrogation or reply can be determined from a similar equation:

$$P_r = \frac{\sigma G_t G_r \lambda^2 P_t}{(4\pi)^3 r_t^2 r_r^2 L}$$

Where  $r_t$  and  $r_r$  are the range from RADAR-to-turbine and turbine-to-aircraft respectively. This equation can be rearranged to give the radius from the turbine within which an aircraft must be for reflections to become a problem.

$$r_r = \sqrt{\frac{\lambda^2}{(4\pi)^3}} \sqrt{\frac{\sigma G_t G_t P_t}{r_t^2 P_r L}}$$

## Shadowing

When turbines lie directly between a RADAR and an aircraft not only do they have the potential to absorb or deflect, enough power such that the signal is of insufficient level to be detected on arrival.

It is also possible that azimuth determination, whether this done via sliding window or monopulse, can be distorted giving rise to inaccurate position reporting.

## Terrain and Propagation Modelling

All terrain and propagation modelling is carried out by a software tool called ICS Telecom (version 11.1.7). All calculations of propagation losses are carried out with ICS Telecom configured to use the ITU-R 526 propagation model.

## Appendix B – Diagrams

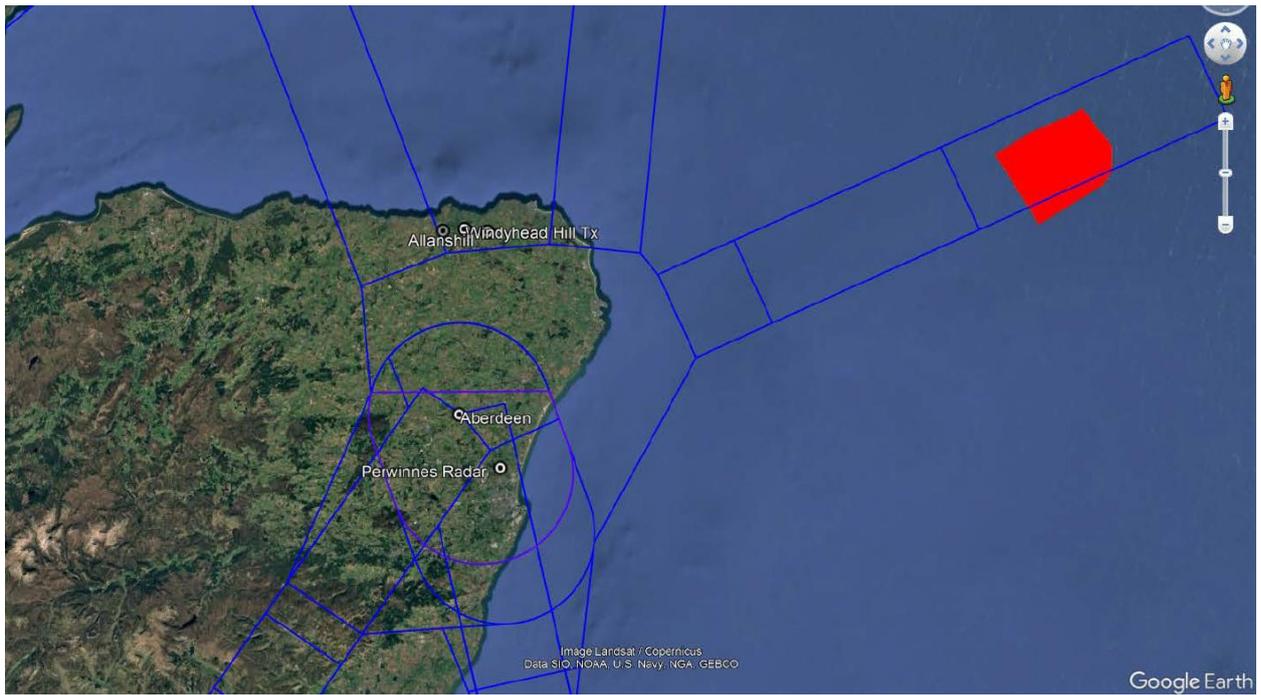


Figure 1: Proposed development location shown on an airways chart

# Natural England

Date: 17 October 2025  
Our ref: 525757  
Your ref: MS-00011410 and MS-00011409



Marine Directorate - Licensing Operations Team  
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Tyneside House  
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**BY EMAIL ONLY**

Dear Amy

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*

**MS-00011410 & MS-00011409 Cerulean Winds Aspen Project Limited - Aspen Offshore Wind Farm - EIA Section 36 consent.**

Thank you for seeking our advice on Aspen Offshore Windfarm in your consultation which we received on 08<sup>th</sup> September 2025. The following constitutes Natural England's formal statutory response.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

The advice contained within this letter is provided by Natural England, which is the statutory nature conservation body within English territorial waters (0-12 nautical miles).

Due to our remit, our advice on this consultation is restricted to species within England and to protected species from English designated sites which may be impacted by the proposed wind farm. We defer to NatureScot to advise on Scottish matters.

We have considered the documents provided with the consultation request in our review, and the measures proposed to mitigate for all identified adverse effects that could potentially occur as a result of the proposal. We advise that, providing there are no substantial changes to the project design envelope, this project alone will not have an Adverse Effect on Site Integrity (AEoSI) on any English SPA or SAC. We also agree that any addition to in combination impacts with other projects will be minor and as such are unlikely to significantly contribute to AEoSI for any English SPA or SAC in combination with the other Plans or Projects assessed.

## Natural England Review Comments

### Updates to HRA Screening – Sites/Features Added or Removed – Coquet Island SPA

Natural England notes that Table 3.2 (page 31) of Chapter 3 – Offshore and Intertidal Ornithology in the Offshore Report to Inform Appropriate Assessment (RIAA) has screened out the following feature:

- Coquet Island SPA – Puffin (Seabird Assemblage) – Breeding and non-breeding seasons

This feature was previously screened in for further assessment in the Offshore Habitats Regulations Appraisal (HRA) Screening Report Revision 1.0 (Table 5-3, page 79, and Table 6-1, page 112), for which Natural England provided advice during an earlier consultation (letter dated 21st March 2025, NE Ref: 503276).

Table 3.4 (pages 37- 46) in Chapter 3 of the RIAA outlines updates to the screening of sites/features, including additions and removals with justifications. However, Coquet Island SPA is not included in this list.

While Natural England queries the rationale for this change between documents, we note that the RIAA concludes no Adverse Effect on Site Integrity (AEoSI), either alone or in-combination, for similar features at a nearby designation, specifically Farnes Islands SPA (Puffin (Seabird Assemblage)).

On this basis, we do not anticipate that a full assessment for Coquet Island SPA would result in a different conclusion to that provided for the Farnes Islands SPA. Therefore, while clarification is requested, the omission is not expected to fundamentally alter the overall conclusions of the RIAA.

### **Additional Information**

Should the proposal be amended in a way which significantly affects its impact on the natural environment then, in accordance with Section 4 of the Natural Environment and Rural Communities Act 2006, Natural England should be consulted again.

For any queries relating to the specific advice in this letter only please contact me using the details below. For any new consultations, or to provide further information on this consultation please send your correspondence to [consultations@naturalengland.org.uk](mailto:consultations@naturalengland.org.uk).

Yours sincerely

Pete Welby  
Operations Delivery Higher Officer Marine  
E-mail: [Redacted]

NatureScot

Marine Directorate  
Scottish Government  
Victoria Quay  
Edinburgh  
EH6 6QQ

23 October 2025

Our ref: CNS REN OSWF INTOG –  
Cerulean

Sent by email only

Dear Amy,

**CERULEAN WINDS – ASPEN 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 ASPEN OFFSHORE WIND FARM**

Thank you for consulting NatureScot on the Section 36 and Marine Licence applications submitted by Cerulean Winds Aspen Project Limited (the Applicant) for the proposed Aspen Offshore Wind Farm (the Project). These are accompanied by an Environmental Impact Assessment Report (hereafter referred to as the Offshore EIAR), Report to Inform Appropriate Assessment (RIAA) and Shadow Derogation Case provided on a without prejudice basis.

In addition, the Section 36 and Marine Licence Applications are supported by a Nature Conservation Marine Protected Area (NCMPA) Assessment. Advice on aspects relating to Turbot Bank NCMPA are provided by JNCC in **Appendix H**.

Our advice in this letter is in relation to the Aspen Array Area, the Offshore Transmission Cables (OTCs) and landfall (up to Mean High Water Springs (MHWS) only), hereafter referred to as the Proposed Development. Onshore components will be subject to separate terrestrial planning applications.

**Policy context**

Working within the context of a climate emergency and a biodiversity crisis, we seek to provide advice that is enabling and secures the right development in the right place with most benefit for climate change reduction and that which avoids damage, and where possible, achieves restoration and enhancement of biodiversity.

As a statutory consultee, NatureScot works in support of the Scottish Government's vision for a Blue Economy<sup>1</sup> with its six outcomes acting as focal points to ensure the marine environment supports ecosystem health, improved livelihoods, economic prosperity, social inclusion and wellbeing. We provide advice in the spirit of Scottish Government's ambition for Offshore Wind as outlined in the Sectoral Marine Plan for Offshore Wind Energy (SMP-OWE) published in 2020 and now undergoing an Iterative Plan Review (IPR) (noting that consultation on the draft updated SMP-OWE recently closed, on 22 August 2025) and the Offshore Wind Policy Statement (consultation closed 13 August 2025). The SMP-OWE aims to balance the promotion of the sustainable development of offshore wind, whilst protecting and restoring our biodiversity.

In response to the new Scottish Biodiversity Strategy to 2045, we support the current work of the Scottish Government in considering a new policy direction of nature positive requirements for marine industries, including Offshore Wind. We seek further consideration and engagement on what might be possible in terms of biodiversity enhancement that would also align with the renewable energy production aims and objectives of this proposal, in the context of the climate emergency and biodiversity loss crisis, if consented.

## **Background**

The Applicant was awarded a Targeted Oil and Gas (TOG)<sup>2</sup> Decarbonisation Exclusivity Agreement in 2023 for a floating offshore wind development, located within search area Eb<sup>3</sup>. The Aspen project is the first of three projects being brought forward by the parent company – Cerulean Winds Ltd – with the Beech and Cedar projects being developed separately. The aspiration of Cerulean Winds Ltd is to connect their three projects together via High Voltage Alternating Current (HVAC), forming a North Sea Renewables Grid (NSRG), with the aim of providing renewable electricity to surrounding oil and gas (O&G) assets. The environmental assessment and consenting process for a NSRG is unclear and not discussed, though forthcoming applications for the Beech and Cedar projects and any associated transmission/ export infrastructure are expected as these developments progress.

Connection to specific O&G assets, either with the Aspen project alone or as part of a NSRG, is currently unknown. Cable connections between the Aspen project and/or a NSRG and O&G assets will be subject to separate marine licencing and permitting requirements, the responsibility for which lies with prospective offtakers of the electricity. There is no assessment of these cables in this Application.

Given the uncertainty regarding onward connections to O&G assets, we highlight that assurances should be made that if this Project is consented, then it is only able to proceed upon the securing of onward connection agreements and subject to the proper environmental assessment of such connections.

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<sup>1</sup> Scottish Government (2022) A Blue Economy Vision for Scotland. Available at: <https://www.gov.scot/publications/blue-economy-vision-scotland/>

<sup>2</sup> The SG published an Initial Plan Framework (IPF) for a Sectoral Marine Plan for Offshore Wind for Innovation and Targeted Oil and Gas Decarbonisation (SMP-INTOG) in February 2022, to enable projects to progress through the planning and seabed leasing process under the 'Targeted Oil and Gas Decarbonisation' (TOG) category, providing they met a number of criteria. The IPR process will combine the SMP-OWE with INTOG into one Plan. This remains outstanding.

<sup>3</sup> <https://www.gov.scot/publications/initial-plan-framework-sectoral-marine-plan-offshore-wind-innovation-targeted-oil-gas-decarbonisation-intog/pages/4/>

## The Project

The Proposed Development is located approximately 84 km east of Peterhead in the central North Sea and includes an Array Area (covering an area of 333 km<sup>2</sup>) with maximum water depths of 112.6 m and an OTC Corridor (covering an area of 712 km<sup>2</sup>). The Proposed Development, which follows a project design envelope (PDE) approach, comprises:

- Up to 72 Wind Turbine Generators (WTGs).
- A maximum rotor blade tip height of 310 m; a maximum rotor blade diameter of 280 m and a minimum rotor blade tip to mean sea level air gap of 22 m.
- Triangular steel semi-submersible floating substructures that will be anchored to the seabed.
- Up to six mooring lines per floating substructure with taut, semi-taut and catenary mooring configurations being considered.
- Up to 6 driven pile anchors per substructure or up to 3 suction anchors per substructure. Scour protection such as rock placement, rock bags etc may be required.
- Up to 3 Offshore Substation Platforms (OSPs) to be located within the Aspen Array Area on fixed bottom jackets with pin pile foundations. Scour protection such as rock dump, rock bags, concrete mattresses etc may be required.
- 300km of Inter-Array cables (IACs) with 264 km on the seabed and 36 km in the water column.
- Up to four OTCs within an OTC Corridor. Each OTC will be up to 155 km in length and buried in separate trenches.
- Cable protection will be required for the IACs and OTCs with a maximum volume of material of 1,380,000 m<sup>3</sup>.
- An undetermined landfall, somewhere between Portlethen and Stonehaven.
- Horizontal Directional Drilling (HDD) as the technique for installing the OTCs across the intertidal zone.
- An anticipated operational life of 35 years.

The offshore construction phase, including site preparation works such as UXO and boulder clearance, is expected to span approximately four years (not including pre-construction surveys). 24-hour working is envisaged with seasonal campaigns likely to account for poor weather over winter. Peak working periods will be quarters 2 and 3. Geophysical and geotechnical investigations will be undertaken prior to construction which may identify the need for additional preparatory works.

Pre-construction surveys are envisaged to commence in 2026, with offshore construction starting Q2/Q3 2027 and extending to Q4 2031.

Installation of the floating foundations and WTGs are expected to follow a stepwise process consisting of anchor and mooring installation offshore; assembly of the floating foundations at a port facility; WTG marshalling and integration onto floating foundations (at port); and tow out of the WTG and floating foundation to the Aspen Array Area, with hook-up to the pre-installed mooring and anchor system. Any temporary wet storage is assumed to be within a relevant consented / licensed area.

The OSFs will be installed on jacket foundations with pin piles using a hydraulic hammer. It is unclear from the Project Description if other OSF foundations form part of the PDE as section

3.6.40 states “*should piles be selected for the OSP(s)[...]*”. Figure 3.21 also illustrates a jacket with suction bucket/ caisson foundations, though we note that this foundation type is not presented within the OSP parameters table 3.10 nor has it been assessed within the relevant chapters. As a result, we have assumed and assessed the foundation type to be fixed jacket structure with pin piles only.

The operational phase is expected to be 35 years, which will include a programme of monitoring, refurbishment and or replacement of assets in-situ however the option to detach WTGs from the IACs and mooring systems and tow back to shore for repairs is included.

Decommissioning and Repowering are both briefly addressed in Chapter 3, and we advise that the Decommissioning Plan should be predicated on full removal of all infrastructure in line with current policy<sup>4</sup>.

### **Assessment approach**

The Applicant has largely followed standard EIA and HRA processes. Information contained within the Offshore EIAR has been laid out sufficiently to aid our review and understanding, although we note several aspects within the ornithological assessment that diverge from our guidance and standard industry practice.

#### *Pre-application engagement*

We highlight that despite efforts to provide project specific advice on aspects of the ornithological assessment to fit the Applicant’s constrained timescale, much of our advice has not been taken into account. This has resulted in an assessment in which we do not have full confidence in the conclusions, and the approach taken to reach them. We frequently emphasise the importance of early and transparent pre-application engagement, particularly for ornithology, to avoid issues arising in the assessment and subsequent requirements for additional information.

#### *Design development*

Our conclusions on EIA significance and the potential for Adverse Effects on Site Integrity (AEOI) are based on the worst-case scenarios presented within the assessments. It is recognised that as Proposed Development parameters are refined, many of the impacts and environmental effects may reduce. Where we report significant effects in our own appraisal, we suggest this is managed via additional mitigation beyond embedded measures. Often this is achieved using specific mitigation and construction plans and their content (e.g. Marine Mammal Mitigation Plan and Piling Strategy), secured as part of the consent conditions and developed and agreed prior to construction as designs progress. Any impacts which are likely to reduce through design evolution should be clearly evidenced, with any implications for mitigation requirements confirmed through consultation with NatureScot and Marine Directorate.

#### *Sensitivity/ magnitude criteria and significance matrices*

Considering risk, significance and magnitude in EIA is an important step, particularly when using the matrix approach. The results of the matrix assessments inform the basis of the EIA assessment which in turn inform the need for any mitigation and / or compensation. We have considered the

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<sup>4</sup> <https://www.gov.scot/publications/offshore-renewable-energy-decommissioning-guidance-scottish-waters/>

approach taken and provide our own matrix appraisal where in our opinion, evidence and our assessment indicate that sensitivity/ magnitude scores are underplayed.

## NatureScot advice

### Offshore and intertidal ornithology – EIA

The EIA assessment for offshore and intertidal ornithology concludes no significant impacts from the Proposal alone. **We broadly agree with the Applicant's conclusions in relation to the Proposal alone impacts under EIA.**

We provisionally conclude that cumulative effects from this Project with other offshore wind farms are significant in EIA terms, for the following:

- Guillemot for distributional responses (i.e. displacement) (major)
- Great black-backed gull for collision (major)
- Razorbill for distributional responses (moderate)
- Kittiwake for combined distributional responses and collision (moderate)

We have identified issues with the applicant approach to calculating the regional population of guillemot which has resulted in substantially different results between the 'Applicant approach' and the 'Guidance approach'.

### Offshore and intertidal ornithology – RIAA

Within our advice on the RIAA, we note several issues with the approach to assessment. Fundamentally, these points have affected our confidence in the assessments provided and for several sites/ species we **do not have sufficient information to be able to determine AEOsI.**

For the sites/ species below **we currently do not have sufficient information to reach a final conclusion on Proposal alone AEOsI.** In this instance we are only able to provide **provisional advice of No AEOsI**

- Guillemot at Buchan Ness to Collieston Coast, Fowlsheugh SPA and Troup, Pennan and Lion's Head SPA

Our inability to reach a definitive conclusion for these sites/species is a result of the Applicant's approach to apportioning guillemot, which is not in line with advice provided pre-application.

In addition, **we currently do not have sufficient information to determine Proposal alone AEOsI** for the following sites/ species:

- Great black-backed gull at Calf of Eday SPA and Hoy SPA

Proposal alone Population Viability Assessments (PVAs) are required for this species on the basis that these sites as apportioned predict impacts exceeding 0.02 percentage point decrease in survival.

Following our own appraisal of the information provided, **we disagree with the conclusion that there will be no AEoSI in-combination.**

For the qualifying species and sites listed below, we have concluded AEoSI in-combination with other offshore wind farm projects for the assessment, which has been conducted with Berwick Bank.

- Gannet at Forth Islands SPA.
- Guillemot at Buchan Ness to Collieston Coast SPA (provisionally).
- Kittiwake at Buchan Ness to Collieston Coast SPA.
- Kittiwake at Fowlsheugh SPA.

For the qualifying species and site listed below, **we are unable to conclude No AEoSI in-combination** with other offshore wind farm projects.

- Puffin at Forth Islands SPA.

For the following qualifying species and sites listed below, **we do not have sufficient information** to fully assess the potential for AEoSI from in-combination impacts:

- Guillemot at Fowlsheugh SPA and Troup, Pennan and Lion's Head SPA.
- Great black backed gull at Calf of Eday, Copinsay Spa, and Hoy SPA.
- Gannet at Fair Isle SPA, North Rona and Sula Sgeir Stack SPA, St Kilda SPA, Sule Skerry and Sule Stack SPA.
- Kittiwake at East Caithness Cliffs SPA, Forth Islands Spa, North Caithness Cliffs SPA, Troup, Pennan and Lion's Head SPA.
- Razorbill at Troup, Pennan and Lion's Head SPA.

Where we have reached a conclusion of AEoSI we advise a derogation case is required. Further advice is provided in **Appendix G** on the compensation measures proposed by the Applicant as part of a without prejudice derogation case.

Further advice with respect to ornithological interests is provided in **Appendix A** together with a summary of our conclusions provided in Table 1A of **Annex 1A**.

### **Marine mammals – EIA and RIAA**

The EIA assessment for marine mammals concludes no significant impacts, both alone and cumulatively. However, we disagree with the sensitivity scoring presented in the assessment and therefore, do not support the Applicant's conclusions. **Instead, we conclude significant effects for disturbance from piling, for the Proposal alone and cumulatively for Risso's dolphin, white-beaked dolphin, minke whale and humpback whale; and cumulatively for harbour porpoise and bottlenose dolphin (Greater North Sea (GNS) Management Unit (MU)).**

In relation to the RIAA, we advise there is a Likely Significant Effect (LSE) to bottlenose dolphin of the Moray Firth Special Area of Conservation (SAC) as a result of disturbance from piling. However, as iPCoD is over precautionary in this instance, **we can conclude no AEoSI.**

For Unexploded Ordnance (UXO) clearance, we note the assessment is based on a worst-case scenario, which could have a significant impact for disturbance on bottlenose dolphin (Coastal East

Scotland (CES) MU / Moray Firth SAC). However, the potential impact is dependent on the specific location of any identified ordnance, its estimated charge weight and removal method.

As such, should Scottish Ministers grant consent, we advise:

- The Applicant will need to consider the implications further, through the development of the Piling Strategy and Marine Mammal Mitigation Protocol (MMMP) post-consent, for all species considered but particularly for Risso's dolphin, white-beaked dolphin, harbour porpoise, minke whale, humpback whale, and bottlenose dolphin. This may require additional noise modelling of the final design parameters and monitoring of noisy activities during construction.
- Within the Piling Strategy and MMMP, further detailed consideration should be given to the duration and timing of noisy activities including piling as well as mitigation measures.
- A detailed UXO disposal campaign plan identifying the location and size of UXO, method for disposal as well as any associated underwater noise modelling and monitoring.

Further advice on marine mammals, including requirements for mitigation, further recommendations for conditions and a request for clarifications, is provided in **Appendix B**.

### **Fish and shellfish ecology – EIA**

The assessment for fish and shellfish ecology concludes **significant effects on spawning herring, both alone and cumulatively** as a result of underwater noise (UWN) from piling activities. Mitigation is therefore required, and is presented in Volume 4, Appendix 14: In principle Fish Mitigation Plan. No significant effects were identified for all other impact pathways and receptors. **We agree with these conclusions.** Further advice is provided in **Appendix C**.

Regarding the sandeel protected feature of the Turbot Bank NCMPA, based on the information provided, JNCC have undertaken their own appraisal of impacts and advise that the Project is **capable of affecting but insignificantly** the sandeel protected feature of the Turbot Bank NCMPA. Further advice from JNCC is provided in **Appendix H**.

### **Benthic ecology – EIA**

The Offshore EIAR concludes **no significant effects, both alone and cumulatively** for Benthic Subtidal and Intertidal Ecology, which we support. Further advice is provided in **Appendix D**.

### **Marine and coastal processes – EIA**

The Offshore EIAR concludes **no significant effects, both alone and cumulatively** for Marine and Coastal Processes, which we support. Further advice is provided in **Appendix E**.

## Blue carbon – EIA

No EIA assessment is provided for blue carbon, nor is this topic addressed within any of the related receptor chapters (e.g. marine and coastal processes, marine water and sediment quality, benthic ecology, or climate). In our Scoping advice (dated 24<sup>th</sup> March 2025), we advised that *“consideration is given to impacts on blue carbon and whether or not an assessment can be undertaken. This should expand on the information and assessment conducted for benthic ecology to focus on the potential impacts of the proposal on marine sediments and coastal habitats”*. This was mirrored in the subsequent Scoping Opinion.

As such, we are unable to provide advice on blue carbon and require clarification before providing our final blue carbon advice under EIA. **We require either clear rationale as to why a blue carbon assessment was not possible, alternatively, a blue carbon assessment should be presented, with further advice on the recommended approach provided in Appendix F.**

The biodiversity value and ecosystem functions provided by Blue Carbon habitats are well understood and afforded protection through a variety of policies. In addition, there is an increasing need to also recognise the climate change mitigation potential in line with the Blue Carbon Action Plan<sup>5</sup>.

## Seascape, landscape and visual impacts (SLVIA) – EIA

In line with the Scoping Opinion and our advice, SLVIA has been scoped out of the EIA assessment. Nevertheless, we expect the final layout, if consented, to be provided within the Design Specification and Layout Plan (DSLPL).

## Next steps

For several European sites, we have reached the conclusion of AEoSI, or have been unable to conclude No AEoSI in-combination with other wind farms including and excluding Berwick Bank. As a result, Marine Directorate will be required to undertake an Appropriate Assessment.

## Compensatory measures

We note the Applicant’s preference to use a future Marine Recovery Fund (MRF) and in-line with interim guidance<sup>6</sup> we welcome that the Applicant has also initiated consideration of their own proposed compensation measures. Until the Scottish MRF and Scotland’s Portfolio of Compensatory Measures are operational, we request ongoing involvement to advise on the ecological effectiveness of any project specific compensation measure(s).

Our understanding of the compensation measures put forward by the Applicant, including our initial view on the principle of each measure, is provided in **Appendix G**. Our advice is focussed on ecological feasibility of compensation measures, and at present we advise there is insufficient

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<sup>5</sup> <https://www.gov.scot/publications/scottish-blue-carbon-action-plan/>

<sup>6</sup> <https://www.gov.scot/publications/scottish-marine-recovery-fund-guidance/pages/overview/>

information to have confidence that the proposed measures could compensate for the predicted impacts of the Project to seabirds.

### **Further information and advice**

We hope this advice is helpful. Please contact Joe Nisbet ( [Redacted] ) or Caitlin Cunningham ( [Redacted] ) in the first instance for any further advice, copying in our marine energy mailbox – [marineenergy@nature.scot](mailto:marineenergy@nature.scot).

Yours sincerely,

**Erica Knott**

Head of Marine Energy – Sustainable Coasts and Seas

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## NATURESCOT ADVICE ON ASPEN OFFSHORE WIND FARM

### Appendix A – Offshore and intertidal ornithology

Offshore and intertidal ornithological interests are considered in Chapter 12 of the Offshore EIAR with other relevant material presented in the following Appendices:

- Appendix 12.1 - Offshore and Intertidal Ornithology Baseline Technical Report
- Appendix 12.2 - Offshore Ornithology Collision Risk
- Appendix 12.3 - Offshore Ornithology Distributional Responses Technical Report
- Appendix 12.4 - Ornithology Migratory Collision Risk Modelling Technical Report
- Appendix 12.5 - Offshore Ornithology MRSea Technical Report
- Appendix 12.6 - Offshore Ornithology PVA Technical Report
- Appendix 12.7 - Offshore Ornithology Apportionment Report

Ornithological interests are also considered in the RIAA, specifically Chapter 3 – Ornithology.

The RIAA is accompanied by a HRA Derogation Case (provided on a without prejudice basis) and corresponding Compensation Plan. Our advice regarding the Derogation Case and related documents is included within **Appendix G**.

A pre-application ornithology workshop with the Applicant was held in July 2025 (hereafter referred to as the 'July 2025 Ornithology Workshop'). During the workshop we made several recommendations regarding the approach to the assessment including further consideration of DAS results, guillemot apportioning / determining regional populations, and thresholds for undertaking PVA / in-combination assessments.

Much of our advice has not been taken on board, despite commitments to do so by the Applicant in the post meeting notes circulated on 22<sup>nd</sup> July 2025. Given our willingness and flexibility to attend these sessions in the Applicant's constrained timescale, and the demands on our limited resources, it is disappointing that our advice has not been applied. This has resulted in an assessment in which we question aspects of the conclusions and the approach taken to reach them.

### EIA Summary

The EIA assessment for offshore and intertidal ornithology concludes no significant impacts from the Proposal alone. **We broadly agree with the Applicant's conclusions in relation to the Proposal alone impacts under EIA.**

We provisionally conclude that cumulative effects from this Project with other offshore wind farms are significant in EIA terms, for the following:

- Guillemot for distributional responses (displacement) (major)
- Great black-backed gull for collision (major)
- Razorbill for distributional responses (moderate)
- Kittiwake for combined distributional responses and collision (moderate)

We have identified issues with applicant approach to calculating the regional population of guillemot which has resulted in substantially different results between the ‘Applicant approach’ and the ‘Guidance approach’<sup>7</sup>.

### RIAA Summary

The RIAA concludes there will be No AEoSI, either from the Proposal alone or in-combination for each protected site and effect pathway considered. Our conclusions on the RIAA following our own assessment of the results are summarised below.

#### Proposal alone assessment of AEoSI

We broadly agree with the Applicant’s Proposal alone conclusion of No AEoSI, noting the exception below where we **currently do not have sufficient information to reach a final conclusion on AEoSI**. In this instance we are only able to provide **provisional advice of No AEoSI** (narrative on this provisional conclusion is provided below under ‘Proposal alone assessment of AEoSI’).

- Guillemot at Buchan Ness to Collieston Coast, Fowlsheugh SPA and Troup, Pennan and Lion’s Head SPA

Our inability to reach a definitive conclusion for these sites/ species is a result of the Applicant’s approach to apportioning guillemot, which is not in line with advice provided pre-application (see advice provided under ‘Apportioning impacts to SPAs’).

In addition, **we currently do not have sufficient information to determine AEoSI** for the following sites/ species:

- Great black-backed gull at Calf of Eday SPA and Hoy SPA

Proposal alone PVAs are required for this species on the basis that these sites as apportioned predict impacts exceeding 0.02 percentage point decrease in survival.

#### In-combination assessment of AEoSI

Following our own appraisal of the information provided, **we disagree with the conclusion that there will be No AEoSI in-combination**. For the qualifying species and sites listed below, we have **concluded AEoSI in-combination** with other offshore wind farm projects for the assessment, which has been conducted with Berwick Bank<sup>8</sup>.

- Gannet at Forth Islands SPA
- Guillemot at Buchan Ness to Collieston Coast SPA (provisionally)
- Kittiwake at Buchan Ness to Collieston Coast SPA
- Kittiwake at Fowlsheugh SPA

For the qualifying species and site listed below, **we are unable to conclude No AEoSI in-combination** with other offshore wind farm projects.

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<sup>7</sup> An updated ‘Guidance approach’ was recommended by us during the July 2025 Ornithology Workshop.

<sup>8</sup> Note, no without Berwick Bank scenario has been assessed. Further advice is provided under ‘Without Berwick Bank’ cumulative and in-combination scenario

- Puffin at Forth Islands SPA

For the following qualifying species and sites listed below, **we do not have sufficient information to fully assess the potential for AEO SI** from in-combination impacts:

- Guillemot at Fowlsheugh SPA and Troup, Pennan and Lion's Head SPA
- Great black backed gull at Calf of Eday, Copinsay Spa, and Hoy SPA
- Gannet at Fair Isle SPA, North Rona and Sula Sgeir Stack SPA, St Kilda SPA, Sule Skerry and Sule Stack SPA
- Kittiwake at East Caithness Cliffs SPA, Forth Islands Spa, North Caithness Cliffs SPA, Troup, Pennan and Lion's Head SPA
- Razorbill at Troup, Pennan and Lion's Head SPA

Where we have reached a conclusion of AEO SI we advise a derogation case is required. Please see **Appendix G** for our advice on the compensation measures proposed by the Applicant as part of a without prejudice derogation case.

### **Baseline characterisation**

The Offshore and Intertidal Ornithology Baseline report is provided in Volume 3, Appendix 12.1.

The Applicant undertook two years of Digital Aerial Surveys (DAS) between April 2023 and February 2025, covering the Aspen Array Area plus a 6 km buffer (noting that survey data from the Aspen Array Area plus 4 km buffer were used to inform the ornithology baseline).

#### Intertidal surveys

Intertidal surveys were conducted for four locations, none of which intersect any SPAs. The closest SPA is Fowlsheugh SPA, roughly 5.5 km south of the southernmost survey location.

The intertidal surveys were only performed over a single non-breeding season. While this timing targets inshore wintering waterfowl, divers and gulls which make use of the intertidal zone during the non-breeding season, it may miss species that make use of the inshore area during the breeding season.

In some cases, the maps of recorded observations by species group show clusters of seabirds (namely, auks, kittiwake and fulmar) in small portions of the coastline in the survey locations. These clusters may represent seabirds attending breeding sites in the non-breeding season. If this is the case, activities relating to construction and pre-construction at the landfall site may potentially impact breeding seabirds. Without breeding season surveys we cannot ascertain whether these sections of coastline are colony sites.

Without a breeding season intertidal survey, it is difficult to fully assess the potential impacts of geotechnical and geophysical surveys conducted in preparation of landfall construction activities and the impacts of landfall installation. While the potential landfall locations are not within an SPA, there may be connectivity to the closest SPA – Fowlsheugh. As a result, any landfall installation should be limited to wintering months if consented. If landfall activities are planned during the breeding season, then a pre-construction breeding season intertidal survey with accompanying assessment including any suitable mitigation should be undertaken.

#### Digital Aerial Surveys

During the July 2025 Ornithology Workshop, the Applicant presented their proposed approach to excluding anomalous DAS results from months they suggested were affected by fishing vessel activities (February 2024 and 2025). Following the meeting however, it was agreed that the months affected by fishing vessels would not be excluded from the assessment. NatureScot also requested a written discussion of the potential impacts of the presence of these fishing vessels, and for all associated data (for example, the fishing vessel tracking data referred to in the meeting) be incorporated into the assessment.

This information has not been provided, reducing our ability to undertake our assessment and ultimately contributes to our precautionary approach when reaching conclusions.

In Appendix 12.1 – Offshore and Intertidal Ornithology baseline technical report, paragraph 5.7.9 states that the abundance estimate from February 2024 has not been included within the mean peak abundance summaries. The Applicant states that this is due to MRSea modelled abundance estimates being vulnerable to influence by artificial increases in density due to spatial smoothing terms increasing estimates surrounding the source. It is stated that *“a design-based estimate only is used for the mean peak abundance estimate”*.

This fits with the advice we provided at the July 2025 Ornithology Workshop and is an acceptable approach. We note that there is no longer any reference to February 2025 also being affected by nearby fishing vessels, however, this difference does not appear to impact the assessment.

However, we note that the seasonal mean peak abundance values provided in table 5.21 (Fulmar seasonal mean peak apportioned abundance estimates) do appear to have been calculated using the MRSea modelled abundance estimate for February 2024. The pre-breeding season (December to March) mean peak abundance estimates presented in table 5.21 are 610 for the Aspen Array Area, and 1119 for the Aspen Array Area plus 2 km buffer. Table 1 below shows how these values match an approach where the MRSea modelled peak estimates are used for the calculation.

As fulmar were not assessed quantitatively, the difference in estimates will not affect our conclusions.

*Table 1 Example breakdown of calculation of mean seasonal peak abundance for fulmar. Yellow indicates the values which match those presented in table 5.21 of appendix 12.1*

		Array Area		Array Area plus 2 km	
		Design based peak estimate	MRSea modelled peak estimate	Design based peak estimate	MRSea modelled peak estimate
<b>Seasonal peaks</b>	<b>Year 1</b>	525 (Feb 24)	336 (Feb 24)	888 (Feb 24)	717 (Feb 24)
	<b>Year 2</b>	591 (Dec 24)	883 (Feb 25)	1172 (Feb 25)	1520 (Feb 25)
<b>Mean season peak abundance</b>	<b>One approach only</b>	558	609.5	1030	1118.5
	<b>Feb 24 MRSea replaced with design based estimate</b>	704		1204	

For kittiwake, the MRSea abundance estimates are not included for February 2024 in Table 5.1 of Appendix 12.1. This matches the Applicant's stated approach. Additionally, the design-based estimate for kittiwake in February 2024 is not the peak count of its season in 2024, and therefore its inclusion or exclusion does not impact the mean seasonal peak estimate.

### Assessment approach

In reviewing the ornithology assessment and supporting information, we have noted minor errors and inconsistencies between documents. Where possible we have corrected for this in our analyses. In the sections below, we highlight some issues with the Applicant's approach. Where issues have been encountered, we have provided an overview on whether these have an impact on our conclusions/ ability to reach conclusions.

#### Collision Risk Assessment

##### *Kittiwake at North Caithness Cliffs SPA in the breeding season*

In our calculations, using the apportioning rates outlined in Table 5.1 and Table 5.5 of Appendix 12.7 and the collision estimates outlined in Table 3.1 of Appendix 12.2, a total of 0.17 adult collisions are apportioned to North Caithness Cliffs SPA. However, Table 3.39 of Chapter 3 of the RIAA states a total annual of adult collisions of 0.42 for the guidance approach. As this value is greater than that estimated by our calculations, it would not change our conclusions as to proposal alone AEoSI.

#### Distributional Responses

Displacement has been assessed using the matrix approach, as opposed to SeabORD, due to known issues with the MATLAB version of SeabORD. This is acceptable and the use of a matrix approach was agreed during the July 2025 Ornithology Workshop.

In the application of the matrix approach, the assessment uses two sets of displacement and mortality rates to estimate overall displacement mortality for the above species (Table 2). Based on the tables that follow, we assume that the displacement rates presented in Tables 2.4 and 2.5 in Appendix 12.3 also cover the non-breeding seasons. **However, we request clarification on this point.**

MRSea was used to produce density estimates for guillemot, gannet, and kittiwake (Appendix 12.3, Section 2.1.2). It was not possible to run for all species in all seasons. Design-based densities were calculated for all species (Appendix 12.3, Table 2.2).

It was agreed in during the July 2025 Ornithology Workshop, based on available evidence, that mid-July could be considered in the post-breeding season for guillemot (Appendix 12.3, Table 2.3).

*Table 2 Displacement and mortality rates for the guidance approach and applicant approach*

Species	Displacement rate	Mortality rate – breeding season	Mortality rate – non-breeding season
<b>Guidance approach</b>			
Guillemot, razorbill, and puffin	60%	3-5%	1-3%

Gannet	70%	1-3%	1-3%
Kittiwake	30%	1-3%	1-3%
<b>Applicant approach</b>			
Guillemot, razorbill, and puffin	50%	1%	1%
Gannet	70%	1%	1%
Kittiwake	30%	1%	1%

We acknowledge the narrative provided to support the use of the Applicant’s approach to displacement in the assessments. In our view the emerging evidence regarding distributional responses is mixed, and insufficiently conclusive for us to change our guidance in this respect. Although our assessment is based on the SNCB/ NatureScot approach, it is useful to have the Applicant’s approach for context.

*Determining guillemot regional populations for EIA*

The methodology for determining non-breeding population for guillemot is non-standard. The Applicant has presented a ‘guidance approach’ and an ‘Applicant approach’ for determining guillemot regional populations in the Offshore EIAR. These differing approaches have resulted in drastically different impact magnitudes (see results discussed within ‘Cumulative effects assessment (CEA)’). During the July 2025 Ornithology Workshop, we recommended use of the Fair Isle mean max foraging range (MMFR; 153.7 km). We are aware that the recommended foraging ranges do not represent the furthest a bird could travel and therefore recommend the extended MMFR as a middle ground. The Applicant has not adopted our recommendation and instead advised, following the workshop, that they would utilise the general MMFR (95.2 km) for the guidance approach.

As part of the Offshore EIAR, the Applicant has presented their own approach to determining guillemot populations. The Applicant approach uses a “*bespoke BDMPS*”, considering all colonies from (and including) Orkney to the Farne Islands SPA, with populations extracted from Furness (2015). We do not endorse this approach and note that it has led to substantially different results when compared to the ‘guidance approach’.

Since the last census (Burnell et al., 2023)<sup>9</sup>, populations of Scottish guillemots have declined by 31%, this is not captured under the ‘Applicant approach’. As a result, the ‘Applicant approach’ presents a 23-fold increase in guillemot population compared with the standard MMFR+1SD ‘guidance approach’, thereby explaining the significant range in population size impacts predicted.

In contrast, use of the Fair Isle MMFR would give a regional population of around 4-times the standard MMFR.

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<sup>9</sup> Burnell, D et al., (2023) Seabirds Count: A census of breeding seabirds in Britain and Ireland (2015-2021). Available at: <https://lynxnaturebooks.com/product/seabirds-count/>

The differences in the Applicant approach to that undertaken by other developments is so large that we are unable to accept this methodology. To ensure consistency between approaches, and to allow comparisons between far-offshore developments to be made, we advise:

- **PVAs are rerun for guillemot cumulative impacts using the extended foraging range approach (153.7 km).**

#### Apportioning impacts to SPAs

##### *Guillemot*

The approach to apportioning used does not reflect the advice given during July 2025 Ornithology Workshop. The Applicant presents a 'NatureScot approach' to apportioning which does not reflect our most recent advice. The Applicant's 'NatureScot approach' sees all SPA apportioned mortalities for guillemot being apportioned to Buchan Ness to Collieston Coast SPA. This approach is likely to overestimate the impact to Buchan Ness to Collieston Coast SPA and underestimate impacts to Fowlsheugh SPA and Troup, Pennan and Lion's Head SPA, particularly in the in-combination assessment.

During the July 2025 Ornithology Workshop, we advised an extended foraging range approach should be used to identify theoretical connectivity for guillemot in the breeding and non-breeding season. Under this approach, the Fair Isle MM+SD foraging range of 153.7 km is used in place of the standard foraging range of 95.2 km. We have advised the use of this approach in cases where development sites are at the outer edge of the standard guillemot foraging range but still show significant numbers of guillemot in DAS data. Additionally, applying the extended foraging range approach would also allow for more consistency in approaches between farther offshore developments.

However, in the post-meeting notes circulated on 22<sup>nd</sup> July 2025, the Applicant noted that there was not sufficient time before submission for this approach to be applied. The Applicant has therefore used the standard MM+SD foraging range for guillemot, which results in only one SPA being within foraging range (Buchan Ness to Collieston Coast SPA).

Had the extended foraging range been used, two additional SPAs would have been included – Fowlsheugh SPA and Troup, Pennan and Lion's Head SPA. As we have concluded AEOsI and/or have been unable to conclude no AEOsI for these two SPAs in our responses to other applications, it is possible that a full assessment of in-combination impacts by Aspen would also result in AEOsI.

The Applicant approach for apportioning guillemot in the breeding season defines a regional population based on Buckingham et al 2022<sup>10</sup> and Dunn et al 2024<sup>11</sup>. In the RIAA, the apportioning is based on the most recent colony counts for colonies within this regional population. Mortalities are then apportioned to non-SPA colonies within the Developer's regional population using the

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<sup>10</sup> Buckingham L, Bogdanova MI, Green JA, Dunn RE, Wanless S, Bennett S, Bevan RM, Call A, Canham M, Corse CJ, Harris MP, Heward CJ, Jardine DC, Lennon J, Parnaby D, Redfern CPF, Scott L, Swann RL, Ward RM, Weston ED, Furness RW, Daunt F (2022) Interspecific variation in non-breeding aggregation: a multi-colony tracking study of two sympatric seabirds. *Mar Ecol Prog Ser* 684:181-197 <https://doi.org/10.3354/meps13960>

<sup>11</sup> Dunn, RE, Duckworth, J, O'Brien, S, Furness, RW, Buckingham, L, Daunt, F, Bogdanova, M & Green, JA 2024, 'Temporal and spatial variability in availability bias has consequences for marine bird abundance estimates during the non-breeding season', *Ecological Solutions and Evidence*, vol. 5, no. 4, e12373. <https://doi.org/10.1002/2688-8319.12373>

normal method, which results in 19.2% of the impact being apportioned to non-SPAs. All other mortalities are then apportioned to Buchan Ness to Collieston Coast SPA.

We do not accept this approach, as apportioning all other mortalities to a single SPA will result in an underestimate of the impact to other SPAs with connectivity. Our preferred approach in this case is the use of the Fair Isle foraging range as an 'extended foraging range'.

As a result, to enable our assessment of impacts to guillemot SPA populations, we require:

- **PVAs for guillemot to be rerun using the extended foraging range approach. This will also enable consistency in comparison across further offshore Scotwind / INTOG sites.**

#### *Great black backed gull and herring gull*

The Applicant states that for both great black-backed gull and herring gull, the non-breeding SPA weighting percentage of birds apportioned to each SPA is 0.1% or less. On this basis the Applicant has concluded that any impacts to these species are immaterial, resulting in a conclusion of No AEoSI for the sites these species have connectivity to (paragraphs 3.8.39 and 3.8.34 of Chapter 3 of the RIAA). However, tables 5.7 (great black-backed gull) and 5.8 (herring gull) in Appendix 12.7 show the non-breeding season apportioning results for these species, and in both cases several of the SPAs in question have a greater than 0.1% apportioning weighting. Additionally, we do not support the application of a 0.1% threshold to apportioning weighting.

Furthermore, during the July 2025 Ornithology workshop, we advised the Applicant that an in-combination PVA should be undertaken if impacts on species at an SPA are greater than 0.2 of a bird, or greater than 0.02% decrease in survival rate.

Using the apportioning weight percentages from tables 5.7 and 5.8 and the mortality estimates presented in the RIAA, Chapter 3, we have undertaken our own analysis and apportioned the estimated mortalities for these species.

For herring gull all percentage point changes in survival were below the 0.02% threshold, and we are content to conclude **no AEoSI** for these SPAs.

For great black-backed gull, apportioned to Calf of Eday SPA and Hoy SPA, predicted impacts exceed 0.02 percentage point change (see Table 3). Given predicted impacts are >0.02% decrease in survival we request:

- **PVA to be undertaken for proposal alone impacts on great black-backed gull at these two SPAs.**
- **PVA to be undertaken for in-combination impacts on great black-backed gull at these two SPAs.**

*Table 3 Great black backed gull collision mortality estimates apportioned to SPA (note – sabbatical birds have not been removed, in alignment with the Applicant's approach)*

Site	Apportioned mortality (total)	Apportioned mortality (adults only)	SMP most recent counts, breeding adult individuals (years)	Change in adult mortality
Calf of Eday SPA	0.05574	0.0245	86 (2018)	<b>0.0285%</b>

Hoy SPA	0.00929	0.0041	12 (2017, 2018, 2024)	<b>0.0341%</b>
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### Sabbatical birds

Paragraph 3.4.8 of Chapter 3 of the RIAA the Applicant states: *“Additionally, each year it is assumed that a proportion of the adult population will not breed, often as a result of population-specific constraints (for example, limited prey availability or extreme weather). However, in order to represent a precautionary approach, the proportion of birds that undertake a breeding sabbatical in any given year is not factored into the assessment, with the assumption being that all adult birds are breeding. This process is precautionary as it assumes that a greater number of mortalities are breeding adults (i.e., the impact is expected to be an overestimate)”*.

Our standard advice would be to apply sabbatical rates to mortality estimates used in the RIAA, however, as the Applicant’s approach will result in more mortalities being apportioned to SPAs, this approach will be more precautionary.

### ‘Without Berwick Bank’ cumulative and in-combination scenario

The Applicant has presented an in-combination assessment (RIAA) and a cumulative effects assessment (CEA) (EIA) that includes Berwick Bank. No ‘Without Berwick Bank’ scenario has been assessed. While a consent decision for Berwick Bank has since been made (August 2025), this concluded that compensation measures submitted by Berwick Bank are insufficient. As such, we assess both scenarios, in keeping with our approach for previous offshore wind applications.

It is noted that in Volume 3, Appendix 12.6, the results of a *“minus BB”* scenario are referenced, though this is not elaborated on. We have assumed that *“minus BB”* refers to a scenario run without the contribution of Berwick Bank and therefore query why this was not presented within the main body of the RIAA or EIA.

On the basis that compensation measures submitted for Berwick Bank are currently deemed insufficient, we advise that:

- **In-combination and cumulative impacts ‘Without Berwick Bank’ are to be provided.**

### Population Viability Assessment (PVA)

The Applicant states (Appendix 12.6, Section 2.3.6) that PVAs were modelled for all species where there would be more than a 0.02% change in adult survival rate. In addition, during the July 2025 Ornithology Workshop, we advised that PVA modelling should be undertaken for any site/species which report an impact of greater than 0.2 birds per annum. The Applicant has not adopted this approach in the RIAA for proposal alone impacts which range from 0.2 to 1.0 birds per annum, instead utilising a qualitative approach which infers conclusions from other offshore wind farm developments, an approach we do not accept.

Furthermore, the numbers presented for great black-backed gull in Appendix 12.6 (Table 3.27) do not match those presented in Volume 2, Chapter 12 (Table 12.50). We have based our assessment on the values in Volume 2, Chapter 12 but **request clarification around these differences**.

The Applicant states they have applied a general rule of thumb (Appendix 12.6, Section 2.3.8), whereby impact scenarios with a CGR remaining above 0.995 does not represent a significant

impact. However, it does not appear that any consideration has been given to impact scenarios with a CGR below 0.995 (e.g. great black-backed gull).

## NatureScot appraisal – EIA

### Proposal alone impact assessment

The Applicant has not identified any significant proposal alone EIA impacts for offshore ornithology. For the proposal alone we are largely in agreement that impacts are small and unlikely to be significant in EIA terms.

Within the EIA, the Applicant has considered impacts from the proposal alone quantified mortalities, as outlined in the Table 4.

Table 4 Proposal alone annual mortalities (Guidance approach). Species in bold above threshold for PVA.

Species	Regional population	Annual displacement adult mortalities	Annual collision adult mortalities	Total annual adult mortalities	Percentage point change in mortality	Counterfactual of population size
Kittiwake	829,937	0.77-2.32	11.01	11.78-13.32	0.001-0.002	NA
<b>Guillemot</b>	<b>52,931</b>	<b>38.59-104.63</b>	<b>NA</b>	<b>38.59-104.63</b>	<b>0.079-0.198</b>	<b>0.966-0.915</b>
Razorbill	591,874	1.79-3.47	NA	1.79-3.47	<0.001-0.001	NA
Puffin	492,189	2.68-17.02	NA	2.68-17.02	0.001-0.003	NA
Gannet	456,298	5.53-16.60	17.17	22.70-33.77	0.003-0.004	NA
Herring gull	466,511	NA	3.84	3.84	0.001	NA
Great black-backed gull	91,399	NA	9.72	9.72	0.011	NA

### Cumulative effects assessment (CEA)

For cumulative assessments in the EIA the following species were assessed using PVA:

- Guillemot (distributional responses)
- Razorbill (distributional responses)
- Puffin (distributional responses)
- Herring gull (collision)
- Great black-backed gull (collision)
- Kittiwake (distributional responses and collision)
- Gannet (distributional responses and collision)

#### *Guillemot*

The impact of displacement results in a percentage point change in mortality that exceeds the 0.02 threshold for PVA requirement.

As outlined above, differences in the approach to quantifying the regional population of guillemot have resulted in significantly different predicted impacts between the two approaches presented by the Applicant. Table 5 below outlines the cumulative assessment results for guillemot for the ‘Applicant approach’ and ‘guidance approach’. We do not believe the results to be reflective of a biologically realistic scenario. In order to adequately assess cumulative impacts to guillemot, **we require PVAs to be rerun using the extended foraging range approach.**

*Table 5 Cumulative assessment results for guillemot. Numbers from Applicant Approach using populations derived from ‘evidence-led’ BDMPS, and Guidance High Approach using populations derived from general MMFR±SD.*

<b>Proposal alone mortalities</b>	<b>Annual cumulative mortalities</b>	<b>Percentage point change in mortality</b>	<b>Median CGR</b>	<b>Median CPS</b>	<b>Developer conclusion</b>	<b>NatureScot conclusion</b>
27.52-104.63	1,289.54-3,188.53	0.105-6.024	0.999-0.932	0.958-0.079	Minor, not significant	<b>Major, significant</b>

In the interim, we **provisionally conclude** that the overall cumulative effect for guillemot to be **major, and therefore significant in EIA terms.** This is considering:

- the medium sensitivity of guillemot to displacement;
- the very low CPS and CGR, which suggest a substantial decline (ranging from 4.18 – 92.10%) in population size and growth rate (0.12 – 6.81%) after 35 years;
- the 31% decline in the population size of guillemot in Scotland between Seabird 2000 and Seabirds Count;
- the effects of the recent HPAI outbreak on guillemot. NatureScot’s Avian Influenza report<sup>12</sup> on the impacts of HPAI estimated the 2022 HPAI outbreak to have been of high impact and with a slow recovery rate predicted; and
- the moderate contribution of the project.

Please note, that a 92% decrease in population size would be catastrophic. We believe that following adoption of the extended foraging range approach, an intermediate result between the current ‘Applicant approach’ and ‘guidance approach’ would be reached and the predicted impacts lessened.

### *Razorbill*

The impact of displacement results in a percentage point change in mortality that exceeds the 0.02 threshold for PVA requirement. Assessment results are presented in Table 6.

<sup>12</sup> <https://www.nature.scot/doc/naturescot-scientific-advisory-committee-sub-group-avian-influenza-report-h5n1-outbreak-wild-birds>

Table 6 Cumulative assessment results for razorbill

Proposal alone mortalities	Annual cumulative mortalities	Percentage point change in mortality	Median CGR	Median CPS	Developer conclusion	NatureScot conclusion
0.70-3.47	989.43-3,904.28	0.167-0.660	0.998-0.992	0.931-0.752	Minor, not significant	<b>Moderate, significant</b>

We conclude that the overall cumulative effect on razorbill to be **moderate and significant in EIA terms**. This is considering:

- the medium sensitivity of razorbill to displacement;
- the low CPS and CGR, which suggest a moderate decline (6.95 – 24.84%) in population size and growth rate (0.20 – 0.79%) after 35 years, with larger impacts predicted to the breeding season population;
- the 2% decline in the population size of razorbill in Scotland between Seabird 2000 and Seabirds count; and
- the minor contribution of the project.

#### *Puffin*

The impact of displacement results in a percentage point change in mortality that exceeds the 0.02 threshold for PVA requirement. Assessment results are presented in Table 7.

Table 7 Cumulative assessment results for puffin

Proposal alone mortalities	Annual cumulative mortalities	Percentage point change in mortality	Median CGR	Median CPS	Developer conclusion	NatureScot conclusion
2.33-17.02	365.59-1,819.95	0.158-0.785	0.999-0.996	0.969-0.854	Minor, not significant	Minor, not significant

We agree with the developer's conclusion of **minor and not significant**.

#### *Herring gull*

The impact of collision results in a percentage point change in mortality that exceeds the 0.02 threshold for PVA requirement. Assessment results are presented in Table 8.

Table 8 Cumulative assessment results for herring gull

Proposal alone mortalities	Annual cumulative mortalities	Percentage point change in mortality	Median CGR	Median CPS	Developer conclusion	NatureScot conclusion
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2.31-3.84	496.62-498.16	0.106-0.107	0.999-0.999	0.955-0.955	Minor, not significant	Minor, not significant
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We agree with the developer's conclusion of **minor and not significant**.

#### *Great black-backed gull*

The impact of collision results in a percentage point change in mortality that exceeds the 0.02 threshold for PVA requirement. Assessment results are presented in Table 9.

*Table 9 Cumulative assessment results for great black-backed gull*

<b>Proposal alone mortalities</b>	<b>Annual cumulative mortalities</b>	<b>Percentage point change in mortality</b>	<b>Median CGR</b>	<b>Median CPS</b>	<b>Developer conclusion</b>	<b>NatureScot conclusion</b>
1.02-9.72	1,135.48-1,144.19	1.242-1.252	0.986-0.986	0.599-0.587	Minor, not significant	<b>Major, significant</b>

We conclude that the overall cumulative effect on great black-backed gull to be **major, and therefore significant in EIA terms**. This is considering:

- the high sensitivity of great black-backed gulls to collision;
- the very low CPS and CGR, which suggest a significant (40.09 – 40.32%) decline in population size and growth rate (1.41 – 1.42%) after 35 years which is expected to irreversibly alter the population in the short-to-long term and alter the long-term viability of the population;
- the large declines in the population size of great black-backed gulls between Seabird 2000 and Seabirds Count, including a 63% population decline in Scotland;
- the effects of the recent HPAI outbreak on great black-backed gull. NatureScot's Avian Influenza report on the impacts of HPAI estimated the 2022 HPAI outbreak to have been of high impact and with a moderate recovery rate predicted for great black-backed gull. Furthermore, great black-backed gull colonies surveyed after the HPAI outbreak by Tremlett et al (2024) had declined by 19%; and
- the minor contribution from the project.

#### *Kittiwake*

The cumulative impact of collision and displacement mortality results in a percentage point change in mortality that exceeds the 0.02 threshold for PVA requirement. Assessment results are presented in Table 10.

*Table 10 Cumulative assessment results for kittiwake*

<b>Proposal alone mortalities</b>	<b>Annual cumulative mortalities</b>	<b>Percentage point change in mortality</b>	<b>Median CGR</b>	<b>Median CPS</b>	<b>Developer conclusion</b>	<b>NatureScot conclusion</b>
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4.38-13.32	3,207.89-3,818.97	0.387-0.460	0.995-0.995	0.847-0.820	Minor, not significant	<b>Moderate, significant</b>
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We conclude that the overall cumulative effect on kittiwake to be **moderate and significant in EIA terms**. This is considering:

- the medium sensitivity of kittiwakes to offshore wind developments;
- the low CPS and CGR, which suggest a moderate decline in population size (15.316 – 17.966%) and growth rate (0.460 – 0.549%) after 35 years;
- the 57% decline in the population size of kittiwake in Scotland between Seabird 2000 and Seabirds Count, suggesting that recovery following the cessation of the development activity would likely be slow;
- the effects of the recent HPAI outbreak on kittiwake. NatureScot’s Avian Influenza report on the impacts of HPAI estimated the 2022 HPAI outbreak to have been of high impact and with a moderate recovery rate predicted for kittiwake; and
- the moderate contribution of the project

#### *Gannet*

The cumulative impact of collision and displacement mortality results in a percentage point change in mortality that exceeds the 0.02 threshold for PVA requirement. Assessment results are presented in Table 11.

*Table 11 Cumulative assessment results for gannet*

<b>Proposal alone mortalities</b>	<b>Annual cumulative mortalities</b>	<b>Percentage point change in mortality</b>	<b>Median CGR</b>	<b>Median CPS</b>	<b>Developer conclusion</b>	<b>NatureScot conclusion</b>
11.30-33.77	733.03-2,532.57	0.092-0.318	0.999-0.996	0.961-0.873	Minor, not significant	Minor, not significant

We agree with the developer’s conclusion of **minor and not significant**.

#### *Other impact pathways*

##### *Direct temporary habitat loss / disturbance*

Kittiwake, guillemot, razorbill, puffin, gannet, and fulmar have been scoped in for impacts leading to habitat loss or disturbance, including vessel movements and underwater noise (including that from UXO removal) in the Aspen Array Area and OTC Corridor. Cable installation is expected to last 80 days with a maximum of 4 vessels on site. Over the course of construction, up to 1,442 vessels round-trips are expected. Divers and seaducks were not considered as they were not seen in large numbers in the site-specific DAS or the non-breeding intertidal survey, and the OTC Corridor does not travel through any sites designated for these species.

Landfall construction impacts were considered for species where peak counts equal 1% or more of the local population (Ramsar Convention of Wetlands, 1971). These were long-tailed duck (1.12%),

Eurasian curlew (2.07%), kittiwake (8.38%), common gull (4.83%), herring gull (2.50%), puffin (31.25%), black guillemot (15.96%), razorbill (2.44%), little auk (4.26%), red-throated diver (1.29%), black-throated diver (5.26%), fulmar (5.15%), great cormorant (1.42%), and grey heron (6.25%). As the impacts arising are limited spatially and temporally, they are considered short-term and reversible with impacts further reduced through temporal considerations of timing close to shore.

No detail is given for what ports or harbours are considered as the VMP has not been finalised. If using a port with passage through a SPA (e.g. Buckie), an assessment of the impacts on the SPA may be required.

We are content with the assessment that impacts will be **not significant**.

#### *Changes in prey availability*

Significant effects were reported for spawning Atlantic herring, a key prey species, as a result of impacts from UWN, though this will reduce following the application of mitigation. No LSE were concluded for any other key prey species (European sprat, common sandeel) due to impacts such as from UWN, increased turbidity in water, or electromagnetic fields (EMF) from cables following mitigation. We agree impacts to seabirds will be **minor and not significant**.

#### *Entanglement*

Guillemot, razorbill, puffin, and gannet were assessed for mortality through secondary entanglement, with effects found to be **negligible and not significant** in EIA terms following the application of mitigation and ongoing maintenance of the lines, including maintenance inspections to collect and remove debris from the mooring lines. We agree with this conclusion.

#### *Artificial light*

Manx shearwater, and European and Leach's storm petrels were scoped in for impacts associated with artificial lighting. The magnitude of impact was assessed as being negligible on account of the distance from colonies to the proposed development, lower illumination intensity of the turbines, and height and direction of the beam. This results in **no significant effects**, which we are content with.

#### *Migratory collision risk*

The mCRM tool has been used with species scoped in where >1% of the UK population are predicted to travel through the Aspen Array Area. The estimated mortalities of all 41 species scoped in represent less than 0.02% reduction in survival rate. We are content with the conclusion that the effect is **not significant** in EIA terms.

#### *Mitigation and monitoring*

In line with established EIA practice, we expect mitigation to be identified where a significant adverse effect is identified. Embedded mitigation is discussed in Chapter 12, Section 12.6.2 – no mitigation for ornithology is proposed by the Applicant. Based on the Applicant's EIA conclusions, no monitoring is proposed for ornithology.

**In this instance, we can accept that no mitigation or monitoring is proposed as specific requirements will instead be required through the derogation case for ornithology to ensure compensatory measures are effective (see our advice on the RIAA below and Derogation Case in Appendix G of our advice).**

## NatureScot appraisal – RIAA

### Proposal alone assessment of AEoSI

For the species and sites outlined in Table 12, the Proposal alone impacts did not meet or exceed the 0.02 percentage point change in adult survival rate threshold. Sites denoted by *'italics\*'* had connectivity only in the non-breeding season. Therefore, no PVAs were required for these sites, and **we can conclude No AEoSI** at all sites for these species.

Table 12 NatureScot conclusion on Proposal alone AEoSI

Species	SPA Site	NatureScot conclusion on proposal alone AEoSI
Gannet	Fair Isle	No AEoSI
	Forth Islands	No AEoSI
	Hermaness, Saxa Vord and Valla Field	No AEoSI
	North Rona and Sula Sgeir	No AEoSI
	Noss	No AEoSI
	St Kilda	No AEoSI
	Sule Skerry and Sule Stack	No AEoSI
Kittiwake	Calf of Eday	No AEoSI
	Cape Wrath	No AEoSI
	Copinsay	No AEoSI
	East Caithness Cliffs	No AEoSI
	Fair Isle	No AEoSI
	Farne Islands	No AEoSI
	Forth Islands	No AEoSI
	Foula	No AEoSI
	Fowlsheugh	No AEoSI
	Hoy	No AEoSI
	Marwick Head	No AEoSI
	North Caithness Cliffs	No AEoSI
	Noss	No AEoSI
	Rousay	No AEoSI
	St Abb's Head to Fast Castle	No AEoSI

Species	SPA Site	NatureScot conclusion on proposal alone AEoSI
	Sumburgh Head	No AEoSI
	Troup, Pennan and Lion's Head	No AEoSI
	West Westray	No AEoSI
Puffin	Fair Isle	No AEoSI
	Farne Islands	No AEoSI
	Forth Islands	No AEoSI
	<i>Foula*</i>	<i>No AEoSI</i>
	Fowlsheugh	No AEoSI
	<i>Hermaness, Saxa Vord and Valla Field*</i>	<i>No AEoSI</i>
	Hoy	No AEoSI
	North Caithness Cliffs	No AEoSI
	Noss	No AEoSI
Razorbill	<i>East Caithness Cliffs*</i>	<i>No AEoSI</i>
	<i>Fair Isle*</i>	<i>No AEoSI</i>
	<i>Forth Islands*</i>	<i>No AEoSI</i>
	<i>Foula*</i>	<i>No AEoSI</i>
	<i>Fowlsheugh*</i>	<i>No AEoSI</i>
	<i>North Caithness Cliffs*</i>	<i>No AEoSI</i>
	<i>St Abb's Head to Fast Castle*</i>	<i>No AEoSI</i>
	Troup, Pennan and Lion's Head	No AEoSI
	<i>West Westray*</i>	<i>No AEoSI</i>
Herring gull	<i>Buchan Ness to Collieston Coast*</i>	<i>No AEoSI</i>
	<i>East Caithness Cliffs*</i>	<i>No AEoSI</i>
	<i>Forth Islands*</i>	<i>No AEoSI</i>
	<i>Fowlsheugh*</i>	<i>No AEoSI</i>

Species	SPA Site	NatureScot conclusion on proposal alone AEoSI
	<i>St Abb's Head to Fast Castle*</i>	<i>No AEoSI</i>
	<i>Troup, Pennan and Lion's Head*</i>	<i>No AEoSI</i>
Great black-backed gull	<i>Copinsay*</i>	<i>No AEoSI</i>
	<i>East Caithness Cliffs*</i>	<i>No AEoSI</i>

While the Applicant's approach to apportioning guillemot is not in line with our advice, we are confident in **provisionally concluding No AEoSI** for guillemot at Buchan Ness to Collieston Coast SPA due to the counterfactual results of the PVA and on the basis that the Applicant's approach likely overestimates the impact to this site (but underestimates the impact to other sites).

For the following sites/species **we do not have sufficient information to fully assess the potential for AEoSI from proposal alone impacts, though are able to reach a provisional conclusion:**

- Guillemot at Fowlsheugh SPA and Troup, Pennan and Lion's Head SPA

This is due to the Applicant's approach to apportioning which has resulted in impacts not being apportioned to these sites. Whilst we are unable to fully assess the potential for AEoSI from proposal alone, we are confident that we can **provisionally conclude No AEoSI**. This is on the basis that for Buchan Ness to Collieston Coast SPA, which is currently apportioned all the impacts, we conclude no AEoSI. Therefore, any impacts apportioned to other sites are very unlikely to exceed those already reported for Buchan Ness to Collieston Coast SPA.

For the following sites/species **we do not have sufficient information to fully assess the potential for AEoSI from proposal alone impacts:**

- Great black-backed gull at Calf of Eday SPA, and Hoy SPA

Table 13 below summarises the sites/species where we do not have sufficient information and presents our provisional conclusion on AEoSI where relevant.

*Table 13 Sites/ species without sufficient information to conclude AEoSI and NatureScot provisional conclusion, where relevant.*

Species	SPA site	NatureScot conclusion on Proposal alone AEoSI
Guillemot	Buchan Ness to Collieston Coast	Apportioning not as advised. <b>Provisional conclusion of No AEoSI.</b>
	Fowlsheugh	Apportioning not as advised. <b>Provisional conclusion of No AEoSI.</b>

Species	SPA site	NatureScot conclusion on Proposal alone AEoSI
	Troup, Pennan and Lion's Head	Apportioning not as advised. <b>Provisional conclusion of No AEoSI.</b>
Great black-backed gull	Calf of Eday	Lack of sufficient information. <b>Proposal alone PVA required.</b>
	Hoy	Lack of sufficient information. <b>Proposal alone PVA required.</b>

#### In-combination assessment of AEoSI – breeding seabird SPAs

The Project has been assessed in-combination with other offshore wind developments only including Berwick Bank. No without Berwick Bank in-combination has been assessed.

Within our advice, we present 'with' or 'without' Berwick Bank scenarios on the basis that compensation measures for Berwick Bank are currently deemed insufficient. (We acknowledge further discussions are required on this aspect with MD-LOT). Unless stated otherwise, NatureScot conclusions on AEoSI as set out below apply to both scenarios.

The assessment for several SPAs and species demonstrated that the percentage point change in adult survival did not meet the 0.02 threshold and/or the mortality from the proposal was less than 0.2 birds/annum and, therefore, PVA was not undertaken. This was our Guidance at the point in time that the Applicant was undertaking their assessment. As a result, we can conclude No AEoSI for the species/sites included in Table 14.

*Table 14 Summary of in-combination assessment of AEoSI for species/ sites where the percentage point change in adult survival did not meet the threshold for PVA.*

Species	SPA site	NatureScot conclusion on in-combination AEoSI
Kittiwake	Calf of Eday	No AEoSI
	Cape Wrath	No AEoSI
	Copinsay	No AEoSI
	Fair Isla	No AEoSI
	Farne Islands	No AEoSI
	Foula	No AEoSI
	Hoy	No AEoSI
	Marwick Head	No AEoSI

Species	SPA site	NatureScot conclusion on in-combination AEoSI
	Noss	No AEoSI
	Rousay	No AEoSI
	St Abb's Head to Fast Castle	No AEoSI
	Sumburgh Head	No AEoSI
	West Westray	No AEoSI
Puffin	Fair Isle	No AEoSI
	Hoy	No AEoSI
	North Caithness Cliffs	No AEoSI
	Noss	No AEoSI
Herring gull	Buchan Ness to Collieston Coast	No AEoSI
	East Caithness Cliffs	No AEoSI
	Troup, Pennan and Lion's Head	No AEoSI
	Forth Islands	No AEoSI
	Fowlsheugh	No AEoSI
	St Abb's Head to Fast Castle	No AEoSI
Great black-backed gull	Copinsay	No AEoSI
	East Caithness Cliffs	No AEoSI

As outlined above under 'Apportioning impacts to SPAs', the assessment for great black-backed gull highlighted apportioned impacts exceeding a 0.02 % decrease in survival rate at Calf of Eday SPA and Hoy SPA. Therefore, for us to advise on AEoSI, we require:

- **In combination PVA to be undertaken for great black-backed gull at Calf of Eday SPA and Hoy SPA.**

The sites/species outlined in Table 15 were found to have a proposal alone impact from 0.2 to 1.0 birds per annum (via guidance approach).

These sites/ species were assessed by the applicant via a qualitative assessment, with conclusions drawn from the results of PVAs undertaken by other offshore wind developments – namely Cenosis and Muir Mhor.

During the July 2025 Ornithology Workshop, we advised that PVA modelling should be undertaken for any site/ species where an impact of greater than 0.2 birds per annum is predicted. The

Applicant noted that in the timeframes they were looking to submit, this would be challenging. As a result, to aid the Applicant, NatureScot offered to review a list of the sites/ species with predicted impacts between 0.2 and 1 birds per annum, so that bespoke advice may be provided and sites/ species of concern could be identified and focused on. However, in their post-meeting note included within the meeting minutes (finalised August 2025) the Applicant stated that: *“Given time constraints, the Applicant confirms an in-combination assessment will be included for all sites with impacts greater than 0.2 birds.”*

However, a suitable in-combination assessment has not been included, the Applicant instead presenting qualitative conclusions informed by the quantitative outputs of other offshore wind developments (Cenos and Muir Mhor). Given our offer to provide further bespoke advice on this aspect, the approach adopted by the Applicant is inadequate. Furthermore, we consistently emphasise the importance of early pre-application engagement, particularly for ornithology, so that issues such as these can be resolved in advance of application submission.

This is an inadequate approach on the basis that other developments cannot be used as a proxy to infer in-combination conclusions for the Aspen Project. Other developments such as Cenosis and Muir Mhor are in different locations, different distances from shore and have differing design envelopes and will therefore report different in-combination conclusions. Additionally, the Applicant has collated the conclusions of other assessments as presented in the application documentation without acknowledging NatureScot’s responses to these assessments<sup>13, 14</sup>. NatureScot’s conclusion of AEoSI differed from both those of the Cenosis and Muir Mhor EIARs for several species.

For all sites/ species which fall between the 0.2 to 1.0 birds per annum impact range, the Applicant has concluded no AEoSI. However, in reviewing our determination of AEoSI for Cenosis and Muir Mhor, and also the Appropriate Assessment conclusions for other developments, for the sites/ species considered in this range we have concluded AEoSI (or no AEoSI could not be concluded) in at least one other assessment<sup>15</sup>. The Applicant has presented a narrative which supports a conclusion of No AEoSI, without fully considering wider advice conclusions.

We therefore do not have the requisite information to fully assess the in-combination impacts for these sites/ species and cannot reach a conclusion on AEoSI without the results of PVA analysis for each site/ species. As a result, we request that:

- **PVA is undertaken for sites/species where an impact of 0.2 to 1.0 birds per annum is predicted, as outlined in Table 15**

*Table 15 Sites/species with 0.2 to 1.0 bird per annum proposal alone impacts where a PVA has not been undertaken*

Species	SPA Site	NatureScot conclusion on in-combination AEoSI
Gannet	Fair Isle	Lack of sufficient information. <b>In-combination PVA required.</b>

<sup>13</sup> [https://marine.gov.scot/sites/default/files/combined\\_consultation\\_responses\\_0.pdf](https://marine.gov.scot/sites/default/files/combined_consultation_responses_0.pdf)

<sup>14</sup> [https://marine.gov.scot/sites/default/files/muir\\_mhor\\_section\\_36\\_application\\_consultation\\_-\\_consultee\\_responses\\_24-04\\_redacted.pdf](https://marine.gov.scot/sites/default/files/muir_mhor_section_36_application_consultation_-_consultee_responses_24-04_redacted.pdf)

<sup>15</sup> Except for Gannet at North Rona and Sula Sgeir SPA.

	North Rona and Sula Sgeir	Lack of sufficient information. <b>In-combination PVA required.</b>
	Noss	Lack of sufficient information. <b>In-combination PVA required.</b>
	St Kilda	Lack of sufficient information. <b>In-combination PVA required.</b>
	Sule Skerry and Sule Stack	Lack of sufficient information. <b>In-combination PVA required.</b>
Kittiwake	East Caithness Cliffs	Lack of sufficient information. <b>In-combination PVA required.</b>
	Forth Islands	Lack of sufficient information. <b>In-combination PVA required.</b>
	North Caithness Cliffs	Lack of sufficient information. <b>In-combination PVA required.</b>
	Troup, Pennan and Lion's Head	Lack of sufficient information. <b>In-combination PVA required.</b>
Razorbill	Troup, Pennan and Lion's Head	Lack of sufficient information. <b>In-combination PVA required.</b>

PVAs were undertaken by the Applicant for sites/species where an impact of more than one bird per annum was estimated, and we provide advice on the PVA results and our determination of AEOsI for seabird SPAs. This is provided below in the form of:

- A summary table.
- More detailed assessments for individual SPAs and species where we have concluded AEOsI or have been unable to conclude no AEOsI.

#### *In-combination assessment summary*

Table 16 below provides a summary of our conclusions following our own appraisal of in-combination impacts.

*Table 16 NatureScot in-combination assessment summary table*

Special Protection Area (SPA)	Qualifying species	CPS values				Determination of AEOsI
		In combination with BB		In combination without BB		
		Low	High	Low	High	
Buchan Ness to Collieston Coast SPA	Guillemot	0.803	0.601	0.814	0.618	AEOsI
	Kittiwake	0.838	0.778	0.853	0.800	AEOsI
Fowlsheugh SPA	Kittiwake	0.817	0.713	0.886	0.816	AEOsI
Forth Islands SPA	Gannet	0.787	0.716	0.756	0.787	AEOsI

Special Protection Area (SPA)	Qualifying species	CPS values				Determination of AEOSI
		In combination with BB		In combination without BB		
		Low	High	Low	High	
	Puffin	0.935	0.893	0.941	0.902	Unable to conclude no AEOSI
<b>Hermaness, Saxa Vord and Valla Field SPA</b>	Gannet	0.978	0.966	0.977	0.968	No AEOSI
<b>Noss SPA</b>	Gannet	0.987	0.982	0.988	0.982	No AEOSI

*In-combination assessment – individual SPA assessments*

**Buchan Ness to Collieston Coast**

Table 17 Summary of assessment results for Buchan Ness to Collieston Coast SPA

Species	Additional mortality from proposal alone (adult birds/annum)		In combination with BB				In combination without BB				Determination of AEOSI
	Low	High	CGR		CPS		CGR		CPS		
			Low	High	Low	High	Low	High	Low	High	
Guillemot	12.5343	33.9948	0.994	0.986	0.803	0.601	0.994	0.987	0.814	0.618	AEOSI
Kittiwake	0.6254	0.6943	0.995	0.993	0.838	0.778	0.996	0.994	0.853	0.800	AEOSI

**We conclude AEOSI for guillemot** at Buchan Ness to Collieston Coast SPA, taking into account:

- the significantly low CPS values resulting in a population decrease of up to 39.9% over 35 years;
- a decrease in population growth rate of up to 1.4%; and
- the significant contribution from the project to the in-combination total

While this feature is in favourable condition and the population is relatively stable, we consider that this is outweighed by the factors highlighted above. However, we note that the apportioning for this species was not performed as advised, and therefore our conclusion in this case is provisional.

**We conclude AEOSI for kittiwake** at Buchan Ness to Collieston Coast SPA, taking into account:

- the significantly low CPS values, resulting in a population decline of up to 22.2%;
- a decrease in population growth rate of up to 0.7%;
- the unfavourable condition of the feature; and
- a 19% population decline between Seabird 2000 and Seabirds Count.

While the project contribution to the in-combination total is fairly low, the CPS values and the declining population make even a small contribution of concern.

**Forth Islands**

Table 18 Summary of assessment results for Forth Islands

Species		In combination with BB	In combination without BB	Determination of AEOSI
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	Additional mortality from proposal alone (adult birds/annum)		CGR		CPS		CGR		CPS		
	Low	High	Low	High	Low	High	Low	High	Low	High	
Gannet	4.1360	6.0390	0.993	0.991	0.787	0.716	0.992	0.993	0.756	0.787	<b>AEoSI</b>
Puffin	1.1275	2.0130	0.998	0.997	0.935	0.893	0.998	0.997	0.941	0.902	<b>Unable to conclude</b>

**We conclude AEoSI for gannet** at Forth Islands SPA, taking into account:

- the significantly low CPS values, resulting in a decrease in population size of up to 28.4%;
- a decrease in population growth rate of up to 0.3%; and
- the moderate contribution of the project.

Although the feature is in favourable condition, the population has been heavily impacted by HPAI.

**We are unable to conclude no AEoSI for puffin** at Forth Islands SPA both with and without Berwick Bank, taking into account:

- the moderately low CPS values, resulting in a population decline of up to 10.7%;
- a decrease in population growth rate of up to 0.3%;
- the measurable contribution from the project;
- the favourable declining condition of the feature; and
- a 39% decline between Seabird 2000 and the Seabirds Count.

### ***Fowlsheugh***

*Table 19 Summary of assessment results for Fowlsheugh SPA*

Species	Additional mortality from proposal alone (adult birds/annum)		In combination with BB				In combination without BB				Determination of AEoSI
	Low	High	CGR		CPS		CGR		CPS		
			Low	High	Low	High	Low	High	Low	High	
Kittiwake	0.5459	0.6042	0.994	0.991	0.817	0.713	0.997	0.994	0.886	0.816	<b>AEoSI</b>

**We conclude AEoSI for kittiwake** at Fowlsheugh SPA with and without Berwick Bank, taking into account:

- the significantly low CPS, resulting in a population decrease of up to 28.7%;
- a decrease in population growth rate of up to 0.9%;
- the measurable contribution of the project;
- the unfavourable declining condition of the feature; and
- a 51% decline between Seabird 2000 and the Seabirds Count.

### ***Seabird assemblage features***

Any named qualifying species of an assemblage feature in an SPA is protected in its own right. The SPA Conservation Objectives are set for individual species rather than the assemblage and

therefore the features should be assessed and any impacts concluded at the individual species level.

This has been the established position in Scotland for quite some time, although we understand that this differs from the approach taken in England.

For those SPAs which have a seabird assemblage feature, where we have concluded AEOsI or unable to conclude no AEOsI, for at least one named species of the seabird assemblage, then that is also the conclusion for the assemblage feature. Therefore, for the seabird assemblage feature (and named species) we conclude either AEOsI or unable to conclude no AEOsI at:

- Buchan Ness to Collieston Coast SPA (guillemot and kittiwake).
- Forth Islands SPA (gannet and puffin).
- Fowlsheugh SPA (kittiwake).

Our conclusions regarding the sites/species included in these bullet points are set out in Table 16 and Tables 17 – 19 above.

As discussed, we do not have sufficient information to determine AEOsI for a number of sites/species (see summary in Table 1A, Annex 1A). We therefore are also unable to provide conclusions on seabird assemblage features for those sites/species until receipt of subsequent information, as requested.

### Marine SPAs

Disturbance/displacement of wintering waterfowl and breeding red-throated divers in marine SPAs could occur due to vessels passing close to or through marine SPAs when transiting to and from construction ports.

In our advice on the Offshore Scoping Opinion, dated May 2025, we commented: *“NatureScot disagree with the proposed approach to scope out distributional response due to construction, installation and decommissioning for the export cable corridor (OTC Corridor) and instead advise that this must be scoped in for assessment in the Offshore EIAR. NatureScot also note that disturbance may also arise from vessels transiting between ports/harbours and the array area.”*

In Table 3.1 of the RIAA, the Applicant responds: *“The Applicant acknowledges NatureScot’s position with regard to the EIAR. With the exception of Ythan Estuary, Sands of Forvie and Meikle Loch SPA, there are no National Site Network sites designated for divers or seaduck species have been identified as having functional connectivity to the OTC corridor. Eider are a feature of Ythan Estuary, Sands of Forvie and Meikle Loch SPA and have potential connectivity to the OTC Corridor. However, while the species reportedly has a moderate sensitivity to ship traffic (Garthe and Hüppop, 2004), given that the Aberdeenshire coast is a busy shipping route, with the Port of Aberdeen located adjacent to the southern boundary of the SPA, it is assumed that eider in the area will be suitably habituated to anthropogenic activities such as vessel movements. Any additional vessel traffic associated with the Proposed Development is not anticipated to significantly increase baseline vessel activity levels within the area. As such, there is no pathway for Likely Significant Effect (LSE) on designated features of any European site via distributional response during construction, installation, or decommissioning of the export cable. Consequently, these activities have been scoped out of the RIAA”.*

We note that the vessel management plan is still in development, and as such there is no detail provided as to the ports which may be used by vessels involved in the development. If the Applicant is to use ports which require passage through an SPA, an assessment of impact may be required for the designated species of the SPA (including species other than divers and waterfowl).

#### Intertidal and migratory species

Scoping for migratory species has been performed based on the likelihood of species passing through the study area on migration, and an initial mCRM analysis to estimate the numbers of birds at risk. Species with more than 1% of the UK population estimated to be at risk, or with other reasons to be considered, have undergone full mCRM modelling. Estimated collision mortalities were then apportioned to SPA.

The mortalities apportioned to Ythan Estuary, Sands of Forvie and Meikle Loch SPA, and Outer Firth of Forth and St Andrews Bay Complex SPA/ Ramsar are very small, and do not result in more than 0.02% change in adult survival, based on the citation count.

Greylag geese are a qualifying feature of Loch of Skene SPA/ Ramsar with potential connectivity to Aspen but were not observed in the DAS or intertidal surveys. Lesser black backed gull is a qualifying feature of Forth Islands SPA with potential connectivity to Aspen but were not observed in the DAS or intertidal surveys.

We therefore agree with the applicant's conclusion of no adverse effect on SPAs with qualifying features that migrate.

#### Fulmar qualitative assessment of distributional responses

It is noted that fulmar were recorded in high abundance in the DAS data, with a total of 14,089 observed in the Aspen Array Area plus 4 km buffer. The mean peak seasonal abundances of fulmar in the Aspen Array Area ranged from 223 (148-344) in the winter season, to 610 (373-1490) in the pre-breeding season.

The potential impact of Distributional Responses on fulmar was assessed for the following SPAs: Buchan Ness to Collieston Coast SPA, Troup, Pennan and Lion's Head SPA, Fowlsheugh SPA, East Caithness Cliffs SPA, North Caithness Cliffs SPA, Copinsay SPA, Hoy SPA, Fair Isle SPA, Calf of Eday SPA, Rousay SPA, West Westray SPA, Sumburgh Head SPA, Noss SPA, Cape Wrath SPA, Foula SPA, Handa SPA, Fetlar SPA, Hermaness, Saxa Vord and Valla Field SPA, North Rona and Sule Sgeir SPA, Shiant Isles SPA, Flannan Isles SPA, Mingulay and Berneray SPA, Rathlin Island SPA, and St Kilda SPA.

Several of these SPAs are relatively close to the Aspen Array Area, when considering the large foraging range of this species.

The qualitative assessment of impact presented in RIAA paragraphs 3.9.6 to 3.9.8 is very limited. This is disappointing considering the abundance of this species in the DAS data. A single data source is referenced, and no detailed discussion is provided. However, we accept the conclusion of **No AEOI** on the basis that the planned Project site is unlikely to be a key foraging zone for fulmar and that the individuals from the sites screened for an LSE of barrier effects are unlikely to be significantly affected by the additional energetic costs posed by the development.

#### Qualitative assessment of other impact pathways

Advice related to other impact pathways assessed under HRA is provided in Table 20.

Table 20 Qualitative assessment of impact pathways occurring during all phases

Impact pathway	Context	Assessment	NatureScot advice
Changes in prey availability (including impacts due to underwater noise and UXO clearance)	<p>Temporary loss of prey species habitat may occur as a result of construction activities such as boulder clearance, jack-up vessel presence and cable installation.</p> <p>In the operation phase permanent habitat loss to fish and benthic prey species may occur as a result of OWF infrastructure and intermittent disturbance due to maintenance activities</p>	<p>Full consideration of potential impacts from underwater noise and suspended sediment have been assessed within EIAR, Volume 2, Chapter 9: Benthic and Intertidal Ecology, EIAR, Volume 2, Chapter 10: Fish and Shellfish Ecology and RIAA, Chapter 4: Fish and Shellfish, with conclusions of these chapters used to inform the assessment on offshore ornithological receptors.</p> <p>Across the Construction phase, the scale of impact on all fish species was assessed as no significant residual effects (EIAR, Volume 2, Chapter 10: Fish and Shellfish Ecology). Additionally, the RIAA Chapter 4: Fish and Shellfish concluded no AEoSI for fish and shellfish features of the River Dee SAC.</p>	<p>No LSE were concluded for key prey species (e.g. Atlantic herring, European sprat, common sandeel) due to impacts such as from UWN, increased turbidity in water, or EMF from cables following mitigation. We agree with the conclusion of <b>No AEoSI</b> from this impact pathway.</p>
Disturbance from artificial lighting	<p>There is the potential that this introduction of artificial light could influence the behaviours of some nocturnal and/or burrow-nesting species, including shearwaters, petrels and puffins, such that could lead to mortality through increased energetic expenditure as a result of disorientation or</p>	<p>The potential impact of Disturbance from Artificial Lighting assessed below applies to all species with known sensitivity to artificial light (namely storm-petrel, Leach's petrel, and Manx shearwater) and SPAs designated for seabird species sensitive to artificial light that are assessed are as follows: Auskerry SPA; Flannan</p>	<p>There is evidence that some species may be impacted by artificial lighting, and the application provides a qualitative assessment of this. Based on the information provided and the lack of a method for assessing impacts quantitatively, we conclude <b>No AEoSI</b> on any SPAs from this impact pathway.</p>

Impact pathway	Context	Assessment	NatureScot advice
	increased risk of collision.	Isles SPA; Foula SPA; Mousa SPA; North Rona and Sula Sgeir SPA, St Kilda SPA; and Sule Skerry and Sule Stack SPA.	
Secondary Entanglement	There is the potential for marine litter such as plastics, debris and ghost fishing gear to become entangled in the mooring lines of floating WTGs. Such fouling of mooring lines may present a mortality risk to diving seabirds	<p>SPAs designated for diving seabird species assessed for entanglement are as follows: Buchan Ness to Collieston Coast SPA; Coquet Island SPA; East Caithness Cliffs SPA; Fair Isle SPA; Farne Islands SPA; Flamborough and Filey Coast SPA; Forth Islands SPA; Foula SPA; Fowlsheugh SPA; Hermaness, Saxa Vord and Valla Field SPA; Hoy SPA; North Caithness Cliffs SPA; North Rona and Sula Sgeir SPA; Noss SPA; St Abb's Head to Fast Castle SPA; St Kilda SPA; Sule Skerry and Sule Stack SPA; Troup, Pennan and Lion`s Heads SPA; and West Westray SPA.</p> <p>Commitment C-OFF-47 comprises the implementation of an Entanglement Management Plan, which is designed to reduce the risk of diving seabirds becoming entangled in derelict or lost fishing gear within the Aspen Array Area. While this is a qualitative assessment, the Entanglement Management Plan includes targeted measures such as regular</p>	The adoption of an Entanglement Management Plan designed to monitor and remove debris from mooring lines should minimise impacts from this pathway and enables us to conclude <b>No AEO SI</b> for all SPAs.

Impact pathway	Context	Assessment	NatureScot advice
		monitoring, reporting protocols, and active removal of gear, which are expected to minimise entanglement risk to a level lower than within adjacent, unmanaged marine areas.	

## Appendix A: Annex 1A – European sites and qualifying species assessed in the RIAA

Table 1A below contains a list of sites and species assessed in the RIAA and our subsequent conclusion of AEoSI, including those sites and species for which a conclusion of No AEOSI has been reached.

Table 1 A NatureScot conclusion of AEoSI for all sites and species assessed in the RIAA

Species	SPA	Proposal Alone NS Conclusions	In-combination (inc. BB) NS Conclusions	In-combination (exc. BB) NS Conclusions
Gannet	Fair Isle SPA	No AEoSI	<i>In-combination PVA required</i>	
	Forth Islands SPA	No AEoSI	<b>AEoSI</b>	<b>AEoSI</b>
	Hermaness, Saxa Vord and Valla Field SPA	No AEoSI	No AEoSI	No AEoSI
	North Rona and Sula Sgeir SPA	No AEoSI	<i>In-combination PVA required</i>	
	Noss SPA	No AEoSI	No AEoSI	No AEoSI
	St Kilda SPA	No AEoSI	<i>In-combination PVA required</i>	
	Sule Skerry and Sule Stack SPA	No AEoSI	<i>In-combination PVA required</i>	
Guillemot	Buchan Ness to Collieston Coast SPA	<i>Provisional conclusion of no AEoSI - but Apportioning not as advised</i>	<b>AEoSI - but Apportioning not as advised</b>	<b>AEoSI - but Apportioning not as advised</b>
	Fowlsheugh SPA	<i>Provisional conclusion of no AEoSI - but Apportioning not as advised</i>	<i>Apportioning not as advised. Request rerun of PVA.</i>	
	Troup, Pennan and Lion's head SPA	<i>Provisional conclusion of no AEoSI - but Apportioning not as advised</i>	<i>Apportioning not as advised. Request rerun of PVA.</i>	
Kittiwake	Buchan Ness to Collieston Coast SPA	No AEoSI	<b>AEoSI</b>	<b>AEoSI</b>
	Calf of Eday SPA	No AEoSI	No AEoSI	No AEoSI
	Cape Wrath SPA	No AEoSI	No AEoSI	No AEoSI
	Copinsay SPA	No AEoSI	No AEoSI	No AEoSI
	East Caithness Cliffs SPA	No AEoSI	<i>In-combination PVA required</i>	

Species	SPA	Proposal Alone NS Conclusions	In-combination (inc. BB) NS Conclusions	In-combination (exc. BB) NS Conclusions
	Fair Isle SPA	No AEoSI	No AEoSI	No AEoSI
	Farne Islands SPA	No AEoSI	No AEoSI	No AEoSI
	Forth Islands SPA	No AEoSI	<b><i>In-combination PVA required</i></b>	
	Foula SPA	No AEoSI	No AEoSI	No AEoSI
	Fowlsheugh SPA	No AEoSI	<b>AEoSI</b>	<b>AEoSI</b>
	Hoy SPA	No AEoSI	No AEoSI	No AEoSI
	Marwick Head SPA	No AEoSI	No AEoSI	No AEoSI
	North Caithness Cliffs SPA	No AEoSI	<b><i>In-combination PVA required</i></b>	
	Noss SPA	No AEoSI	No AEoSI	No AEoSI
	Rousay SPA	No AEoSI	No AEoSI	No AEoSI
	St Abb's Head to Fast Castle SPA	No AEoSI	No AEoSI	No AEoSI
	Sumburgh Head SPA	No AEoSI	No AEoSI	No AEoSI
	Troup, Pennan and Lion's head SPA	No AEoSI	<b><i>In-combination PVA required</i></b>	
	West Westray SPA	No AEoSI	No AEoSI	No AEoSI
Puffin	Fair Isle SPA	No AEoSI	No AEoSI	No AEoSI
	Farne Islands SPA	No AEoSI	No AEoSI	No AEoSI
	Forth Islands SPA	No AEoSI	<b>Unable to conclude</b>	<b>Unable to conclude</b>
	Hoy SPA	No AEoSI	No AEoSI	No AEoSI
	North Caithness Cliffs SPA	No AEoSI	No AEoSI	No AEoSI
	Noss SPA	No AEoSI	No AEoSI	No AEoSI
Razorbill	Troup, Pennan and Lion's head SPA	No AEoSI	<b><i>In-combination PVA required</i></b>	
Great black backed gull	Calf of Eday SPA	<b><i>Proposal Alone PVA required</i></b>		<b><i>In-combination PVA required</i></b>
	Copinsay SPA	No AEoSI	No AEoSI	No AEoSI
	East Caithness Cliffs SPA	No AEoSI	No AEoSI	No AEoSI
	Hoy SPA	<b><i>Proposal Alone PVA required</i></b>		<b><i>In-combination PVA required</i></b>

<b>Species</b>	<b>SPA</b>	<b>Proposal Alone NS Conclusions</b>	<b>In-combination (inc. BB) NS Conclusions</b>	<b>In-combination (exc. BB) NS Conclusions</b>
Herring gull	Buchan Ness to Collieston Coast SPA	No AEoSI	No AEoSI	No AEoSI
	East Caithness Cliffs SPA	No AEoSI	No AEoSI	No AEoSI
	Troup, Pennan and Lion's head SPA	No AEoSI	No AEoSI	No AEoSI
	Forth Islands SPA	No AEoSI	No AEoSI	No AEoSI
	Fowlsheugh SPA	No AEoSI	No AEoSI	No AEoSI
	St Abb's Head to Fast Castle SPA	No AEoSI	No AEoSI	No AEoSI

## NATURESCOT ADVICE ON ASPEN OFFSHORE WIND FARM

### Appendix B – Marine Mammal Ecology

Marine mammal interests are considered in Chapter 11 and the following supporting documents of the Offshore EIAR:

- Volume 3, Appendix 3.1 – Underwater Noise Technical Report.
- Volume 3, Appendix 10.2 – Marine Protected Area Assessment Report.
- Volume 3, Appendix 11.1 – Marine Mammals & Other Megafauna Baseline Technical Report.
- Volume 3, Appendix 11.2 – iPCoD Modelling Report and
- Volume 4 Appendix 6 – Outline Marine Mammal Mitigation Protocol.

Marine mammal features of European sites are also considered in the RIAA, Chapter 2: Marine Mammals.

Our advice on the bottlenose dolphin qualifying species of the Moray Firth SAC as well as the minke whale qualifying species of the Southern Trench NCMPA is included within this Appendix.

The EIA assessment for marine mammals concludes no significant impacts, both alone and cumulatively. However, we disagree with the sensitivity scoring presented in the assessment and therefore, do not support the Applicant's assessment conclusions.

**Instead, we conclude significant effects for disturbance from piling based on the current worst-case scenario provided. These significant effects are for the proposal alone for:**

- Risso's dolphin;
- white-beaked dolphin;
- minke whale; and
- humpback whale

**We also conclude significant effects cumulatively for:**

- Risso's dolphin;
- white-beaked dolphin;
- minke whale;
- humpback whale;
- harbour porpoise; and
- bottlenose dolphin (Greater North Sea (GNS) MU).

We have reviewed the results of iPCoD in relation to predicted cumulative / in-combination impacts to bottlenose dolphin of the CES MU and Moray Firth SAC. We advise there is LSE as the piling disturbance contours do overlap with the 2 km coastal strip which bottlenose dolphin from the Moray Firth SAC utilise. However, as the model is over precautionary, we conclude no significant effects to the bottlenose dolphin CES MU and no AEOI to bottlenose dolphin from the Moray Firth SAC. We provide further advice on this aspect below.

In considering impacts from UXO we note the assessment is based on a worst-case scenario, which could have a significant impact for disturbance on bottlenose dolphin (CES MU). However, the potential impact is dependent on the specific location of any identified ordnance, it's estimated charge weight and removal method.

As such, should Scottish Ministers grant consent, we advise:

- **The Applicant will need to consider the implications further, through the development of the Piling Strategy and MMMP post-consent, for all species considered but particularly for Risso's dolphin, white-beaked dolphin, harbour porpoise, minke whale, humpback whale, and bottlenose dolphin. This may require additional noise modelling of the final design parameters and monitoring of noisy activities during construction.**
- **Within the Piling Strategy and MMMP, further detailed consideration should be given to the duration and timing of noisy activities including piling as well as mitigation measures.**
- **A detailed UXO disposal campaign plan identifying the location and size of UXO, method for disposal as well as any associated underwater noise modelling and monitoring.**
- **Further consideration of disturbance impacts post-consent, particularly for trenching, rock placement, cable laying and dredging activities that may occur within or adjacent to the 2 km coastal strip applicable for bottlenose dolphins in the CES MU / Moray Firth SAC. Appropriate mitigation may need to be agreed post-consent, i.e. use of MMOs to manage activities if bottlenose dolphins are observed.**

Furthermore, we require clarification of the following points:

- **In relation to the impact range for suction anchor installation, we request clarification as to how this was calculated due to the high PTS impact to harbour porpoise, noting that further consideration may be required, with specific mitigation agreed.**
- **We request that the Applicant provides clarification on the percentage of the population impacted by piling disturbance using the UK portion of the MUs.**
- **We request clarification on how the species densities were derived for the cumulative assessment, highlighting that cumulative piling disturbance may require re-assessment post-consent.**
- **We request that the Applicant provides clarification post-consent on the number of proposed piling days assessed due to the discrepancy noted between the EIA and iPCoD.**

## Baseline characterisation

### Appendix 11.1: Marine Mammals & Other Megafauna Technical Report

The report uses the most recent research and has incorporated the advice recommended by NatureScot. The inclusion of a final section that examines other data sources with reasoning given as to why these were not included within the density estimates is useful.

We highlight that the following points should be considered:

#### *Minke whale*

We note the surface densities acquired from Gilles et al. (2025)<sup>16</sup> have been presented on a map for several species for which the data are available. The minke whale density used in the

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<sup>16</sup> Gilles, A, Authier, M, Pigeault, R, Ramirez-Martinez, NC, Benoit, V, Carlström, J, Eira, C, Geelhoed, SCV, Laran, S, Sequeira, M, Sveegaard, S, Taylor, NL, Saavedra, C, Vázquez-Bonales, JA, Hammond, PS (2025). Spatial models of cetacean density in European Atlantic waters based on SCANS-IV summer 2022 survey data. Final report published 14 May 2025. 31 pp plus Appendix. <https://tinyurl.com/3rv246v5>

quantitative assessment from the Gilles et al. (2025) map is quoted as 0.0769 animals per km<sup>2</sup>. However, Figure 5.4, suggests that the array area largely lies within an area of higher density up to 0.100 animals per km<sup>2</sup>. Our recommendation for future applications would be to consider and use the finer scale spatial densities presented in Gilles et al. (2025). However, we do not require the current application to recalculate densities.

### *Bottlenose dolphin*

Regarding the estimation of the CES MU bottlenose dolphin densities, we agree that the first scenario resulting in an estimation of 0.01 dolphins per km<sup>2</sup> is not robust, nor reflective of fine-scale distribution or ‘hot-spots’ (Aberdeen harbour for example). The second scenario in which the whole CES MU population (226 dolphins) is divided across a 2 km zone within the CES MU is more representative, however, we suggest a slightly different approach as the resulting density is lower than we would expect (0.116 animals per km<sup>2</sup>).

Of a total CES MU population of 226, 52.5 % (118) of these individuals are thought to frequent coastal areas south of the Moray Firth (Arso Civil et al., 2021)<sup>17</sup>. Of these 118 animals, assuming uniform spread across an area bounded by the 2 – 20 m depth contour (Quick et al., 2014)<sup>18</sup> between Peterhead and the Farne Islands, would equal 0.19 animals per km<sup>2</sup> (118 / 606.92). Again, we do not require the current application to recalculate densities, however we highlight our recommendation for future applications to consider this approach in calculating spatial densities.

## **Assessment approach**

### Sensitivity criteria

Sensitivity criteria are presented in Table 11.10, Section 11.6.9 states that *“The value of the receptor is not included in the definitions of criteria used to determine the sensitivity of marine mammals and other megafauna. All marine mammals are considered to have a very high value given that all are either listed under Annex II of the Habitats Directive as species of Community Interest and/or are listed under Annex IV of the Habitats Directive as EPS of Community Interest and in need of strict protection”*. We disagree with this as a reason to not include value as an element of the criteria. Not including value / importance within the sensitivity criteria disregards the inherent reason why cetaceans and seals are given a high level of legislative protection through the Habitats Regulations and fails to fully acknowledge the potential risks to individuals and populations.

Moreover, there is a consistent attempt to minimise the potential impacts and severity of underwater noise effects, including Permanent Threshold Shift (PTS). The supporting evidence for the Applicant’s approach relies heavily on a workshop from 2018 that is not listed in the references. However, our understanding is that this workshop involved expert opinion rather than

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<sup>17</sup> Arso Civil, M., Quick, N., Mews, S., Hague, E., Cheney, B. J., Thompson, P., and Hammond, P. (2021), Improving understanding of bottlenose dolphin movements along the east coast of Scotland., Final report. Report number SMRUC-VAT-2020-10 provided to European Offshore Wind Deployment Centre (EOWDC).

<sup>18</sup> Quick, N. J., Arso Civil, M., Cheney, B., Islas, V., Janik, V., Thompson, P. M., and Hammond, P. S. (2014), The east coast of Scotland bottlenose dolphin population: Improving understanding of ecology outside the Moray Firth SAC. Department of Energy and Climate Change.

empirical evidence, and which has not been peer-reviewed or published. It does not align with current, accepted understanding of noise impacts on marine mammals.

This workshop is referenced in support of statements such as *“They concluded that such change [PTS] is not likely to adversely and significantly impact the survival and reproductive rates of marine mammals...”* and *“It was also agreed that a PTS of 6 – 18 dB in a narrow frequency band in the 2 – 10 kHz region is unlikely to significantly affect the ability of individuals to survive and reproduce (Kastelein et al., 2017).”*

In the former case, the citation refers to a study that experimented with the Temporary Threshold Shift (TTS) threshold of captive harbour porpoise at exposure to scaled down airguns. These had a higher dominant frequency, smaller bandwidth but were within a similar frequency of full-scale airguns <100 Hz. In that study, a measurable change in hearing threshold occurred 1–4 min after exposure to 10 shots of a downscaled double airgun set-up, with a SEL<sub>cum</sub> of 188 dB re 1 µPa. This study is not directly relevant as it is not in relation to pile driving.

Therefore, in the Applicant’s sensitivity criteria, the bar is set very high for anything other than a negligible or minor outcome. We advise that the scores assigned are underplaying the sensitivity of some of the impacts and therefore the conclusions.

Table 21 and Table 22 in our advice below present the Offshore EIA conclusions and revised scores based on our assessment for proposal alone and cumulatively, respectively.

### **Impact assessment**

We are content with the impacts scoped out of the assessment, including EMF for marine mammals (noting that this is scoped in and assessed for other megafauna, such as basking shark).

#### *Auditory injury from piling*

For auditory injury, PTS is a non-recoverable impact, therefore the sensitivity of marine mammals should be ‘high’.

We are broadly content with the assessment and numbers presented for PTS SPL<sub>peak</sub>. However, the impacted area for harbour porpoise equates to 1.7 km<sup>2</sup>, with a range of 730 m for this species. Although the numbers of animals expected to be affected is below one, equating to less than 0.01 % of the UK portion of the MU, this should be considered further in the MMMP. This distance will be difficult to mitigate with Marine Mammal Observers (MMOs) alone in certain weather conditions and during periods of darkness.

We note the proposed numbers of animals impacted by PTS SEL<sub>cum</sub>, particularly with respect to harbour porpoise, minke whale, Risso’s dolphin and white-beaked dolphin where large impact ranges result in up to 6.4 %, 12.7 %, 13.82 % and 10.29 % of the UK MU populations being impacted, respectively. However, we accept that these projections are based on animals remaining within the impacted region for >24 hours. Whilst we acknowledge that these ranges are likely over-precautionary to an extent, we highlight that they cannot be fully mitigated, and the assessment should acknowledge this. Overall, this does not change the significance of the outcome in EIA terms.

We encourage the Applicant to explore and test the outputs of the RaDIN report (Matei et al., 2024<sup>19</sup>) within the Piling Strategy and post-consent monitoring. Particularly, an increase of time between subsequent pile strikes in the first 45 minutes of piling which has the largest potential to significantly reduce the estimates of hearing damage onset ranges, compared to characteristics such as the total duration of piling.

### Disturbance from piling

We note that disturbance has been predicted via iPCoD using both the dose response curves for harbour porpoise (Graham et al., 2017)<sup>20</sup> and the NMFS Level B harassment thresholds. We currently advise the former are taken forward for consideration but appreciate the inclusion of both.

The narrative discusses the relevant MUs in their entirety and does not refer to the UK portion of the MUs affected. Therefore, this understates the percentage of the UK populations impacted by disturbance. **As such, we request clarification on the percentage of the population impacted by disturbance using the UK portion of the MUs.**

Regardless, the percentage of the population predicted to be impacted by disturbance is considerable for:

- white-beaked dolphin (9.32-10.29 % WTG, 10.15 % OSP);
- Risso's dolphin (12.52-13.82 % WTG, 13.64 % OSP); and
- minke whale (11.56-12.78 % WTG, 12.61 % OSP).

Thus, these impacts should be assigned a 'medium' magnitude, with 'medium' sensitivity assigned, which results in a 'moderate' outcome and is therefore significant under EIA terms. We therefore request, if consented:

- **The Applicant considers the implications further, through the development of the Piling Strategy and MMMP post-consent, for all species considered but particularly for Risso's dolphin, white-beaked dolphin, minke whale, humpback whale, harbour porpoise and bottlenose dolphin. This may require additional noise modelling of the final design parameters and monitoring of noisy activities during construction.**
- **Within the Piling Strategy and MMMP, further detailed consideration should be given to the duration and timing of noisy activities including piling as well as mitigation measures.**

### Auditory injury from UXO clearance

We recognise that with the previous success demonstrated in Scottish Waters using low order deflagration techniques, high order detonation is highly unlikely. However, we acknowledge that a range of charge weights have been assessed with a worst-case scenario using high order detonation.

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<sup>19</sup> Matei, M., Chudzińska, M., Remmers, P., Bellman, M., Darias-O'Hara, K., Verfuss, U., Wood, J., Hadry, N., Wilder, F. and Booth, C., 2024. Range dependent nature of impulsive noise (RaDIN). Final Report. Offshore Industries Joint Industry Programme (ORJIP) for Offshore Wind.

<sup>20</sup> Graham, I. M., Pirotta, E., Merchant, N. D., Farcas, A., Barton, T. R., Cheney, B., Hastie, G. D. and Thompson, P. M. (2017), 'Responses of bottlenose dolphins and harbor porpoises to impact and vibration piling noise during harbor construction', *Ecosphere* 8.

Generally, we agree that PTS from low order UXO clearance will have ‘negligible / low’ magnitude for the species assessed. However, if low order is unsuccessful and certain charge weights are required, it is likely the PTS range will not be mitigable without additional measures. We do not agree with the sensitivity outcomes and reiterate that all marine mammals should have a ‘high’ sensitivity. We advise that the Applicant seek further advice from Marine Directorate and NatureScot if certain charge weights and high order clearance is required once further investigations have been completed and more information on locations / sizes of UXO are known.

#### Disturbance from UXO clearance

Similarly, we agree with the magnitude scores and note that bottlenose dolphin (CES MU) are included as ‘medium’. When combined with a ‘medium’ sensitivity score as necessary to reflect their vulnerability to underwater noise, this results in a ‘moderate’ outcome which is significant under EIA terms. However, we note the assessment is based on a worst-case scenario and the potential impact is dependent on the specific location of any identified ordnance, it’s estimated charge weight and removal method. We therefore request, if consented:

- **A detailed UXO disposal campaign plan which identifies location and size of UXO, method for disposal and any associated underwater noise monitoring.**

#### Injury and disturbance from underwater noise from geophysical surveys

We advise that a thorough assessment will be required as part of any post-consent EPS licence application and associated marine mammal risk assessment. This should take account of and include details on:

- Types of equipment to be used and operating frequency, with a preference for equipment operating outside of the hearing frequency of marine mammals.
- Consideration of the sensitivity of cetacean species where operating frequency may be within specific hearing and quantification provided of expected propagation distances or numbers of animals impacted by injury or disturbance, particularly within the context of the UK proportion of the MU.

#### Injury and disturbance from other construction activities

These activities include trenching, rock placement, cable laying, dredging and suction anchor installation. The impact ranges for PTS onset for these activities are assessed to be ~100 m for all receptor species except harbour porpoise. For harbour porpoise, suction anchor installation may have a PTS impact range up to 1.1 km, which is large. **We request clarification as to how the range was calculated for suction anchor installation and highlight that further consideration of this activity may be required for harbour porpoise, with specific mitigation to be agreed.**

A precautionary Effective Deterrence Range (EDR) of 5 km has been applied to account for disturbance. The estimated range of disturbance has been calculated as 78.54 km<sup>2</sup>, which may be significant. The Applicant states “*that the impact of disturbance from other construction activities is considered to result in a small proportion of the population affected*” but does not provide any estimates for receptor species to support this. **Therefore, we request further consideration of disturbance impacts post-consent, particularly for trenching, rock placement, cable laying and dredging activities that may occur within or adjacent to the 2 km coastal strip applicable for bottlenose dolphins in the CES MU / Moray Firth SAC. Appropriate mitigation may need to be agreed post-consent, i.e. use of MMOs to limit activities if bottlenose dolphins are observed.**

### Operational noise of floating foundations

A detailed review of current knowledge of operational noise impacts has been presented which is useful. Based on this, and the duration and frequency of the effect, a magnitude score of 'medium' has been given, which we agree with.

Sensitivity has been scored as 'negligible' for most species and 'low' for minke whales, humpback whales and basking sharks. These scores are underpinned by the stated frequencies of operational noise below 200 Hz and therefore at the lower end of most species' hearing range. This is only true for the turbine noise, but not for the mooring / cable 'transient' noises, which could produce transient noises up to 48 kHz. These have not been included in the sensitivity assessment. For this reason, and due to the uncertainty around this impact, we advise that the sensitivity score should be 'low' rather than 'negligible' for all species.

This results in a significance score of 'minor' rather than 'negligible', which better represents the potential risks and uncertainties, noting that this does not change the overall significance under EIA.

### Other impacts

Various other impacts not relating to underwater noise have also been assessed, including:

- Collision risk with floating foundations
- Habitat loss / change
- Physical barrier effects
- EMF impacts on megafauna
- Vessel disturbance
- Vessel collision risk
- Changes to prey

The assessments for these impacts are largely in line with those seen in other proposals. For mitigating collision risk and disturbance from vessels, we highlight the importance of a Vessel Management Plan (VMP) and the Scottish Marine Wildlife Watching Code (SMWWC) to reduce speeds where marine mammals are observed / known to be present.

The significance outcomes are all 'negligible - minor', which we agree with.

### Basking shark – megafauna

We note that basking shark is listed as having a 'medium' sensitivity to EMF impacts, which we agree with. However, with impacts expected to be localised, we are content with a 'minor' significance outcome for this species.

### **Proposal alone summary**

For the impacts where we disagree with the Offshore EIAR conclusions as detailed above, Table 21 provides a summary of our revised scores based on our assessment for the proposal alone.

For some of the impacts we have regrouped the species based on our conclusions of magnitude and sensitivity scoring.

Table 21 Aspen Offshore EIA conclusions and NatureScot revised scores based on our assessment for the proposal alone. Cells shaded in blue indicate where our conclusions differ. Receptor codes are as follows: HP – harbour porpoise; BND – bottlenose dolphin; WBD – white-beaked dolphin; AWSD – Atlantic white-sided dolphin; RD – Risso’s dolphin; MW – minke whale; HW – humpback whale; HS – harbour seal; GS – grey seal; BS – basking shark. \*Dependent on equipment. ^Significant under EIA.

Effect	Receptor	Offshore EIA conclusions			NatureScot conclusions		
		Magnitude	Sensitivity	Significance	Magnitude	Sensitivity	Significance
Auditory injury from piling	BND, RD, AWSD, WBD, HS, GS	Negligible	Low	Negligible	Low	High	Minor
	HP, MW, HW, BS	Low	Low	Minor	Low	High	Minor
Disturbance from piling	HS	Negligible	Low	Negligible	Low	Medium	Minor
	HP, BND, AWSD, MW, HW, GS, BS	Low	Low	Minor	Conclusions below based on regrouping suggested by NatureScot		
	RD, WBD	Medium	Low	Minor			
	BND, AWSD, GS, BS, HP	Regrouping suggested by NatureScot			Low	Medium	Minor
	WBD, MW, RD, HW	Regrouping suggested by NatureScot			Medium	Medium	Moderate^
Auditory injury from UXO	BND, RD, AWSD, WBD, HS, GS	Negligible	Low	Negligible	Negligible	High	Minor
	HP, BS, HS	Low	Low	Minor	Low	High	Minor
	MW, HW	Low	Medium	Minor	Low	High	Minor
Disturbance from UXO	HS	Negligible	Low	Negligible	Low	Medium	Minor
	HP, BND (GNS MU), RD, AWSD, WBD, MW, HW, GS, BS	Low	Low	Minor	Low	Medium	Minor
	BND (CES MU)	Medium	Low	Minor	Medium	Medium	Moderate^
Auditory injury from other construction activities	All species	Negligible	Low-Medium	Negligible	Negligible	High	Minor
Disturbance from other construction activities	MW	Low	Low	Minor	Low	Medium	Minor
	HS, GS	Low	Low	Minor	Low	Negligible	Negligible
	All other species	Low	Low	Minor	Low	Low	Minor
Auditory injury from geophysical surveys	All species	Negligible	Low	Negligible	Negligible	Negligible – High*	Negligible - Minor*

Disturbance from geophysical surveys	All species	Negligible – Low*	Low	Negligible – Minor*	Negligible – Low*	Negligible – Medium*	Negligible – Minor*
Disturbance from operational noise	MW, HW, BS	Medium	Low	Minor	Medium	Low	Minor
	All other species	Medium	Negligible	Negligible	Medium	Low	Minor

## Cumulative assessment

In relation to the cumulative assessment, we note there are inconsistencies in the species densities used, which do not align with those used in the rest of the EIA. It is unclear how the quoted densities have been derived, and these will make a substantial difference to the estimated impacts. **Therefore, we request clarification on how the species densities have been derived for the cumulative assessment, highlighting that cumulative piling disturbance may require re-assessment post-consent.**

In addition, the abundance from the whole MU for each species has been used, rather than the abundance from the UK portion of the MU, which underestimates the proportion impacted.

**Therefore, we request that the Applicant provides clarification on the percentage of the population impacted by piling disturbance using the UK portion of the MUs.**

Even with the possible underestimation, the numbers of animals predicted to be disturbed cumulatively during the construction phase is significant, especially for harbour porpoise, bottlenose dolphins (GNS MU), Risso's dolphin, white-beaked dolphin, minke whale and humpback whale.

We welcome the scoring of magnitude of 'medium' for bottlenose dolphin and 'high' for white-beaked dolphin but advise that Risso's dolphin and minke whale should also be allocated a 'high' magnitude score and harbour porpoise 'medium'. In our advice above, we disagree that sensitivity is 'low' for all receptors. If these are re-scored 'medium' in line with Table 21 below, then the **disturbance would have a significant impact under EIA for harbour porpoise, bottlenose dolphin (GNS MU), Risso's dolphin, white-beaked dolphin, minke whale and humpback whale.**

**The Applicant will need to consider the implications of our revised conclusions further, through the development of the Piling Strategy and MMMP post-consent to reduce the predicted impact to harbour porpoise, bottlenose dolphin, Risso's dolphin, white-beaked dolphin, minke whale and humpback whale in particular. Given these predicted impacts, we advise that further noise modelling and possibly monitoring to reassess /validate the assessment predictions and better understand the likelihood of these impacts occurring may be required.**

### IPCoD

As noted above, we consider the iPCoD results for bottlenose dolphin from the CES MU to be overly precautionary as we think it is very unlikely that 40 bottlenose dolphins will be exposed to 100% disturbance. Therefore, based on the information provided we conclude no significant effects under EIA.

We have noted a discrepancy in the number of proposed piling days within the MPA Assessment Report and EIA compared to what has been modelled within iPCoD. The former indicates a worst-case scenario of 112 days for piling associated with the WTGs and 12 days for the OSP. The iPCoD modelling report states 162 days for piling associated with the WTGs and 12 days for the OSP. Whilst this may indicate extra precaution within the iPCoD population trajectory modelling, there should be consistency in the piling days assessed and we require clarification on this post-consent. **Therefore, we request that the Applicant provides clarification post-consent on the number of piling days assessed.**

## Mitigation

Embedded commitments are discussed in Section 11.6.68, which includes development and adherence to a MMMP.

### Appendix 6: Outline MMMP

A generic level of mitigation is provided in the outline plan. Noting our comments above, additional measures may need to be considered which could include use of Acoustic Deterrent Devices (ADDs), Passive Acoustic Monitoring (PAM) operators, seasonal piling, and potentially other mitigation methods. Additionally, **we advise that the MMMP should also apply to basking sharks**. It is expected that a more detailed MMMP will be provided post-consent.

### UXO clearance

We recognise that with the previous success demonstrated in Scottish Waters of low order deflagration techniques, high order detonation is not considered likely. However, we highlight that additional mitigation should be considered within the MMMP in case of the need for high order detonation, including visual searches, PAM and ADDs.

## Monitoring

We are unclear at this stage what monitoring may be required. Any monitoring will be dependent on revised calculations of noise modelling, the final project design scenario, the MMMP and Piling Strategy. We note the concerns around the proposal alone and cumulative impacts and are seeking to prevent instantaneous PTS as well as reducing some of the cumulative PTS impacts.

## MPA Assessment Report – Southern Trench NCMPA

Appendix 10.2: Marine Protected Area Assessment considers the Southern Trench NCMPA, designated for minke whale, located 61.6 km from the array area and 6.4 km from the OTC. Noise contours for some activities do overlap with the NCMPA and we are content with the identified potential impact pathways, namely: underwater noise from piling, UXO clearance and changes to prey.

### Auditory injury from piling

The modelled piling noise propagation for PTS SEL<sub>cum</sub> (38 km) does not overlap with the NCMPA. Thus, we are content that auditory injury from piling is not capable of affecting minke whale of the NCMPA.

### Disturbance from piling

In Table 6.7, we note that up to 14.2 % of the NCMPA could be exposed to disturbance from underwater noise associated with impact piling for the Proposal alone. In addition, the cumulative assessment for disturbance from piling noise is not well presented, making it challenging to assess the scenarios for the potential overlap of each development. However, we recognise the precautionary nature of the assessments and note that iPCoD modelling did not suggest significant population changes over time, either alone or cumulatively.

As such, we are content to accept the conclusion that the achievement of the NCMPA Conservation Objectives are not at risk of being hindered, both for the Proposal alone and cumulatively.

### UXO clearance

For PTS from UXO clearance, the potential effect on the NCMPA depends on the location / size of the charge. Considering the low likelihood of a high order detonation, we are content with the conclusion that impacts from UXO clearance is not capable of affecting, other than insignificantly, the minke whale feature of the NCMPA. However, once further investigative surveys have taken place, this conclusion should be reviewed as part of a UXO Disposal Plan.

### **Cumulative summary**

For disturbance from piling, where we disagree with the Offshore EIAR conclusions as detailed above, Table 22 below provides a summary of our revised scores for the cumulative assessment.

*Table 22 Aspen Offshore EIAR conclusions and NatureScot revised scores for disturbance from piling based on our assessment for cumulative impacts. Cells shaded in blue indicate where our conclusions differ. Receptor codes are as follows: HP – harbour porpoise; BND – bottlenose dolphin; WBD – white-beaked dolphin; AWSD – Atlantic white-sided dolphin; RD – Risso’s dolphin; MW – minke whale; HW – humpback whale; HS – harbour seal; GS – grey seal; BS – basking shark. \*Dependent on equipment. ^Significant under EIA. NatureScot conclusions subject to clarification over density estimate confirmation from Applicant.*

Effect	Receptor	Offshore EIAR conclusions			NatureScot conclusions		
		Magnitude	Sensitivity	Significance	Magnitude	Sensitivity	Significance
Disturbance from piling	HP, AWSD, MW, HS, GS	Low	Low	Minor	Conclusions below based on regrouping suggested by NatureScot		
	BND, RD	Medium	Low	Minor			
	WBD	High	Low	Minor			
	AWSD, HS, GS, BND (CES MU)	Regrouping suggested by NatureScot			Low	Medium	Minor
	BND (GNS MU), HP	Regrouping suggested by NatureScot			Medium	Medium	Moderate^
	WBD, RD, MW, HW	Regrouping suggested by NatureScot			High	Medium	Moderate^

### **European Protected Species (EPS) considerations**

Throughout the Offshore EIAR, it is mentioned that an EPS licence is unlikely to be required (e.g., UXO clearance, piling auditory injury, geophysical surveys, etc). We disagree with this, particularly without any attempt at presenting impact distances and numbers of animals impacted by auditory injury or disturbance from geophysical surveys. Thus, we advise that consideration of EPS will be needed for all activities with a risk of auditory injury/disturbance.

### **RIAA**

This document considers the Moray Firth SAC designated for bottlenose dolphins. The Berwickshire and Northumberland SAC for grey seals has been omitted from assessment as previously agreed with NatureScot due to low likelihood of connectivity of seals using the area to the designated site.

### UXO clearance

We note that UXO clearance will be licensed separately, but it has been included in the RIAA for illustrative purposes. As previously highlighted, there are scenarios where UXO clearance could have a LSE on bottlenose dolphin (CES MU), which have connectivity to the Moray Firth SAC population. However, with appropriate mitigation applied, we advise there would be no AEOI.

### Auditory injury / Disturbance from piling

As noted above, having reviewed the results of iPCoD in relation to predicted impacts to bottlenose dolphin of the Moray Firth SAC. We advise that there is LSE, as the piling disturbance contours do overlap with the 2 km coastal strip which the bottlenose dolphin from the Moray Firth SAC utilise, however as the model is over precautionary, we can conclude no AEOI for the Proposal alone and in-combination.

## NATURESCOT ADVICE ON ASPEN OFFSHORE WIND FARM

### Appendix C – Fish and Shellfish Ecology

Fish and shellfish interests are considered in Chapter 10 of the Offshore EIA, with other relevant material presented in the following Appendices:

- Volume 3, Appendix 3.1: Underwater Noise Technical Report
- Volume 3, Appendix 9.4: Offshore Baseline Survey Report.
- Volume 3, Appendix 10.1: Fish and Shellfish Ecology Technical Report
- Volume 3, Appendix 10.2: Marine Protected Area Assessment
- Volume 4, Appendix 14: In principle Fish Mitigation Plan

The assessment for fish and shellfish ecology **concluded significant effects** for the following impact pathways and receptors:

- Impact 1: Behavioural Impacts Arising from UWN for spawning herring.
- Impact 16: Cumulative Mortality, Injury and Behavioural Changes Resulting from UWN for spawning herring.

Mitigation is therefore required, and is presented in Volume 4, Appendix 14: In principle Fish Mitigation Plan.

No significant effects were identified for all other impact pathways and receptors. We are content with these conclusions.

Our interest in fish and shellfish species and the conclusions being reached relate to the importance of these species as both prey species and as core components of the marine ecosystem. Impacts to fish and shellfish must therefore be considered in the context of wider ecosystem resilience. We highlight there are still gaps in knowledge around the potential impacts on fish species from the development of a floating wind farm, particularly at this stage with a broad project envelope design.

### Study area

The fish and shellfish ecology study areas have been updated since EIA Scoping based on the results of UWN and Suspended Sediment Concentrate (SSC) modelling. Within the Offshore EIA, the UWN Zone of Influence (Zoi) has been set to 100 km (increased from the scoping Zoi of 50 km). The SSC Zoi has been refined to 10 km based on tidal excursion (refined from the scoping Zoi of 15 km). It is stated in Chapter 7 – Marine and Coastal Processes, that this is based on the distance SSC may be advected and meaningfully interact with sensitive receptors, though it is unclear what constitutes a “meaningful interaction”.

### Baseline characterisation

Table 10.4 provides details on the data sources used to inform the baseline. The data is drawn from publicly available data and literature, including consideration of data from other offshore wind environmental assessments. All data sources used are reviewed in relation to the Proposed Development and are clearly presented.

### Site specific surveys

eDNA samples have been taken at 29 stations (12 in the Aspen Array Area, 17 in the OTC), the results are well presented and have been sufficiently used to inform the baseline, we welcome this

approach. Benthic grab samples have been taken at 71 sample station with sediment Particle Size Analysis (PSA) used to infer suitability for both sandeel habitat and herring spawning habitat. The grab sample sites are distributed throughout the OTC but only cover the southern part of the Aspen Array Area. It is noted that the northeastern section of the Aspen Array Area hasn't been sampled, with no justification provided for the lack of sampling in this area. Full coverage in the Aspen Array Area would have been helpful to determine sediment type and the suitability of habitat for either sandeel or herring spawning. Broadscale habitat mapping has been used to infer suitability where PSA is not available. Given this method is more precautionary the overall conclusions will be unaffected.

### Receptors

The project uses VER (Valued Ecological Receptors) to refine the fish and shellfish receptors to be considered within the impact assessment. The list presented is well reasoned, using a variety of data sources including site surveys (eDNA, Drop Down Video (DDV) – this approach is welcomed. A list of the criteria used to assess suitability would have been helpful to fully understand the VER process. We also recommend for sandeel the use of scientific names to correctly identify the species being discussed.

### Heat maps

Heat maps have been presented for both herring spawning and sandeel habitat (Figures 10.9 & 10.11.) The heat maps have been produced by layering data sources to give a confidence score to habitats that potentially support sandeel habitat or herring spawning. Where more data overlaps the higher the confidence score, and the more certainty of specific areas having suitable habitat and that habitat hosting the target species. Whilst this approach is good in theory, it should be noted that fisheries datasets have limitations of use, and this method compounds these issues. For example, the Langton et al. 2021<sup>21</sup> map for sandeel acknowledges the limitations of training data used to inform the model as being spatially limited. The author highlights a weakness in the model as depth used is between 30-50 m, while the range of *Ammodytes marinus* (sandeel) extends from 12-120 m. This limitation is illustrated at Turbot Bank NCMPA, designated for sandeel, where the Langton et al., 2021 model is unable to map the presence of sandeel given the depth within the NCMPA of 60-80 m.

This 'heat map' method layers both the presence of suitable habitat and the target species. With climate change, the North Sea is predicted to increase in temperature, and therefore the distribution of herring spawning sites and sandeel may change, possibly moving to cooler, deeper waters. As a precautionary approach, any identified habitat suitable for herring or sandeel should be included into the impact assessment to add resilience to the system.

Section 10.5.39 describes how data sources are used to create the sandeel habitat suitability heat map (Figure 10.11), with 'herring spawning ground (Coull et al., 1998)' referenced as a data source. It is assumed that this reference to herring spawning is an error, with sandeel spawning grounds in fact being used, otherwise the mapped distribution of sandeel will be affected.

The scale used in the key for presenting the heat maps is not uniform and stretches out the data where confidence is highest. Ultimately this will reduce the number that could possibly fall within

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<sup>21</sup> Langton R., Boulcott P., Wright P.J. (2021) A verified distribution model for the lesser sandeel *Ammodytes marinus*. Mar. Ecol. Prog. Ser. 667: 145-159.

the highly confident category compared to other categories (e.g. if low confidence is 10-5, medium confidence is 5-2, high confidence is 2-1 the chance of falling within the high category is reduced). Justification for the scale adopted is not presented. However, this method for assessing the confidence of a habitat is not the only one taken forward to assess the impacts, so does not affect the overall outcome of the assessment.

### **Impact assessment**

The impacts scoped in/ out of the assessment reflect the Scoping Opinion. Table 10.15 presents the maximum design scenarios and includes estimates of the areas impacted by each potential impact. This is useful in helping to understand the extent of impacts.

#### Approach to assessment

Criteria for assessing impacts effects adopts a standard EIA methodology of defining the magnitude of the potential impact and the sensitivity of the receptors. Overall, we agree with the criteria and approach to assessing impacts for fish and shellfish.

For each impact the receptor groups are split into Vulnerable Ecological Receptors (VER) groups: pelagic, demersal, shellfish, elasmobranchs and diadromous fish. Spawning herring and sandeel are considered separately on the basis impacts would be greater due to their life cycle being intrinsically linked to the seabed. This approach is suitable.

UWN has been modelled using the worst case scenario for fleeing and stationary fish species, with Popper et al., 2014<sup>22</sup> used to group receptors into three groups: group 1 non-hearing (no swim bladders), group 2 fish with swim bladders (not used for hearing), and group 3 fish with swim bladders (used for hearing). Examples of fish that fall within each category are given (Table 10.17). Both spawning herring and sandeel have been considered within the UWN model as static while other species flee. We agree with this categorisation noting the comments regarding cod below.

Throughout the impact assessment, cod are categorised as pelagic spawners, not limited to specific sedimentary areas for spawning. We do not agree with this. Cod is a benthic-pelagic fish where mating activity takes place on the seabed. Males choose a suitable area or territories (known as leks) that they defend from other males and emit characteristic grunting and rumbling sounds to attract a mate. Physical disturbance during mating will disrupt this activity and UWN may mask mating vocalisation. As with herring spawning, mating males who are defending their leks from other males may be reluctant to leave the area during spawning as mating may override the need to flee.

There are cod spawning areas (Ellis et al., 2012) which overlap with the Proposed Development, though these are classed as 'Lower'. As a result, potential impacts to spawning cod have likely been underestimated given the assertion in the impact assessment that they are fleeing receptors not tied to specific areas for spawning. The reality for this receptor and the potential range of behavioural impacts relative to the presence of spawning grounds is likely more nuanced. As a result, given the likely underestimated impacts, and considering mitigation will be applied for

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<sup>22</sup> Popper, A. N., Hawkins, A. D., Fay, R. R., Mann, D. A., Bartol, S., Carlson, T. J., ... Tavolga, W. A. (2014). *ASA S3 s<sup>-1</sup>C1. 4 TR-2014 sound exposure guidelines for fishes and sea turtles: A technical report prepared by ANSI-accredited standards committee S3 s<sup>-1</sup>C1 and registered with ANSI*. New York, NY: Springer.

behavioural impacts to spawning herring, we highlight there is an opportunity to also extend this mitigation to spawning cod, where practicable. Further detail is provided under ‘Mitigation’ below.

### UWN impacts leading to mortality, injury and behavioural changes

#### *Group 1 fish*

Group 1 (Popper et al., 2014) are species that remain close to the seabed, and include sandeel, lemon sole, dab, plaice, mackerel, elasmobranchs, and sea lamprey. Sandeel is the only species considered as stationary which we support. A conclusion of **not significant** has been reached on the basis that underwater noise will be relatively localised and short in duration. With the exception of sandeel, we agree with this conclusion for all species within this category on the basis that most fish and elasmobranch species can flee localised underwater noise and utilise areas outside of the impact zone.

However, the impact on sandeel will be greater due to their substrate affinity and habitat dependence. Sandeel spawning and nursery grounds overlap with the Aspen Array Area and impact ranges for mortality (1200 m) recoverable injury (1900 m) and TTS (78,000 m). The assertion that *“sandeel spawning grounds are widely distributed across the broader marine environment, [therefore] any noise-related impacts are expected to be small in the wider context”* does not minimise the impacts to sandeel spawning and nursery grounds within the modelled impact ranges.

Furthermore, it is unclear how the conclusion *“that sandeel will have recovered from TTS before exiting hibernation and won’t respond to external stimulus when hibernating”* has been drawn from the referenced literature (Leonhard et al., 2013); we are unable to find any supporting evidence of this statement in the report. Additionally, there is no mention of the proposed piling times (other than the anticipated start year), and therefore it is difficult to assess with certainty whether piling operations will interact with the burrowed period of sandeel between September and February (emerging in November – February to spawn).

Considering the overlap with sandeel nursery and spawning grounds, and considering their static nature, we advise a **medium magnitude** of impact from UWN.

#### *Group 3 fish*

Herring are within group 3, with spawning herring considered a static receptor. **A significant effect** is concluded on spawning herring for:

- Impact 1: Behavioural Impacts Arising from UWN

We agree with the above conclusions of significant effects. However, it should also be noted that we do not currently deem there to be sufficient evidence to conclude *“any behavioural impacts to fish would be significantly reduced when spawning”* (10.7.160). The same lack of evidence applies to the theory that behavioural reactions of European eel would be dampened as a result of migration. However, these statements have not been used to influence the overall conclusion on effect significance.

Mitigation has been set out in Volume 4, Appendix 14: In Principle Fish Mitigation Plan.

### Particle motion

Particle motion has been identified as a key evidence gap by ScotMER and as such we request that:

- **The proposed development, if consented, explores opportunities to contribute to emerging research in this field, especially given the potential for suitable habitat across the proposed development area for Nephrops (Coull et al., 1998).**

Increases in Suspended Sediment Concentrations (SSC) and deposition

*Herring*

Herring demonstrate habitat fidelity and lay their eggs directly onto the substrate. Increases in SSC and deposition during construction activities can smother eggs and disrupt the development of larvae. SSC can reduce the availability of oxygen for eggs, and the sediment granules can damage developing larvae, making herring eggs and larvae particularly sensitive to this impact. Whilst adult herring are mobile, eggs and larvae are susceptible to smothering. We agree with the **medium sensitivity** of this receptor to SSC.

Areas of 'medium' spawning potential are located throughout the Aspen Array Area and OTC Corridor. Given the spatial extent and temporary nature of the impact, with no long-term impacts anticipated, we agree with the **low magnitude** and conclusion of **not significant**.

*Sandeel*

We disagree that sandeel are deemed to be of "low vulnerability" to increases in SSC.

The FeAST tool specifies that sandeels have medium sensitivity to light siltation changes (deposition up to 5 cm) and high sensitivity to heavy siltation changes (deposition of more than 5 cm and up to 30 cm). Given deposition of up to 10 cm may occur (10.7.222), we consider a medium vulnerability to be more accurate. Considered in conjunction with the national importance of this receptor as a PMF species, we advise sandeel as having **medium sensitivity** to increased SSC.

Furthermore, the assessment does not consider potential changes in habitat with a greater proportion of finer sediment. Sandeels rarely occur in sediments where the silt content is greater than 4%, and they are absent in substrate where silt content is greater than 10%. No assessment has been made regarding the potential changes in habitat suitability from sediment deposition, with potential consequences for the Turbot Bank NCPA (see **Appendix H**).

Given the spatial extent and temporary nature of the impact, with no long-term impacts anticipated, we agree with the **low magnitude** and conclusion of **not significant**.

Direct temporary habitat disturbance

The Applicant has identified the maximum area of temporary habitat loss/disturbance as being approximately 23.94 km<sup>2</sup>. We note this area of temporary habitat loss/disturbance is significantly larger than other developments of a similar capacity / design envelope.

*Herring*

Herring are reliant on specific substrate conditions to complete their lifecycle, and whilst it is possible for herring to be displaced and utilise suitable sediment in a different area of the Regional

Study Area, it cannot be assumed that all herring will do this, or that they will return following the cessation of construction.

We agree with the conclusions of **not significant** for this impact pathway and receptor. However, given the spatial extent of disturbance, temporary impacts during key life history stages such as spawning, should be appropriately considered. We suggest there is a potential opportunity as part of the In principle Fish Mitigation Plan to minimise potential impacts through scheduling of works to avoid sensitive spawning periods.

#### *Sandeel*

Sandeel are dependent on specific habitats due to their substrate fidelity and life history and consequently are less likely to leave their habitat in search for similarly suitable sediment than herring. Sandeel are particularly vulnerable to disturbance and habitat loss in the winter hibernation months, and in general there is a lack of post-construction research on sandeel habitat use. Habitat fidelity means that sandeels are sensitive to the temporary removal of substrate, and particularly sensitive during the spawning window (November – February) when eggs are buried in the substrate.

As indicated above, we agree with the conclusion of **not significant** but suggest there is a potential opportunity as part of the Fish Mitigation Plan to minimise potential impacts during key life history stages, through timing of key activities where possible.

#### Electromagnetic fields

Our collective understanding of EMF effects remains poor, particularly in relation to in-field measurements of EMF and potential impacts to sensitive receptors, such as elasmobranchs including basking sharks.

ScotMER currently have a research contract let on this subject matter, due to report in 2026 and any outputs from this work should be considered in the final project design.

#### UXO clearance

A high-level assessment has been presented for UXO clearance and subsequent UWN impacts. The commitment for a full assessment of the potential impacts from UXO clearance works in support of a separate marine licence application is welcomed. The commitment to use of low-order techniques and avoidance through site design is welcomed. Whilst low-order techniques are preferred, a worst case scenario is presented on the basis of high order detonation of UXO (750 kg + donor charge).

Based on the information provided, we are content with the conclusions of **not significant** presented in Table 10.43.

#### **Cumulative assessment**

Impacts for cumulative assessment have been selected from the long list of impacts and considered against a wider number of developments within the 100 km UWN ZoI using a tiered approach.

**Significant** cumulative effects are reported for Impact 16: Cumulative Mortality, Injury and Behavioural Changes resulting from UWN. We agree with the conclusions drawn and the requirement for mitigation.

## **Mitigation**

### Embedded mitigation

Embedded mitigation has been proposed to reduce potential impacts on environmental receptors. Table 10.13 describes the embedded mitigation measures relevant to Fish and Shellfish Ecology.

### In Principle Fish Mitigation Plan

The In Principle Fish Mitigation Plan provides an overview of the mitigation measures that could be employed to reduce and/or minimise impacts to a non-significant level. Potential measures include:

- Piling during the peak herring spawning season will be undertaken using alternative, refined piling scenarios;
- WTG anchors and OSP foundations will not be installed using piles that require impact driving;
- WTG anchor piles and OSP foundation piles will be installed using alternative pile installation techniques during the peak herring spawning season;
- Noise abatement systems (NAS) will be implemented during piling operations in the peak herring spawning season; and
- No piling will be undertaken during the peak herring spawning season.

(We would find it helpful for clarification on the differences between the 1<sup>st</sup> and 3<sup>rd</sup> bullet point above).

The plan acknowledges that different design configurations will have different impacts and mitigation is only needed for 'worst case' scenario. We advise that mitigation should be implemented where there are predicted significant effects as the project design envelope develops. Any impacts which are likely to reduce through design evolution should be clearly evidenced, with any implications for mitigation requirements confirmed through consultation with NatureScot and Marine Directorate.

## **Monitoring**

No monitoring is currently proposed. However, given the reported significant effects and the commitment to implementation of a Fish Mitigation Plan, we recommend monitoring may be required, to be discussed and agreed as the final project design is assessed against the Offshore EIAR predictions, and where mitigation is required and implemented to ensure that applied mitigation is successful.

## **RIAA**

At the EIA Scoping stage, we provided our position on diadromous fish whereby impacts should be assessed through the EIA process and not through HRA. This position reflects:

- Current limited knowledge of spatial and temporal distribution and behaviour of these species in the marine environment,

- Current lack of evidence to inform impact pathways, and,
- Lack of reference population figures which prevents impact apportioning to SACs.

Despite our recommendations, we note that fish and shellfish have been considered through the HRA process, with No AEOI determined for the features of the River Dee SAC. We do not provide comments on the fish and shellfish aspects of the RIAA, noting that depending on the location and type of works required for the OTC, mitigation may be required to reduce impacts to Atlantic salmon. Marine Directorate Science Evidence Data and Digital (MD-SEDD) may provide comments on this aspect of the assessment.

## NATURESCOT ADVICE ON ASPEN OFFSHORE WIND FARM

### Appendix D – Benthic Ecology

Benthic ecology interests are considered in Chapter 9 of the Offshore EIAR, with other relevant material presented in the following Appendices:

- Appendix 9.1: Offshore Baseline Survey Reports
- Appendix 10.2: Marine Protected Area Assessment Report
- Appendix 5: Invasive Non-Native Species Mitigation Plan

Overall, the documents provide an appropriate level of detail and were presented well, with our pre-application advice being considered and appropriately addressed. The assessment for Benthic Ecology concludes that all impacts are not significant, both alone and cumulatively, see Tables 9.41 and 9.42, which we agree with.

In this Appendix, we provide comments and advice which addresses elements of the assessment process but do not affect the outcome of the assessment or advice conclusions.

#### Study area

At Scoping, the study area proposed was a 15 km buffer around the Aspen Array Area and Offshore Transmission Cable (OTC) Corridor, pending sediment plume modelling results. This has been reduced to a 10 km buffer, following modelling results which indicate a spring tidal excursion of 9.5 km. We are content with this approach.

#### Baseline characterisation

Benthic surveys were carried out in December 2024. Table 9.4 describes the surveys, which include grab samples (39 across the Aspen Array Area, 32 in the OTC Corridor) and seabed imagery transects (13 across the Aspen Array Area, 17 in the OTC Corridor plus an additional 4). We have assumed there is an error in figure 9.2 as the seabed imagery figures stated in Table 9.4 do not seem to match up with the locations shown in Figure 9.2, which only shows 4 drop-down video locations in the OTC Corridor.

Sections 9.5.78-9.5.136 considers the seabed habitat and communities present in the Aspen Array Area and OTC Corridor. This provides useful details on the habitats and species present, and highlights any of conservation value. Table 9.9 summarises habitats and species of conservation value that were recorded, including:

- Potential rocky reefs – but not classified as Annex I reef.
- Seapen and burrowing megafauna biotope.
- *Sabellaria* individuals – but not in a form that is classed as a reef. The *Sabellaria* reef biotope is included in the assessment regardless as a precautionary measure, which we welcome.

Additionally, we note that ocean quahog were not recorded in the surveys. However, they are considered highly likely to be present, and are therefore included in the assessment, which again is welcomed.

Our understanding is that no site-specific intertidal surveys were conducted, as the Project includes HDD for bringing the cable ashore and thus, no impacts on the intertidal are expected.

This is acceptable in this scenario. However, if HDD is unlikely to work further assessment and consideration will be required.

Section 9.5.160 suggests that “*post-construction surveys for the Proposed Development can be used to validate assessments of the likely impacts within this Chapter.*” However, there is no further mention of post-construction surveys in this Chapter, nor in the Commitments Register. We do not consider at this stage there is a need for post construction surveys based on the assessment and conclusions reached. There may however be benefits in undertaking monitoring, in respect of learning, depending on the type of anchors, installation of methods deployed – this should be discussed further as part of any post consent stage.

### **Approach to assessment**

The criteria for magnitude and sensitivity, and the significance matrix, as detailed in Table 9.12, seem appropriate for this receptor group.

We are broadly content with the potential impacts scoped in and out of the assessment, as per Section 9.6.3 and Table 9.14. However, suspended sediment concentrations (SSC) during the operation and maintenance phase should not be scoped out. At Scoping, this impact was included across all phases, which we agreed to, so it is unclear why it has now been scoped out of the assessment. Any repair or maintenance work could result in SSC, which could potentially affect benthic habitats and species. However, given the scale of this impact, we assume that the outcome would be similar, or less than, SSC for construction, which was assessed and concluded to be not significant under EIA terms. However, this may be incorrect and should be addressed as part of any post consent O&M plan.

We welcome the assessment of Electro Magnetic Fields (EMF) Effects on benthic ecology receptors in the Operation & Maintenance phase, which we flagged as required in our Scoping Advice and which was reflected in the Scoping Opinion.

Table 9.15 presents the Worst-Case Design Scenarios and includes estimates of the areas impacted by each potential impact. This is useful in helping to understand the extent of impacts. We note that up to 25% of the OTC Corridor would require seabed preparation, otherwise referred to as sandwave clearance. However, Section 9.7.6 states that sandwaves were observed across approximately two thirds of the OTC Corridor. Ultimately, this is unlikely to change the assessment conclusions, but clarity on the proportion of the OTC Corridor requiring seabed preparation would be useful.

### **Impact assessment**

Section 9.7 presents the assessment of significance of each of the potential impacts. It is clearly laid out, and gives a thorough review based on regional context, the Aspen Array Area and OTC Corridor.

We agree with the assessment conclusions as summarised in Table 9.51. In every case, the conclusion is minor or negligible, and therefore not significant under EIA terms. These conclusions are generally based on the magnitudes being scored as ‘low’ or ‘negligible’, which we agree with.

## Cumulative assessment

Section 9.8 presents the cumulative assessment, which follows a standard, tiered approach, similar to other proposed developments. The only impact assessed is SSC, as it is the only impact with potential for cumulative impacts. The conclusion is that the cumulative impacts are not significant, which we accept.

## Mitigation

Because all impacts are assessed as not significant, no additional mitigation measures are proposed beyond the embedded mitigation outlined in Table 9.13, which is largely the production of and adherence to post-consent plans and programmes. Plans and programmes themselves do not strictly constitute mitigation – it is the measures contained within the plan that will mitigate impacts. However, we are content for this to be addressed through the development of the post-consent plans.

### Appendix 5: Invasive Non-Native Species Mitigation Plan

This seems to be a comprehensive mitigation and contingency plan, clearly presented and in line with guidance. Table 3.8 lays out the proposed biosecurity measures. While these seem appropriate, some are caveated as “where possible”, which is not a full commitment to all of the measures. Further detail will be required following consent if granted.

## Monitoring

As all impacts are assessed as not significant, no monitoring is proposed. Section 9.7.191 states that the Applicant will engage with Marine Directorate and NatureScot to identify and contribute to targeted and proportionate regional or strategic monitoring. This commitment is welcomed.

### Appendix 5: Invasive Non-Native Species Mitigation Plan

Monitoring is considered in Section 3.5. This mainly consists of reporting any detections of INNS when carrying out other activities, rather than being a targeted INNS monitoring programme.. Further detail will be required following consent if granted.

## NCMPA Assessment

### Appendix 10.2: Marine Protected Area Assessment

Turbot Bank NCMPA and Southern Trench NCMPA are the only sites considered. JNCC advice on Turbot Bank NCMPA is presented in **Appendix H**.

For the Southern Trench NCMPA, all features other than minke whale are scoped out, either due to negligible sensitivity from the activities or an absence of impact pathways. For the burrowed mud benthic feature, we agree that, despite being sensitive to some of the potential impacts, there is no pathway for effect due to the distance between the proposed activity (considering the expected zone of influence) and the burrowed mud feature of this site. The burrowed mud feature is found in the north and west part of the NCMPA, which is a considerable distance from the Proposed Development, and so is not likely to be affected.

We therefore advise that the proposed development is not capable of affecting the habitat or geodiversity features of the Southern Trench NCMPA. Our advice on the minke whale feature of this NCMPA is found in **Appendix B**.

## NATURESCOT ADVICE ON ASPEN OFFSHORE WIND FARM

### Appendix E – Marine and Coastal Processes

Marine and coastal processes interests are considered in Chapter 7 of the Offshore EIAR, with other relevant material presented in the following Appendices:

- Volume 3, Appendix 7.1 – Marine and Coastal Processes Technical Report

The assessment for marine and coastal processes concludes **no significant impacts, both alone and cumulatively. We agree** with these conclusions based on our understanding of the available science, however, advice should be sought from MD-SEDD on mixing and seasonal stratification.

In this Appendix, we provide comments and advice which addresses elements of the assessment process but does not affect the outcome of the assessment or the overall conclusion of our advice.

#### Study area

We are content with the study areas used in the assessment. The study area for marine and coastal processes receptors has been defined based on:

- A spring tidal excursion ellipse buffer around the Proposed Development over which suspended sediment plumes may travel, with a Zone of Interest (Zoi) of 10 km applied.
- Impacts beyond the 10 km Zoi such as littoral processes which could be impacted by Project infrastructure, based on the coastal sub-cell information set out in Ramsay and Brampton (2000)<sup>23</sup>.

#### Baseline characterisation

We are content that the relevant key data sources have been used for the baseline characterisation.

#### Impact assessment

##### Magnitude of effect

The definitions of magnitude used in the marine and coastal processes assessment appear to be biased towards lower magnitude outcomes. In particular, we consider that the upper threshold for a low magnitude impact (Table 7.5) is set inappropriately high. It includes any spatial extent “restricted to the near-field and immediately adjacent far-field areas”. Therefore, an effect covering many tens of square kilometres would likely be assessed as not significant, regardless of receptor sensitivity (Table 7.7).

However, overall, we are satisfied that changing the magnitude does not alter the overall conclusion of **not significant** for marine and coastal processes receptors.

##### Contradictions in assessment

We have noted several contradictions and discrepancies in the design envelope parameters taken forward into the assessment. Largely, these do not affect the marine and coastal processes

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<sup>23</sup> Hansom, J.D., Fitton, J.M., and Rennie, A.F. (2017) Dynamic Coast - National Coastal Change Assessment: National Overview, CRW2014/2.

assessment outcomes. However, overall, it reduces confidence in the assessment, with potential wider implications for other topics which rely on the outputs of the marine and coastal processes modelling (e.g., fish and shellfish and benthic ecology).

For “*Impact 1 – Suspended sediment*” etc, we note a contradiction in Table 7.10 with respect to worst case scenarios taken through to the assessment. Although the ‘Justification’ column in the table states that there would be bedform clearance along 50% of the OTC length, the ‘Worst Case Design Scenario’ column, which informs the assessment, gives this as 25%. Therefore, there is a risk that the magnitude of suspended sediment creation has been underestimated. Whilst this does not affect the conclusions / outcomes of the marine and coastal processes assessment, potential implications may be more pronounced for other receptors (e.g., fish and shellfish and Turbot Bank NCMPA).

Similarly, under the assessment of “*Impact 4 – Scour (operational)*” (section 7.7.77) states there would be 6 anchors per WTG, but this is given as 4.5 in the ‘Worst Case Design Scenario’ column for Impact 2 (Table 7.10). The possibility that the Magnitude of scour is under-estimated wouldn’t affect the marine and coastal processes conclusions, though potential implications for other receptors may be more pronounced.

Finally, while the assessment of “*Impact 5 - Modifications to tidal regime*” states OTC cable protection dimensions as 1.5m x 10m (7.7.76), in the ‘Worst Case Design Scenario’ column for this pathway, this is given as 2m x 3m. The possibility that the footprint of cable protection is underestimated wouldn’t affect the marine and coastal processes conclusions, though potential implications for other receptors may be more pronounced.

### Sandwave clearance

Clearance of bedforms in the OTC is deemed necessary in order to ensure effective cable burial (Table 7-10). The assessment of “*Impact 2 - Impacts to seabed morphology (construction)*” implies that these bedforms are likely to recover in less than 2 years. As a result, we question if there will be subsequent requirements for bedform clearance multiple times during the 35-year lifetime of the Project. Additionally, we highlight that consideration should also be given to the decommissioning aspects of cable removal. This aspect should be clearly addressed in the Operational and Maintenance (O&M) and Decommissioning Plans, if the project is consented, particularly on other receptors such as benthic and fish & shellfish.

Sandwaves might indeed be mobile enough to recover in less than 2 years, but the arguments presented are unclear.

### **Cumulative effects**

Advice should be sought from MD-SEDD on the key cumulative assessment aspects which relate to mixing and seasonal stratification.

### **Monitoring**

The impact of large-scale floating offshore wind farms on mixing and seasonal stratification is an emerging topic with significant uncertainties. This Project provides an early opportunity to contribute towards this evidence gap through pre- and post-construction monitoring in alignment

with the recommendation set out in Section 5.4 of the Scottish Government report "Scoping an Offshore Wind Sustained Observation Programme (OW-SOP)"<sup>24</sup>.

The following ScotMER research project is currently in progress "Development of marine physical process modelling guidelines for offshore wind farm environmental impact assessments". We acknowledge the timing for this Project may not align with the outputs of this research project however it may be useful to consider the research outputs when designing monitoring, if consented.

The following research programmes are also underway, and research outputs should be considered when designing physical processes monitoring:

- ECOWind "Physics-to-Ecosystem Level Assessment of Impacts of Offshore Windfarms" (PELAGIO)<sup>25</sup>
- Enabling Sustainable Wind Energy Expansion in Seasonally Stratified Seas (eSWEETS3)<sup>26</sup>

Further advice should be sought from MD-SEDD on this topic.

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<sup>24</sup> <https://www.gov.scot/publications/scoping-offshore-wind-sustained-observation-programme-ow-sop/>

<sup>25</sup> <https://ecowind.uk/projects/pelagio/>

<sup>26</sup> <https://pcwww.liv.ac.uk/~jons/research.htm>

## NATURESCOT ADVICE ON ASPEN OFFSHORE WIND FARM

### Appendix F – Blue Carbon

As indicated in the cover letter, no EIA assessment is provided for blue carbon, nor is this topic addressed within any of the related receptor chapters (e.g. marine and coastal processes, marine water and sediment quality, benthic ecology, or climate). In our Scoping advice (dated 24<sup>th</sup> March 2025), we stated that *“consideration is given to impacts on blue carbon and whether or not an assessment can be undertaken. This should expand on the information and assessment conducted for benthic ecology to focus on the potential impacts of the proposal on marine sediments and coastal habitats”*. This advice was mirrored in the subsequent Scoping Opinion.

As such, **we are unable to provide advice on blue carbon.**

We consider it is important to assess impacts on blue carbon and as such we advise all offshore wind farm applications should be presenting a blue carbon assessment. Advice on the preferred assessment approach is set out below.

#### Study area

The study area defined for blue carbon should mirror the advice for benthic ecology and/or physical processes.

#### Baseline characterisation

The blue carbon assessment should expand on the information and assessment conducted for benthic ecology, as well as making links to the physical processes chapter where appropriate.

We note that site-specific benthic and geophysical surveys were conducted across the Aspen Array Area and the OTC Corridor, with samples for particle size analyses and data from Multi-Beam Echo Sounder (MBES) collected. Site-specific benthic samples could be compared to relevant data sources (e.g. Smeaton et al., 2020). Alternatively, MBES measurements can potentially be used to inform or support a blue carbon assessment, including a spatially explicit estimate of surficial carbon stocks, i.e. top 10cm of sediment (Hunt et al., 2020). In either case this information should be clearly signposted or presented within the blue carbon assessment.

We recommend the following relevant data sources:

- Burrows, M. T., Smeaton, C., Tillin, H., Grundy, S., Sugden, H., Moore, P., Fitzsimmons, C., Austin, W., O’Dell, A. 2024. [The United Kingdom’s Blue Carbon Inventory: Assessment of Marine Carbon Storage and Sequestration Potential in Scotland \(Including Within Marine Protected Areas\)](#). A Report to The Wildlife Trusts, WWF and the RSPB. Scottish Association for Marine Science, Oban.
- [Cunningham, C. and Hunt, C. 2023. Scottish Blue Carbon - a literature review of the current evidence for Scotland’s blue carbon habitats](#). NatureScot Research Report 1326.
- Daewel, U., Akhtar, N., Christiansen, N., & Schrum, C. (2022). Offshore wind farms are projected to impact primary production and bottom water deoxygenation in the North Sea. *Communications Earth and Environment*, 3(1), 1–8. <https://doi.org/10.1038/s43247-022-00625-0>

- Diesing, M., Thorsnes, T., & Rún Bjarnadóttir, L. (2021). Organic carbon densities and accumulation rates in surface sediments of the North Sea and Skagerrak. *Biogeosciences*, 18(6), 2139–2160. <https://doi.org/10.5194/bg-18-2139-2021>
- Hunt C, Demšar U, Dove D, Smeaton C, Cooper R and Austin WEN (2020) Quantifying Marine Sedimentary Carbon: A New Spatial Analysis Approach Using Seafloor Acoustics, Imagery, and Ground-Truthing Data in Scotland. *Front. Mar. Sci.* 7:588. <https://doi.org/10.3389/fmars.2020.00588>
- Smeaton, C., Austin, W., & Turrell, B. (2020). *Re-evaluating Scotland's sedimentary carbon stocks*. (2 ed.) (Scottish Marine and Freshwater Science; Vol. 11, No. 2). Marine Scotland. <https://doi.org/10.7489/12267-1>
- Smeaton, C., Hunt, C.A., Turrell, W.R. and Austin, W.E.N. 2021a. Marine Sedimentary Carbon Stocks of the United Kingdom's Exclusive Economic Zone. *Frontiers in Earth Science*, 9 <https://doi.org/10.3389/feart.2021.593324>
- Smeaton, C. and Austin, W.E.N. 2022a. Quality not quantity: Prioritizing the management of sedimentary organic matter across continental shelf seas. *Geophysical Research Letters*, 49, <https://doi.org/10.1029/2021GL097481>
- Turrell, W. R., Austin, W. E. N., Philbrick, S. P., Tilbrook, C., & Kennedy, H. (2023). Clarifying the role of inorganic carbon in blue carbon policy and practice. *Marine Policy*, 157(October), 105873. <https://doi.org/10.1016/j.marpol.2023.105873>
- Watson, S. C. L., Somerfield, P. J., Lemasson, A. J., Knights, A. M., Edwards-Jones, A., Nunes, J., ... Beaumont, N. J. (2024). The global impact of offshore wind farms on ecosystem services. *Ocean and Coastal Management*, 249 (September 2023). <https://doi.org/10.1016/j.ocecoaman.2024.107023>

### Potential impacts

Impact pathways for blue carbon should be similar to those for benthic ecology, with an emphasis on direct disturbance to sediment in particular. As the fate of disturbed sedimentary organic carbon is currently unknown, as a precautionary approach, it should be assumed that 100% of the disturbed volume will result in CO<sub>2</sub> emissions to the atmosphere. For intertidal habitats that may be disturbed by activities (for instance cabling connections to land), indirect impacts such as smothering may be an issue.

Assessments should also consider the impact of the cable corridor on sedimentary carbon and its potential for spatial overlap with kelp beds, subtidal and intertidal seagrass beds, and saltmarsh where it comes ashore.

We advise that changes in physical processes resulting from the presence of the subsea infrastructure associated with the Project, e.g. scour effects, changes in wave/tidal current regimes and resulting effects on sediment transport, may also impact blue carbon. We also advise consideration of the changes in fishing activity before and after installation of any wind farm should be assessed. As such, blue carbon assessments should include this as an impact pathway where relevant, as sediment and associated carbon accumulation may result from the Project (Daewel, et al., 2022; Watson et al., 2024). This could be further impacted at decommissioning stage, although the impact is likely to be negligible given relatively low sediment accumulation rates in the North Sea, noting that this does vary spatially (Diesing, Thorsnes, & Bjarnadóttir, 2021).

## Approach to assessment

We would accept a quantitative or qualitative approach given the current data gaps in sedimentary carbon densities and reactivity and the uncertainty in the fate of disturbed carbon, though our preference is for the former. Previous assessments have mapped and quantified the carbon stocks in the underlying sediment using existing data sources, over the proposed seabed area likely to be disturbed/lost through the installation of infrastructure.

The assessment presented should be transparent, utilising tables where appropriate to clearly display the quantitative breakdown for calculating total carbon stocks over areas/extents of different sediment types. Carbon densities vary with sediment type so where data are available to suggest variable sediment type, the associated carbon density will change. Most sedimentary carbon stocks are calculated for the surficial 10 cm because this is where the majority of the evidence has been collected. However, assessments should acknowledge that there will be additional disturbance to carbon that is buried deeper from foundations, anchors, etc.

While there is a suggestion within the literature that there may be an increase in accumulation of sedimentary organic carbon as a result of the infrastructure associated with offshore wind farms modifying current speeds, it is unlikely that this will compensate for sediment disturbance and loss over the lifetime of an offshore wind farm proposal.

The vulnerability and recoverability of blue carbon should be considered when assessing the sensitivity, magnitude and overall significance of any impact. In general, we have assessed that *'The receptor is deemed to be of high vulnerability, low recoverability, and high value. The sensitivity of the receptor is therefore, considered to be high.'* This is because sediment accumulation on the seabed can be very low and recovery therefore is slow.

Previous assessments have included comparisons to overall Scottish carbon emissions or extent of habitat within Scotland to assess the significance of impact. This often results in a very small proportion which leads to an assessment of insignificance.

To convert carbon stocks to CO<sub>2</sub> emissions, a factor of 3.67 should be used. It is not appropriate for inorganic carbon stocks to be converted to CO<sub>2</sub> emissions.

## Cumulative effects

Assessments should consider the cumulative impacts of disturbance from other developments, including on longer-term carbon stored buried deeper.

## NATURESCOT ADVICE ON ASPEN OFFSHORE WIND FARM

### Appendix G – Derogation

The Applicant has submitted a derogation case alongside the s36 and Marine Licence Applications for the proposed Aspen Offshore Wind Farm. This derogation case is provided on a without prejudice basis, and includes the following documents:

- Offshore Habitats Regulations Appraisal Without Prejudice Derogation Case
- Compensation Plan, including Appendix A: Draft Compensation Implementation Monitoring Plan

We have considered both these reports and provide advice below.

### Delivery of compensation

In the absence of the publication of the Sectoral Marine Plan for Offshore Wind Energy (anticipated March 2026) we provide advice on project-specific compensation. We are aware there are several relevant projects and workstreams considering compensation delivery – at the plan or strategic level – being conducted across Scottish and UK Governments.

A Scottish Government Consultation on the Scottish Marine Recovery Fund (MRF) has recently concluded, highlighting the opportunity for developers to contribute to this for the delivery of compensation measures to be identified in a Portfolio of Seabird Compensation Measures. We have responded to the MRF consultation to ensure relevant, meaningful, high-quality measures are secured to address the biodiversity crisis, and particularly the decline of seabird populations.

We note the Applicant's preference to use a future MRF (i.e. *Option 1: Strategic Compensation through MRF*) and in-line with Scottish Government's interim guidance<sup>27</sup> we welcome that the Applicant has also begun to consider project specific compensation measures. Until the Scottish MRF and Scotland's Portfolio of Compensatory Measures are operational, we request ongoing involvement to advise on the ecological effectiveness of any project specific compensation measures.

Furthermore, if the MRF is not a viable option the Applicant has indicated a preference to contribute to other strategic measures (i.e. *Option 2: Other Strategic Compensation Measures*). This includes contributing to the Scottish Marine Enhancement Environmental Fund (SMEEF) and/or regional measures, such as those being developed by the North-East and East Ornithology Group (NEEOG) of ScotWind developers. We welcome and acknowledge the collaboration and willingness to collectively identify potential regional compensation measures by the NEEOG. However, in the absence of a final, updated sectoral marine plan (SMP) and plan-level compensation measures and/or delivery mechanisms for coordinated compensation, project developers submitting applications have to consider and submit, largely in isolation, project specific derogation cases and compensation measures.

### Compensation Plan

Within the assessment provided in the RIAA, the Applicant has reached conclusions of no AEOI for each site and species assessed, both project-alone and in-combination. However, as set out in Table 1.1 of the *Compensation Plan*, the Applicant has outlined sites and species which, in their

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<sup>27</sup> <https://www.gov.scot/publications/scottish-marine-recovery-fund-guidance/>

view, may require compensatory measures. In view of the difficulties we have encountered in providing final ornithological advice, as discussed in **Appendix A**, we disagree with the mortality predictions provided, noting that the Appropriate Assessment will determine final sites and species which may require compensation.

The Applicant identifies a number of measures that could be undertaken to compensate for impacts to guillemot, puffin, kittiwake and gannet. Four high-level options are proposed, in order of Applicant preference:

- Option 1: Strategic Compensation through MRF
- Option 2: Other Strategic Compensation Measures
- Option 3: Collaborative Measures
- Option 4: Proposed Development-led Measures

We focus our advice on the ecological feasibility of proposed compensation Measures 3 – 4, which were submitted as part of the without prejudice derogation package. In doing so, we acknowledge that at this point in time, the Appropriate Assessment has yet to be undertaken.

On the basis of our provisional appraisal of AEOsI (see **Appendix A**), we agree that compensation measures are likely to be required for the species identified, namely:

- Guillemot
- Puffin
- Kittiwake
- Gannet

We have found the detail provided within the *Compensation Plan* to be generally high-level and lacking in detail. Furthermore, *Appendix A: Draft Compensation Implementation Monitoring Plan* provides only a basic outline, with no specific detail on implementation or monitoring. This is highlighted and reflected within our advice on the specific measures below.

Please note there are still ongoing discussions around the evaluation of any compensation measures and how best this should be considered. We do not necessarily agree that the methods deployed for Hornsea 4 will be appropriate in this context. Further discussion will be required as measures are developed and if required.

### Option 3 – Collaborative Measures

The Applicant has initiated consideration of compensation measures and proposes to share measures with other wind farm developers, including both consented and in planning projects. Table 4.1 summarises all proposed compensation measures in development by other Scottish projects, stating that initial discussions have been held with Green Volt, West of Orkney, Ossian, Caledonia, Cenos, and Salamander. Additionally, a draft letter of intent has been shared between Muir Mhor and Aspen. Paragraph 4.2.2 states that “*further information on Muir Mhor proposed measures can be found in the section below*”, however, the following section discusses the project specific compensation measures, making no reference to collaborative measures with other projects.

We advise that this Option requires significant further consideration by the applicant and any potential delivery partners. Noting that many of the proposed measures are still under

development and agreement has not yet been reached regarding the sufficiency of the measures for the lead developer(s) alone.

#### Option 4 – Proposed Development-led Measures

##### *Gannet bycatch mitigation in Scottish waters*

We note that mitigation will be predominantly focused on longline fisheries in Scottish waters, with a range of mechanisms proposed. Engagement with Scottish fisheries via the Marine Directorate has provided some initial feedback on the suitability of the various options in the hake longline fishery, including: reducing deck lighting during line setting; bird scaring lines during line setting; increase sink rates; change where discards and offal exit the vessel, keeping birds away from line hauling area. However, there are many dependencies that make delivery of such a measure especially complex, nor is it clear without further information which elements the Applicant has the ability to deliver.

Whilst we agree that there is some evidence of gannet bycatch occurring in Scottish waters, this is limited, and an accurate estimate of mortality is largely unknown. To establish the effectiveness of this measure, we would require more detail on any proposed scheme, including better quantifying the existing pressures and management measures, how gannets might benefit (what assumptions are made and the risks / implications of these assumptions), as well as how the measure may integrate with any existing management measures.

This measure would also require monitoring to establish its effectiveness. We note the proposal to monitor success either through a comparison with non-mitigated fisheries which will be determined through either pre-implementation monitoring, or through a treatment vs control study. However, we require further information on the methodology and results of any pre-implementation monitoring in order to assess the effectiveness of this measure.

In summary, this proposed measure requires significant further consideration by the applicant.

##### *Onshore creation of nesting space*

The Applicant proposes to enhance habitat through vegetation clearance, drainage management or the placement of metal ledge “hammocks” into the cliffs at the existing non-SPA colony of Cove Bay on the southern coast near Aberdeen, to optimise guillemot and kittiwake productivity.

This section focuses almost entirely on hammocks for kittiwake, with no evidence that vegetation encroachment or run-off is directly affecting the quality of seabird breeding habitat for kittiwake or guillemot at the selected site(s). As hammocks are not suitable for guillemot, we are unable to see how this measure proposes to benefit guillemot.

We do not support the hammock feature of this measure, as nesting habitat is not generally considered to be a limiting factor for kittiwake. There are other factors causing the decline in populations and we recommend progressing other compensation measures which will be of wider benefit to the seabird populations impacted by the development. Further comments on this proposed measure are listed below:

- The longlist of potential sites was narrowed to a shortlist of colonies situated between Buchan Ness to Collieston Coast SPA and Fowlsheugh SPA, which were then assessed for occupancy and productivity. No evidence on productivity at the selected Cove Bay site is presented, or how this compares with other colonies in the area.

- In Paragraph 5.2.46, it states that it is anticipated that prey availability in the area will be sufficient to support an uplift in the number of guillemot and kittiwake. There is no evidence to support this and there is a danger that changing the natural balance of the colony could have a negative effect on availability of prey. We also do not understand how it can be stated that there is good prey availability near their selected site but not at other colonies in the vicinity, without any evidence.
- Moreover, it is also states that the location is anticipated to be adequately sheltered from extreme weather given the breeding success of the existing colony. There is no evidence given to support this, and there is a possibility that any areas currently without nests could partly be due to exposure.
- Whilst avian predation is mentioned, mammalian predation (e.g. rats, mink) is not discussed. It would be counter-productive to have hammocks, or otherwise improve nesting habitat, if there is accessibility to mammalian predators.
- Finally, metal hammocks could be affected by heating from the sun which could affect egg survival.

Regarding habitat enhancement through vegetation clearance or drainage management, further site-specific information would be required to evidence that vegetation encroachment or run-off is directly affecting the quality of seabird breeding habitat at Cove Bay.

Furthermore, consideration would need to be given to coastal habitat and vascular plant features of Cove SSSI, which would be significant barriers to deploying metal ledges in the cliff face, vegetation clearance or drainage management.

In summary, we do not support the installation of hammocks and consider that the remaining elements (vegetation clearance or drainage management) are very poorly developed and the measure in its current form does not provide sufficient confidence that it could be effective.

#### *Puffin compensation*

The following management measures are proposed for puffin:

- Reduction of vegetation encroachment,
- Reduction of anthropogenic disturbance, and
- Human presence acting as a deterrent to gull predation.

Very little detail is provided about this measure to enable us to make an assessment of its ecological value. Some general evidence is provided to support the need for these management measures. We can accept that anthropogenic disturbance can be an issue, but more detail is required about impacts at specific sites to be targeted by this measure. One suggestion to reduce disturbance is path management, but without site-specific information, we are unable to comment on whether this would directly benefit puffins at a specific location.

Regarding the suggestion that the presence of humans may enhance breeding prospects for puffin by acting as a deterrent to gulls and reducing predation, no evidence is presented to support this claim. Additionally, it is unclear how this would form a suitable management measure.

Baseline monitoring will be required in advance of implementing any management measures to establish the need for the measures and the baseline conditions. This is the approach undertaken

by other offshore wind farm projects and is now generally accepted as standard practice. This should be undertaken as soon as possible.

Overall, we consider this measure to be very poorly developed and in its current form does not provide sufficient confidence that it could be effective.

## **Appendix H – JNCC advice on Turbot Bank NCMPA**

Appendix H: JNCC Advice on Aspen Offshore Wind Farm – Offshore Marine Protected Areas – (JNCC Ref: OIA-11043)

JNCC's role in relation to offshore renewables has been delegated to NatureScot. NatureScot is now authorised to exercise JNCC's functions as a statutory consultee in respect of certain applications for offshore renewable energy installations in offshore waters (0-200nm) adjacent to Scotland.

JNCC however, maintains responsibility for offshore Marine Protected Areas (MPAs). As such, JNCC have provided the following advice in relation to the Aspen Offshore Wind Farm Offshore Environmental Impact Assessment (EIA) Report to provide a view on nature conservation matters related to the Turbot Bank Nature Conservation Marine Protected Area (NCMPA) which is located adjacent to the Aspen Wind Farm export cable corridor.

The following advice relates to Marine Protected Areas (MPAs) within the offshore environment, extending out from the 12nm limit. For all other advice, we defer to NatureScot.

### **Overall comments**

The project is located adjacent to the Turbot Bank NCMPA, which is situated 0.1 km to the South of the export cable corridor. JNCC note that there is an embedded commitment detailed within the EIA that states that the NCMPA boundary will not be crossed by the export cable corridor.

### **Turbot Bank NCMPA**

Turbot Bank NCMPA is designated for sandeels. The current conservation objective for Turbot Bank NCMPA is to maintain the sandeels in 'Favourable Condition', meaning that the quality and quantity of its habitat and the composition of its population are such that they ensure that the population is maintained in numbers which enable it to thrive. We take this opportunity to emphasise the importance of assessing all potential operational impact-pathways in combination with the Site Information Centre documents on the JNCC website: <https://jncc.gov.uk/our-work/turbot-bank-mpa/>.

Any sediment plumes generated by activities relating to the Aspen Wind Farm could settle on habitat that is currently suitable for sandeel, potentially preventing sandeel settlement. JNCC note that within the Marine Protected Area Assessment (Appendix 10.2) Chapter the applicant has stated that sediment deposition is typically predicted to be between 4-6mm within the offshore cable corridor, with a maximum increase of up to 10mm occurring in discrete locations along the route. Outside of the cable corridor, deposited sediment thicknesses of up to 2mm may occur up to 10 km away, generally towards the south. However, JNCC note that the extent of Suspended Sediment Concentration (SSC) that will be deposited within the NCMPA remains unclear, as there are contradictions between, and within, other chapters of the EIA. If the Applicant could please re-clarify the worst-case scenario impacts to the NCMPA, this would be appreciated.

On reviewing the assessment, JNCC advise that any impacts on sandeel would be small scale and short term in nature. JNCC agree with the Applicant's conclusion that the Proposed Development will not hinder the achievement of the Conservation Objectives of Turbot Bank NCMFA.

We would expect to see any commitments to avoiding the MPA realised with a licence condition. It should also be noted that during the summer, sandeel emerge to feed and increase their bodyweight. To further limit any impacts to sandeel it would be beneficial to explore mitigation measures to minimise plume-generating activities during the summer period as best practice.

**Newtonhill,  
Muchalls and  
Cammachmore  
Community  
Council**

**From:** [Redacted]  
**To:** [MD Marine Renewables](#)  
**Subject:** RE: MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – EIA Section 36 consent and Marine Licence Applications - Consultation – Response Required by 23 October 2025  
**Date:** 28 October 2025 14:40:06  
**Attachments:** [image001.png](#)

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Dear Lauren,

Thank you for the opportunity to comment on this application. You are quite right to assume a 'nil return' as the Community Council decided against making a submission on the Section 36 consultation. I am sure that we shall have something to say about the Section 37 consultation in due course.

Many thanks,  
Michael

Michael Morgan  
Planning Officer  
Newtonhill, Muchalls and Cammachmore Community Council

# Northern Lighthouse Board



# Northern Lighthouse Board

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Your Ref: Aspen OWF – S36 Consent & ML Application  
Our Ref: AL/OPS/ML/WIND\_067\_25

Ms Amy Woodward  
Licensing Operations Team – Marine Directorate  
Scottish Government  
Marine Laboratory  
375 Victoria Road  
Aberdeen  
AB11 9DB

11 September 2025

## ***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 Part 4 of the Marine & Coastal Access Act 2009 to Construct and Operate the Aspen Offshore Wind Farm, Approximately 84km East of Peterhead***

Thank you for your e-mail correspondence dated 8<sup>th</sup> September 2025 relating to the application submitted by **Cerulean Winds Aspen Project Ltd** for consent to develop the Aspen Offshore Wind Farm, located approximately 84km East of Peterhead.

Northern Lighthouse Board note that the Aspen OWF will consist of up to 72 floating Wind Turbine Generators (WTG) with an approximate export capacity of around 1GW. Up to three Offshore Substation Platforms (OSP) will be installed within the array. Landfall sites for up to 4 offshore export cables have been identified in an area between Portlethen and Stonehaven, Aberdeenshire. The Aspen OWF is part of the wider North Sea Renewables Grid, and is intended to connect to both oil and gas assets and the onshore grid.

NLB have reviewed the documentation associated with the application, with particular reference to the navigational safety elements of the application contained within Chapter 14 (Shipping & Navigation), Chapter 19 (Infrastructure & Other Marine Users) and Chapter 20 (Major Accidents & Disasters). The inclusion of

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Outline Post-Consent Documents such as Appendix 9 (Outline Aids to Navigation (AtoN) Management Plan), Appendix 10 (Outline Lighting & Marking Plan (LMP)) and Appendix 12 (Outline ERCoP) is welcomed. NLB note the hazards identified through the Navigational Risk Assessment (NRA) process, and the associated mitigations detailed within both Appendix 4.2 (Commitments Register) and Table 8 of the Navigation Risk Assessment. It should be noted that there is a numbering discrepancy for the LMP between the Commitments Register entry (C-OFF-46) and the Shipping & Navigation Chapter reference (C-OFF-47).

Northern Lighthouse Board also acknowledge that Ardersier Port has been identified as the anticipated Primary Construction Port, and that wet storage of both component parts and completed structures is intended to be kept to a minimum. NLB will work with both the project and Ardersier Port with regard to the lighting and marking arrangements for any wet storage areas.

Within Section 14.7.96 of the Shipping & Navigation chapter, it is stated “In the unlikely event a turbine was to breakout (either from its moorings, or during towage), it would still be marked and visible to other navigating vessels in accordance with the LMP”. Only WTG designated as SPS/IPS have AtoN installed - all other WTG are not fitted with marine AtoN, and would essentially be unlit in the event of a breakout. NLB are willing to work with the developer regarding the provision of emergency lighting and marking for inclusion in the LMP.

Within Section 14.7.97, NLB observe that a response plan for off-station buoyage during all phases of the project will be included within the ERCoP. NLB request that this plan is cross-referenced to the LMP, and also includes details of promulgation of information regarding the failure such as Notices to Mariners (NTM), Radio Navigation Warnings (RNW) or local ‘Securite’ broadcasts by the MCC or guard vessel.

It is noted with Appendix 9 (AtoN Management Plan) that provision has been made for the remote monitoring and testing of marine AtoN through both the construction and O&M phases of the project, with availability reports provided to NLB when requested. Within Section 2.4.1 (Testing), NLB request that this is expanded to “all marine AtoN, and associated systems, shall be tested”.

NLB also acknowledge the commitment to engage with NLB with regard to temporary replacement of AtoN should an SPS/IPS structure be removed for maintenance. It is also requested that the maintenance of AtoN is included with the O&M Manual, and that the AtoN Management Plan is referenced where necessary.

Within Section 3.1.2 and Figure 3.1 (Protocol for the Loss of an Aid to Navigation), NLB request inclusion of an immediate action for promulgation of the failure information to mariners, by way of NTM/RNW etc.

The establishment, alteration and discontinuation of any Aid to Navigation is subject to the Statutory Sanction of the Commissioners of Northern Lighthouses. Further guidance and application forms can be obtained on request from the NLB Navigation Department ([navigation@nlb.org.uk](mailto:navigation@nlb.org.uk)).

NLB request that within Appendix 12 (ERCoP), provision is made for the promulgation of information by NTM/RNW regarding any incident, including newly sunk vessels or WTG, that presents a hazard to navigation, to all appropriate organisations.

NLB do operate vessels in the Central North Sea as part of their statutory duties under the Merchant Shipping Act 1995. However, this is largely for the inspection of AtoN installed on offshore installations. Aids to Navigation associated with Aspen OWF would be incorporated in to these inspection voyages, and NLB do not anticipate that the project will negatively impact these operations.

Northern Lighthouse Board have no objection to the proposed Aspen OWF, and will continue to engage with the applicant with regard to the development of post-consent navigational safety documentation.

Yours sincerely  
[Redacted]

Peter Douglas  
Navigation Manager

# Royal Society for the Protection of Birds Scotland



Marine Renewables  
Consenting and Licensing Casework Office  
Licensing Operations Team – Marine Directorate  
Scottish Government  
Victoria Quay  
Edinburgh  
EH6 6QQ

By email: [MS.MarineRenewables@gov.scot](mailto:MS.MarineRenewables@gov.scot)

27 November 2025

Dear Sirs

### **Aspen Offshore Wind Limited – Cerulean Offshore Wind – EIA Section 36 Consent and Marine Licence Application - Consultation**

Thank you for consulting RSPB Scotland on the above applications to construct and operate an offshore windfarm approximately 75km off the Aberdeenshire coastline, and for allowing RSPB Scotland a significant extension of time in which to submit our response – we are extremely grateful.

RSPB Scotland recognises that climate change is the greatest threat to nature, and we support the transition to renewable energy. We consider that offshore wind has a part to play in a just transition from Scotland's dependence on fossil fuels. We support the principle of offshore wind development and agree that renewable electricity generation offshore has strong policy support. In this case, while we have no objection to the project in isolation we have concerns regarding cumulative impact with other North Sea windfarms, and Berwick Bank in particular and the ability to fulfil compensation requirements in tandem with Berwick Bank, and this is the key reason why we object to the proposal.

#### General Comments

We understand that the proposal involves up to 72 Wind Turbine Generators (WTGs) on floating foundations with accompanying infrastructure. This leads to approximately 1GW capacity for the site. It is understood that the lifetime of the development is estimated at 35 years. This application includes the cable route and landfall point.

It is important to recognise the continued use of models for all OWF ecological assessments and that these are theoretical models that do not always correspond to reality. These models are not able to fully capture the nuances of our dynamic natural environment, the complex behaviours of seabirds or the interlinkages between the two. Therefore, models are not able to evaluate fully the possible risks windfarms pose to seabirds. This fact, combined with the sensitivities of seabird populations to e.g. small changes in adult mortality, availability

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The RSPB is part of BirdLife International, a network of passionate organisations, working together to save nature across the world.

of food etc makes them particularly vulnerable and the Habitats Regulations are clear on the requirement to take a precautionary approach when assessing all possible effects of a proposed development.

The Application site is within the foraging range of several seabird species. The Strategic Environmental Assessment for the Sectoral Marine Plan (SMP) for Offshore Wind Energy 2020 suggests that this option located between NE7 and E2 (INTOG Eb lease area) has the potential to affect bird species, although the distance offshore reduces the potential risk to foraging areas. There may, however, be species which transit through these offshore areas as part of migration routes, and therefore project-level survey and consideration of potential mitigation will be required. There are also numerous seabird colonies in the vicinity, many of which are also designated as Special Protected Areas (SPA) due to supporting one or more rare, threatened, or vulnerable bird species as listed in Annex I of the Birds Directive or regularly occurring migratory species. There are therefore legal obligations under the Habitats Regulations including avoiding disturbance to and deterioration of the protected sites and their species.

Seabirds are relatively long-lived, tend to breed later in their life cycle and have fewer young than other birds and, as a result, their populations are sensitive to even the smallest increases in adult mortality. Their survival and productivity rates can be impacted by offshore windfarms directly (i.e. collision) and indirectly (e.g. displacement from foraging areas and additional energy expenditure required to avoid and due to additional flying distances to alternative foraging areas). They are also already under severe pressure. In Scotland, the number of breeding seabirds has declined by 49% since the 1980s, according to the Scottish biodiversity indicator in 2019 they were assessed as moving away from target to achieve Good Environmental Status<sup>1</sup>.

#### Detailed Comments

RSPB Scotland note the Applicant's assessment upon SPA and RAMSAR designations and that no Adverse Effects on Site Integrity (AEoSI) are anticipated. We welcome the 'without prejudice' derogation case made by the applicant should Scottish Ministers find AEoSI. A 'without prejudice' case is presented for 3 designated SPAs on an 'in combination' with other operational and planned projects as follows:

Fowlsheugh SPA- Kittiwake  
Forth Islands SPA Puffin and Gannet  
Buchan to Collieston Coast – Kittiwake and Guillemot

The applicant had identified strategic measures through the developing strategic compensation Marine Recovery Fund being developed by the Scottish Government. Should this not be feasible or available several measures have been suggested that are in effect either a strategic approach (e.g. contribution to SMEEEF) or collaboration with other developers on a project basis that have received consent or are negotiating project level compensation. We support the pathway approach set out by the applicant but would emphasise that the strategic approach is likely to result in the best outcomes and would perhaps be the most efficient route once the systems and structure are operational. Our comments are set out in Appendix 2

We have some concerns in relation to Manx Shearwater, European storm petrel and Leach's petrel and that it is not possible to rule out AEoSIs upon UK SPA sites for these species given the difficulties outlined in Appendix 1 relating to light attraction without the findings of ongoing research into the effects of lighting upon these three species.

RSPB Scotland have not been able to identify marine enhancement measures that go beyond mitigation/compensation measures and would suggest that enhancement should be required of this marine energy development.

Should you require any further information, please do not hesitate to get in contact.

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<sup>1</sup> [Scottish Biodiversity Indicator – The Numbers and Breeding Success of Seabirds \(1986 to 2019\)](#)

Yours sincerely  
[Redacted]

Andrew Tait  
Senior Conservation Planner, RSPB Scotland

# Appendix 1

## Aspen Offshore Windfarm Application

### Detailed Response by the Royal Society for the Protection of Birds

#### Introduction

1. This appendix sets out the steps for the habitat regulations with the legal steps that must be taken, together with the wider legal context and the policy landscape for offshore wind development. This is followed by a summary of the most relevant seabird colonies and their current status.

#### Offshore ornithology assessment

2. RSPB Scotland recognise that the Applicant invested a great amount of time and resource into the ornithological re-assessment process and wish to formally express that we welcome and appreciate this work.
3. We consider the approach advised by NatureScot and detailed in their online guidance to be the best reflection of the likely impact of the proposed OWF development.
4. As set out in Searle et al (2023a)<sup>1</sup>, assessing impacts of offshore windfarms and other renewables developments is inherently uncertain. This uncertainty is propagated throughout the impact assessments, as there are not only direct impacts, but ecosystem wide impacts that can change, for example, the abundance and availability of prey. Multiple data sources and modelling techniques are used to capture a simplified version of reality. They do not fully capture the complexity of seabird behavioural or demographic processes in an inherently dynamic marine environment.
5. It is therefore vital that the precautionary approach required by the Habitats Regulations is taken. This means if scientific data is incomplete or hard to get and it is not possible to complete a full evaluation of all possible or potential risks an activity/development may cause; account should be taken of all possible harm. Potential harm should not be dismissed due to the lack of scientific data.
6. Importantly, the precautionary principle requires the Applicant to demonstrate with scientific certainty that something would not be harmful. The concept of something being overly precautionary dismisses the inherent uncertainty in modelling and overlooks the simplistic version of reality that the modelling captures.
7. Not recognising these uncertainties risks poorly informed decisions being made. Furthermore, an underestimation of impacts will have repercussions when consenting later offshore wind development. If a precautionary approach is taken from the beginning, the likelihood of irreversible damage occurring is reduced even whilst our knowledge base is incomplete and modelling improves.

#### The Habitats Regulations

8. The Habitats Regulations seek to conserve particular habitats and species across the UK. The overall aim of these Regulations is to ensure the long-term survival of viable populations of the UK's most valuable and threatened species and habitats, throughout their natural range and to maintain and promote biodiversity.

9. These Regulations relevant to this application are:
  - 9.1. *The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)* (“the 1994 Regulations”) - applies on land in Scotland, and in Scottish inshore waters (the area of sea adjacent to Scotland from 0 to 12 nautical miles);
  - 9.2. *The Conservation of Habitats and Species Regulations 2017* -applies to specific reserved and devolved activities on land in Scotland, and in Scottish inshore waters, including for consents under sections 36 and 37 of the Electricity Act 1989; and
  - 9.3. *The Conservation of Offshore Marine Habitats and Species Regulations 2017* -applies to all UK offshore waters (the area of sea beyond 12 nautical miles).
10. These are referred to as “the Habitats Regulations” in this submission.
11. In Scotland, 162 Special Protection Areas (SPAs) have been classified. These have been specifically identified and protected due to supporting one or more rare, threatened, or vulnerable bird species as listed in Annex I of the Birds Directive, or regularly occurring migratory species.
12. Although the UK has withdrawn from the EU, the aims and objectives (as set out in the Habitats and Birds Directives recitals/preambles) remains relevant and important as discussed below. SPAs are protected in Scotland and the rest of the UK, and the standard of protection and requirements has not changed.
13. There have however been some changes to terminology and process due to Brexit. Of relevance to this submission is that the EU-wide network of SPAs and SACs known as “Natura 2000” Network post Brexit, no longer is of legal relevance. However, the UK-wide network of protected sites is, and is referred to as the “UK site network”. In addition, references in the Habitats Regulations to the “coherence of Natura 2000” must now be read as references to the coherence of the UK/National site network.
14. Using *the Conservation of Habitats and Species Regulations 2017* (since all Habitats Regulations have identical requirements), the Regulations set out the sequence of steps to be taken by the competent authority (here the Scottish Ministers) when considering authorisation for a project that may have an impact on a European site and its species before deciding to authorise that project. These are as follows:
  - Step 1: consider whether the project is directly connected with or necessary to the management of the SPA and its species (regulation 63(1)). If not –
  - Step 2: consider, on a precautionary basis, whether the project is likely to have a significant effect on the SPA and its species, either alone or in combination with other plans or projects (the Likely Significance Test) (regulation 63(1)).
  - Step 3: make an appropriate assessment of the implications for the SPA and its species in view of its conservation objectives. There is no requirement or ability at this stage to consider extraneous (non-conservation e.g. economics, renewable targets, public safety etc) matters in the appropriate assessment (regulation 63(1)).
  - Step 4: consider whether it can be ascertained that the project will not, alone or in combination with other plans or projects, adversely affect the integrity of the SPA and its species, having regard to the manner in which it is proposed to be carried out, and any conditions or restrictions subject to which that authorisation might be given (the Integrity Test) (regulation 63(6)).

- Step 5: In light of the conclusions of the assessment, the competent authority shall agree to the project only after having ascertained that it will not adversely affect the integrity of the SPA, alone or in combination with other plans or projects (regulation 63(5)).
  - Step 6: only if the competent authority is satisfied that, there being no alternative solutions and the plan or project must be carried out for imperative reasons of overriding public interest (which, subject to (regulation 64(2)), may be of a social or economic nature), they may agree to the plan or project notwithstanding a negative assessment of the implications for the European site (regulation 64(1)).
  - Step 7: in the event of the no alternative solutions and imperative reasons of overriding public interest tests being satisfied, the Scottish Ministers must secure that any necessary compensatory measures are taken to ensure that the overall coherence of the Natura 2000 network is protected (regulation 68).
15. It is important to add that in addition to the requirements set out above, in relation to both inshore area and the offshore marine area, any competent authority must exercise its functions so as to secure compliance with the requirements of the Habitats Directive and the Birds Directive; and in particular to take such steps as it considers appropriate to secure the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds, having regard to the requirements of Article 2 of the Birds Directive.<sup>7</sup> And for offshore SPAs regulation 26, Offshore Regulations requires competent authorities to exercise their functions (as far as possible) to secure steps to avoid the disturbance of species and the deterioration of habitats or habitats of species within those sites.

### Appropriate assessment

16. As part of the assessment requirements, regulation 63, Habitats Regulations (regulation 28, Offshore Regulations) require the application of the precautionary principle. Meaning that if it cannot be excluded, on the basis of objective scientific information, that it is likely to have a significant effect on a SPA and its species, an appropriate assessment will be required: see *Waddenzee*.
17. Following that appropriate assessment, a project may only be granted consent if the competent authority is convinced that it will not have an adverse effect on the integrity of the European site(s) and their species of concern, having applied the precautionary principle and taken account of the conservation objectives for those sites and their habitats and species. *Waddenzee* confirmed that where doubt remains as to the absence of adverse effects on the integrity of the site, approval should be refused (subject to the considerations of alternative solutions, imperative reasons of overriding public interest and the provision of compensatory measures as set out in regulations 64 & 68).
18. An appropriate assessment requires all aspects of the project which could affect the site, its species and its conservation objectives to be identified in the light of the best scientific knowledge in the field. The competent authority,
- “taking account of the conclusions of the appropriate assessment of the implications...for the site concerned, in the light of the conservation objectives, are to authorise such activity only if they have made certain that it will not adversely affect the integrity of the site. That is the case where no reasonable scientific doubt remains as to the absence of such effects”.*

19. Integrity of the SPA should be considered as the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is classified. A site can be described as having a high degree of integrity where the inherent potential for meeting site conservation objectives is realised, the capacity for self-repair and self-renewal under dynamic conditions is maintained, and a minimum of external management support is required. When looking at the 'integrity of the site', it is therefore important to take into account a range of factors, including the possibility of effects manifesting themselves in the short, medium and long-term.
20. As is clear from the requirements of the Habitats and Offshore Regulations, the assessment of integrity is to be considered by reference to the impact of the project alone and in-combination with other plans and projects, taking account of the site(s) conservation objectives. As clearly set out in *Waddenzee*, para 61:

*"61 In view of the foregoing, the answer to the fourth question must be that, under Article 6(3) of the Habitats Directive, **an appropriate assessment of the implications for the site concerned of the plan or project implies that, prior to its approval, all the aspects of the plan or project which can, by themselves or in combination with other plans or projects, affect the site's conservation objectives must be identified in the light of the best scientific knowledge in the field.** The competent national authorities, taking account of the appropriate assessment of the implications of mechanical cockle fishing for the site concerned in the light of the site's conservation objectives, are to authorise such an activity only if they have made certain that it will not adversely affect the integrity of that site. That is the case where no reasonable scientific doubt remains as to the absence of such effects."* (emphasis added)

#### **The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017**

21. These EIA requirements state that consent cannot be granted for Environmental Impact Assessment (EIA) development unless the decision-maker has taken into account environmental information including an environmental statement which describes the significant effects, including cumulative effects, of the development on the environment. This will include effects on all wild bird species whether SPA species or not.
22. Offshore wind farms have the potential to impact on birds through collision with rotating blades, direct habitat loss, disturbance from construction activities, displacement during the operational phase (resulting in loss of foraging/roosting area) and impact on bird flight lines (i.e. barrier effect) and associated increased energy use by birds for commuting flights between roosting and foraging areas. These additional potential impacts must be taken into account.

#### **The UK Marine Strategy Regulations and Good Environmental Status**

23. Also of relevance to achieving sustainable development in our seas is the Marine Strategy Framework Directive<sup>13</sup>. This was developed in response to concerns that although existing legislation protected the sea from some specific impacts, it was sectoral and fragmented. To overcome this, the directive seeks to reduce impacts on marine waters regardless of where impacts occur by applying an ecosystem approach.
24. Applying an ecosystem approach is important. Our natural environment is complicated, and the outcome of an impact may manifest elsewhere. It also feeds into the concept of sustainable development and the vision for clean, healthy, safe, productive, and diverse seas; managed to meet the long term needs of nature and people as set out Scotland's National Marine Plan.

25. The Marine Strategy Framework Directive was transposed into UK law by the Marine Strategy Regulations 2010. It requires the UK to put in place the necessary management measures to achieve 'Good Environmental Status' (GES) in UK seas by 2020. This involves protecting the marine environment, preventing its deterioration, and restoring it where practical alongside using marine resources sustainably. As with the Habitats Regulations, although the UK has withdrawn from the EU, the legislative requirement for GES remains in place.
26. Governments of the UK have collectively failed to meet 11 out of the 15 indicators of Good Environmental Status (GES) for our seas with the marine bird indicator moving away from target. For breeding seabirds, more species, especially surface feeders who depend on small fish at the surface (35% in the Greater North Sea), are now experiencing frequent, widespread breeding failures. The reduced availability of small fish is largely responsible for these declines and impacts on breeding success.

### *Section summary*

27. Taken together, there is a clear legal and policy requirement to protect the marine environment and deliver sustainable development. The UK Marine Strategy is clear in its aims of improving the state of the marine environment through taking a large scale, holistic approach. Therefore, proposals which further impact the ability of the UK to achieve GES should be considered carefully. The ability of an application to comply with the vital requirements of the Habitats Regulations which seek the long-term survival of viable populations of Europe's most valuable and threatened species and habitats, must also be scrutinised and considered in detail.

### **Policy Position**

28. In accordance with the requirements of the Marine (Scotland) Act 2010 when considering an application and making a recommendation to Ministers, MD-LOT must consider the extent to which the proposed activity accords with any marine plan for an area and the impact that it would have on the environment, human health, and other legitimate users of the sea as well as other matters considered relevant.
29. Scotland's National Marine Plan<sup>2</sup> (NMP) (adopted 2015) sets out the strategic policies for sustainable development in both the Scotland inshore region (0 to 12 nautical miles) and within the Scottish Offshore region (12 to 200 nautical miles).
30. A core aim of marine planning, as set out by the NMP, is to manage human impact on the marine environment. The plan therefore seeks to put the marine environment at the heart of the planning process and adopt the principles of sustainable development. The environmental, social, and economic policies of the plan are intended to be complementary with one another as elements of sustainability.
31. Through policy GEN 9 (Natural Heritage), the NMP requires that development and use of the marine environment complies with legal requirements for protected areas and protected species, not result in significant impact on the national status of priority marine features, and protect, and where appropriate, enhance the health of the marine area. It also encourages a strategic approach to mitigation of potential and cumulative impacts, stating that these form an integral part of marine planning and decision making.
32. Renewables specific policies within the NMP direct commercial scale development to the plan options areas (as identified in the Sectoral Marine Plan) and require applications to demonstrate compliance with the Environmental Impact Assessment (EIA) and Habitat Regulations Appraisal (HRA) legislative requirements.

33. Since the adoption of the NMP, Scottish Government have further recognised that net zero and energy goals will have impacts on the environment, specifically marine biodiversity, as well as other users of sea. In particular, the draft Energy Strategy and Just Transition Plan (2023), recognises the potential impacts on biodiversity arising from the major expansion in offshore wind. It contains a commitment to work in a way that recognises this reality and ensures appropriate protection of the natural environment as part of a joined-up approach to tackling the climate and nature crisis.
34. This follows the approach of the National Planning Framework 4 which, in policy 1 clearly sets the expectation that significant weight will be given to the global climate and nature crises when considering all development proposals. Although this document is not directly applicable to marine development, it is applicable to onshore elements and RSPB Scotland believe it is a relevant consideration, albeit one with limited weight, for development offshore. Although in early stages of development, RSPB Scotland understands that consideration is being given as to how National Marine Plan 2 can follow the approach in NPF4.

### Ornithological interest of the Application site

35. The UK is of outstanding international importance for its breeding seabirds and wintering marine birds. As with all Annex I and regularly migratory species, the UK has a particular responsibility under the Birds Directive to secure their conservation.
36. Seabirds are relatively long-lived, and as a result, their populations are sensitive to small increases in adult mortality. Their survival and productivity rates can be impacted by offshore windfarms directly (i.e. collision) and indirectly (e.g. displacement from foraging areas, additional energy expenditure, potential impacts on forage fish and wider ecosystem impacts such as changes in stratification).
37. The probability of seabirds being impacted by an application relates to whether they are likely to be in the area of the development, and their behaviour in the vicinity of the development. This will depend on a number of factors, including the application's proximity to seabird colonies, the species within those colonies, the species behaviours (including their foraging range, food preferences and flight behaviour), the attraction of the application array itself as a foraging area, and the attraction of areas beyond the application array for foraging (which would require birds to transition through the development array or detour around it).
38. We have general concerns regarding Manx Shearwater, European storm petrel and Leach's petrel. While we, we agreed that low numbers of these species have been recorded in historical surveys, it may be that these low numbers arise through biases inherent in the survey methods (such as the timing of surveys and low visibility of birds on the water) rather than low numbers on the site. Furthermore an additional consideration for these species is the extent to which nocturnally active seabirds, such as Manx shearwaters, may be attracted to the illuminations required for turbines, support vessels and the construction or expansion of ports. Such attraction will cause behaviour change, which could. In turn result in increased collision risk, for example, if birds fly higher when attracted to light. Consequently, we do not believe it is possible to rule out the potential effects upon a European site in combination with other projects.

### Species of interest

39. The **key species of interest in relation to the application are** Black-legged Kittiwake (*Rissa tridactyla*), Northern Gannet (*Morus bassanus*), Common Guillemot (*Uria aalge*), Atlantic Puffin

(*Fratercula artica*) Manx Shearwater (*Puffinus puffinus*), European Storm-petrel (*Hydrobates pelagicus*) and Leach’s Storm-petrel (*Hydrobates leucorhous*).

40. A summary of their population status within the Britain, Isle of Man and Channel Islands is provided in Table 1 below.

Species	% World Population	UK Colony Trends 1986 to 2021
Black-legged Kittiwake	5.3	Declining
Northern Gannet	59.1	Mostly increasing but a few declining colonies ( <i>N.B. Gannets were badly impacted by HPAI in 2021-22</i> )
Guillemot	6.2	Some colonies increasing but many declining
Atlantic Puffin	3.3-3.9	Declining
Manx Shearwater	81.0	Increasing
European Storm-petrel	6.8	Increasing
Leach’s Storm-petrel	0.1	Declining

Table 1

### Northern Gannet

41. Northern Gannet are endemic to the North Atlantic although the majority breed in Britain and Ireland. They tend to breed on offshore islands and stacks. Gannets are typically long-lived seabirds, living to an average age of 17 years and not breeding until the age of 5 years. During the breeding season, adults will take it in turn to incubate the single egg for approximately 42-46 days with the chick fledging unaccompanied by its parents after approximately 90 days. Some colonies, such as that on the Bass Rock in the Firth of Forth – the largest Gannetry in the world - are particularly large and conspicuous. Gannet can catch fish at depths of 20 metres but also feed from the surface on small shoaling fish such as sandeel.
42. During the breeding season Gannets are central-place foragers meaning they are constrained to return to the nest after foraging to maintain territories and raise their young. Foraging trip durations are dependent on colony size with birds from larger colonies making longer foraging trips (both in distance and duration).
43. Gannet were particularly badly impacted by Highly Pathogenic Avian Influenza (HPAI) during the 2022 breeding season with large numbers of deaths reported. On the Bass Rock a catastrophic breeding failure was reported which is likely to vastly impact their future population numbers and the robustness of those populations to additional mortality.
44. They are amber listed in the Birds of Conservation Concern.
45. Northern Gannet have been assessed as having a high vulnerability to collisions with rotating turbine blades (Furness *et al.*, 2013, Wade *et al.*, 2016), partly due to their flight altitude and manoeuvrability. Breeding Gannets tracked with GPS from Helgoland in the eastern North Sea travelled around and through operational wind farms.
46. There is a need to assess the possible impacts to Gannets throughout the year as behavioural constraints change; starting when they arrive back at the colony for the breeding season until they leave on migration, and then throughout the winter. During autumn and winter potential interaction with turbines will not be limited to birds from the closest breeding colony but birds from across the breeding range as they disperse and travel south.

47. There is consistent evidence of wind farm avoidance by non-breeding Gannets and Gannets on migration. But little is known about the behavioural responses of breeding Gannets to offshore turbines resulting from a lack of operational turbines within foraging range of breeding colonies.

### *Black-legged Kittiwake*

48. Black-legged Kittiwake are members of the gull family. They tend to nest on vertical rocky-sea cliffs and during the breeding season feed on energy rich pelagic shoaling fish, such as sandeel, sprat and juvenile herring. Kittiwakes are surface feeders and are highly dependent on sandeels in the breeding season, as such they are particularly vulnerable to food shortage. During the breeding season Kittiwakes are central-place foragers meaning they are constrained to return to the nest after foraging to maintain territories and raise their young. When not in attendance at the nest or away on a foraging trip, Kittiwakes use the sea below the cliffs for maintenance behaviours such as loafing (spending time on the water to preen or rest, not related to feeding), preening and bathing. During the breeding season the highest densities of Kittiwakes at sea are within 1km of the colony.
49. Kittiwake are red listed in the Birds of Conservation Concern and on the OSPAR list of threatened and/or declining species and have been assessed by the IUCN as vulnerable to global extinction. They are particularly susceptible to collision risk but are also vulnerable to distributional changes as a result of the presence of turbines.

### *Common Guillemot*

50. Common Guillemot are member of the auk family along with Puffin and Razorbill. They typically form highly dense colonies and lay a single egg (without a nest) on a cliff, narrow ledges, or other inaccessible areas. They tend to eat fish and crustaceans. Guillemots are typically long-lived seabirds, living to an average age of 23 years and not breeding until the age of 5 years. Breeding success is highest where birds are most tightly packed. Adults will incubate the egg for 28-37 days, fledging then taking place when the chick is ~3 weeks old. The chick will then complete its growth at sea accompanied by its male parent.
51. The response of Guillemots to offshore wind farms is mixed although there is a paucity of data for breeding birds. Non-breeding birds have been shown to avoid offshore wind farms, as have breeding birds in the southern North Sea, whereas in the Irish Sea, Guillemots have shown no changes in abundance post construction and at another site, increased in abundance. More recent work has suggested that there may be some habituation over time to the presence of wind farms.
52. While details are still emerging, the 2024 breeding season for Guillemot appears to be extremely poor, with large number of nest sites vacant, birds present but not laying eggs and high degree of breeding asynchronicity. The causes of this are likely to be multifactorial, and may include HPAI, high water temperatures and resultant poor body conditions. The long term, population scale consequences are unclear, but may be severe. As a result, an extremely high level of precaution should be applied in considering the impacts arising from any offshore development on this species.
53. They are amber listed in the Birds of Conservation Concern.

### *Puffin*

54. Puffin are one of the most iconic seabird species around Scotland with their brightly coloured beaks during the breeding season. They tend to nest in burrows and so are susceptible to

mammalian predators. There is some evidence their diet changes seasonally but during the breeding season, they typically feed on shoaling fish such as sandeel, sprat and herring which they catch by underwater pursuit.

55. They are vulnerable to displacement which can lead to a loss of feeding grounds and excess energy expenditure as they take less direct routes to reach alternative prey sources.
56. Puffin are red listed in the Birds of Conservation Concern and have been assessed by the IUCN as vulnerable to global extinction.

#### *Manx Shearwater*

57. This medium-sized sooty black and white seabird is a skilful navigator of the open ocean, but rarely seen on land. Manx shearwaters are long-lived birds that typically glide on stiff wings low over the sea surface. They are nocturnal at their breeding colonies, which are often located in steep and inaccessible terrain at a few dozen localities, mostly located on our western seaboard.
58. Outside of the breeding season, these migratory birds winter in the South Atlantic, predominantly off Brazil and Argentina.
59. The birds are amber listed as a UK bird of conservation concern.

#### *European Storm-petrel*

60. This small petrel, not much larger than a House Martin and very similar in appearance, is extremely pelagic, spending most of its life at sea.
61. The Storm Petrel only comes to land during the summer months, making its breeding attempts on offshore islands and a few isolated headlands. Although it has an estimated breeding population in the UK of around 30,000 pairs, this is an extremely difficult species to see during the breeding season, only coming to land during the hours of darkness often staying at sea on bright moonlit nights.
62. Several Storm Petrel breeding colonies have been the subject of detailed study, with ringing data demonstrating that this is a long-lived bird, with some individuals living for over 30 years.
63. This is the most marine of our breeding birds and a difficult species to see, visiting its underground nests at night and spending the rest of the time at sea.
64. The birds are amber listed as a UK bird of conservation concern.

#### *Leach's storm-petrel*

65. Leach's Petrel has a more restricted breeding distribution within Britain & Ireland than the more familiar Storm Petrel, its colonies all located within 70 km of the Atlantic continental shelf. While significant numbers breed at colonies on remote islands far off the coasts of Scotland and Ireland, our population is small compared to those off North America.
66. As with other burrow-nesting seabirds, the species faces a threat from mammalian predators inadvertently introduced to islands. Leach's Petrels may also be taken by avian predators, which is one reason for their nocturnal habits at breeding sites.
67. The birds are red listed as a bird of UK conservation concern.

### *Proximity of seabird colonies*

68. The application array location is close to several SPAs with qualifying features within foraging range of the application array area. This includes the East Caithness Cliffs SPA, North Caithness Cliffs SPA, Outer Firth of Forth and St Andrews Bay Complex SPA, the Forth Islands SPA, Fowlsheugh SPA and St Abb's Head to Fast Castle SPA, Flannan Isles, Foula, North Rona and Sgula Sgeir, St Kilda, Sule, Skerry and Sule Stack, Auskerry, Mousa, Priest Islands (Summer Isles), Seas of St Kilda, St Kilda, Treshnish Isles, Copeland Islands, Aberdaron Coast and Bardsey Island, Irish Sea Front, Rum, Skomer, Skolkholm and seas off Pembrokeshire.
69. As SPAs, these sites are subject to general duties to protect, conserve and restore the designated features of the site to meet their conservation objectives, to prevent deterioration of the site's habitats and to prevent significant disturbance to the sites. If an application might impact a qualifying feature, as set out in Chapter 1, assessment in accordance with the Habitats Regulations is required.

### *Forth Islands SPA*

70. The Forth Islands SPA consists of a series of islands in the Firth of Forth. The islands of Inchmickery, Isle of May, Fidra, The Lamb, Craigleith and Bass Rock were classified in 1990 and an extension to the site, consisting of Long Craig, was classified in 2004.
71. It qualifies under Article 4(2) of the Birds Directive due to the regular presence of:
- Migratory species including:
    - **Northern Gannet**, representing 8.2% of world's biogeographical population and 13.6% of the Great Britain population); and
    - **Atlantic Puffin**, (representing 1.5% of the total F.a.grabae biogeographic population and 3.1% of the Great Britain population).
  - In excess of 20,000 individual seabirds during the breeding season including, in addition to Northern Gannet and Atlantic Puffin:
    - **Razorbill** representing 1.4% of the Great Britain population;
    - **Common Guillemot** representing 2.2% of the Great Britain population; and
    - **Black-legged Kittiwake** representing 1.7% of the Great Britain population.
72. The conservation objectives for the Forth Islands SPA are:

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

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

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

### *Fowlsheugh SPA*

73. Fowlsheugh SPA is a stretch of sheer cliffs on the east coast of Aberdeenshire plus a two-kilometre extension into the marine environment. The cliffs were designated in 1992 and the marine extension in 2009.

74. It qualifies under Article 4(2) of the Birds Directive due to the regular presence of:

- Migratory species including:
  - **Common Guillemot** representing 5% of the Great Britain population; and
  - **Black-legged Kittiwake** representing 7.5% of the Great Britain population.
- In excess of 20,000 individual seabirds during the breeding season including:
  - **Razorbill** representing 3.9% of the Great Britain population.

75. The conservation objectives for the Fowlsheugh SPA are:

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

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

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

### *St Abb's Head to Fast Castle SPA*

76. St Abb's Head to Fast Castle SPA comprises an area of sea cliffs and 1km marine extension stretching over 10km along the Berwickshire Coast. The cliffs were designated in 1997 and the marine extension in 2009.

77. It qualifies under Article 4(2) of the Birds Directive due to the regular presence of:

- In excess of 20,000 individual seabirds during the breeding season including:
  - **Razorbill** representing 1% of the Great Britain population;
  - **Common Guillemot** representing 3% of the Great Britain population; and
  - **Black-legged Kittiwake** representing 4% of the Great Britain population.

78. The conservation objectives for the St Abb's Head to Fast Castle SPA are:

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

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

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

### East Caithness Cliffs

79. The East Caithness Cliffs SPA includes most of the sea-cliff areas between Wick and Helmsdale on the north-east coast of the Scottish mainland and includes an approximate 2km seaward extension. It was designated in 1996 and the marine extension in 2009.

80. It qualifies under Article 4(2) of the Birds Directive due to the regular presence of:

- In excess of 20,000 individual seabirds during the breeding season including:
  - **Razorbill** representing 2% of the Great Britain population;
  - **Common Guillemot** representing 3% of the Great Britain population; and
  - **Black-legged Kittiwake** representing 1% of the Great Britain population.

81. The conservation objectives for the East Caithness Cliffs SPA are:

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

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

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

### North Caithness Cliffs

82. The North Caithness Cliffs SPA includes sea-cliffs and islands at the north coast of the Scottish mainland. It includes a seaward extension that extends approximately 2km into the marine environment to include the seabed, water column and surface. It was designated in 1996 and the marine extension in 2009.

83. It qualifies under Article 4(2) of the Birds Directive due to the regular presence of:

- In excess of 20,000 individual seabirds during the breeding season including:
  - **Razorbill** representing 3% of the Great Britain population;
  - **Common Guillemot** representing 4% of the Great Britain population; and
  - **Black-legged Kittiwake** representing 3% of the Great Britain population.

84. The conservation objectives for the North Caithness Cliffs SPA are:

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

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

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

### *Troup, Pennan and Lion's Heads*

85. The Troup, Pennan and Lion's Heads SPA is a 9km stretch of sea cliffs along the Aberdeenshire coast in Scotland. It includes a seaward extension that extends approximately 2km into the marine environment to include the seabed, water column and surface. It was designated in 1997 and the marine extension in 2009.

86. It qualifies under Article 4(2) of the Birds Directive due to the regular presence of:

- In excess of 20,000 individual seabirds during the breeding season including:
  - **Black-legged Kittiwake** representing 6% of the Great Britain population;
  - **Common Guillemot** representing 4% of the Great Britain population.

87. The conservation objectives for the Troup, Pennan and Lion's Heads SPA are:

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

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

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

### *Buchan Ness to Collieston Coast*

88. The Buchan Ness to Collieston Coast SPA is a stretch of south-east facing cliff in Aberdeenshire, Scotland. It includes a seaward extension that extends approximately 2km into the marine environment to include the seabed, water column and surface. It was designated in 1998 and the marine extension in 2009.

89. It qualifies under Article 4(2) of the Birds Directive due to the regular presence of:

- In excess of 20,000 individual seabirds during the breeding season including:
  - **Common Guillemot** representing 1% of the Great Britain population; and
  - **Black-legged Kittiwake** representing 6% of the Great Britain population.

90. The conservation objectives for the Buchan Ness to Collieston Coast SPA are:

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

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

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

### Farne Islands

91. The Farne Islands SPA is a group of low-lying islands 2-6km off the coast of Northumberland in north-east England. It includes a seaward extension that extends approximately 2km into the marine environment to include the seabed, water column and surface. It was designated in 1996 and the marine extension in 2009.
92. It qualifies under Article 4(2) of the Birds Directive due to the regular presence of:
- In excess of 20,000 individual seabirds during the breeding season including:
    - **Common Guillemot** representing 2% of the biogeographic population; and
    - Seabird assemblage including Black-legged Kittiwake.

93. The conservation objectives for the North Caithness Cliffs SPA are:

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

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

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

### Flamborough and Filey Coast SPA

94. The Flamborough and Filey Coast SPA is a stretch of cliffs running along the Yorkshire coast. It includes a seaward extension that extends approximately 2km into the marine environment to include the seabed, water column and surface. The Flamborough Head and Bempton Cliffs SPA was originally designated in 1993 for its internationally important colony of Kittiwakes. In 2016, the protected area was extended and renamed as the Flamborough and Filey Coast SPA. This extension provided specific protection to another three species, the overall seabird assemblage, and the terrestrial cliff environment of Filey Brigg. The revised SPA also protects the inshore waters around the seabird breeding cliffs, from mean low water to 2km offshore.
95. It qualifies under Article 4(2) of the Birds Directive due to the regular presence of:
- In excess of 20,000 individual breeding seabirds and more than 1% of the biogeographical population of four regularly occurring migratory species;
    - **Black-legged Kittiwake** (2% North Atlantic);
    - **Northern Gannet** (2.6% North Atlantic);
    - **Common Guillemot** (15.6% North Atlantic);
    - **Razorbill** (2.3% North Atlantic); and
    - **Seabird assemblage** including over 2,000 individual **Northern Fulmar**

96. The conservation objectives for the Flamborough and Filey Coast SPA are:

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

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

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

### *Hoy SPA*

97. Hoy is a mountainous island at the south-western end of the Orkney archipelago. Hoy SPA covers the northern and western two-thirds of Hoy island, which is formed of Old Red Sandstone and contains Orkney’s highest hills, and adjacent coastal waters. The SPA supports an extremely diverse mixture of mire, heath and alpine vegetation and Britain’s most northerly native woodland. These upland areas and the high sea cliffs at the coast support an important assemblage of moorland breeding birds and breeding seabirds.

98. It was designated in December 2000 with a marine extension on 25 September 2009 and qualifies under Article 4(2) of the Birds Directive by regularly supporting 120,000 seabirds including nationally important populations of the following species:

- **Atlantic puffin** (3,500 pairs, 0.7% of the GB population);
- **Black-Legged Kittiwake** (3,000 pairs, 0.6% of the GB population);
- **Arctic Skua** (59 pairs, 2% of the GB population);
- **Northern Fulmar** (35,000 pairs, 6% of the GB population);
- **Great Black-Backed Gull** (570 pairs, 3% of the GB population);
- **Common Guillemot** (13,400 pairs, 2% of the GB population).

99. The conservation objectives for Hoy SPA are:

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

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

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

### *Rousay*

100. Rousay is an island off the north-east of Orkney. The SPA consists of sea cliffs and areas of maritime heath and grassland in the northwest and northeast of the island.

101. It was designated in February 2000 with a marine extension in 2009 and qualifies under article 4(1) and 4(2) of the Birds Directive by regularly supporting 30,000 seabirds including nationally important populations of the following species:

- **Arctic Tern** (790 pairs, 2% of the GB population),
- **Arctic Skua** (130 pairs; 4% of the GB population),

- **Black-legged Kittiwake** (4,900 pairs; 1% of the GB population),
- **Common Guillemot** (10,600 individuals, 1% of the GB population),
- **Northern Fulmar** (1,240 pairs, 0.2% of GB population).

102. The conservation objectives for Rousay SPA are:

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

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

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

### **Proximity of Marine Protected Areas**

#### **Outer Firth of Forth and St Andrews Bay Complex SPA**

103. The Outer Firth of Forth and St Andrews Bay Complex SPA is a large estuarine and marine site consisting of the adjacent Firth of Forth and Tay. It attracts one of the largest and most diverse marine bird concentrations in Scotland. It complements adjacent SPAs including the Forth Islands SPA.

104. It was designated in 2020 and qualifies under Article 4(2) of the Birds Directive due to the regular presence of:

- Migratory species including:
  - **Northern Gannet** (*Morus bassanus*), representing 1.4% of biogeographical population and 2.7% of the Great Britain population.
- In excess of 20,000 individual seabirds during the breeding season including:
  - **Atlantic Puffin** (*Fratercula arctica*) representing 5.3% of the Great Britain population,
  - **Black-legged Kittiwake** (*Rissa tridactyla*) representing 1.6% of the Great Britain population and;
  - More than 2,000 individual **Common Guillemots** (*Uria aalge*).
- In excess of 20,000 individual seabirds during the non-breeding season including more than 2,000 individual **Common Guillemot**, **Black-legged Kittiwake**, and **Razorbill** (*Alca torda*).

105. The draft conservation objectives for the Outer Firth of Forth and St Andrews Bay Complex SPA are:

*“To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.*

*To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:*

- *The populations of qualifying features are viable components of the site.*

- *The distributions of the qualifying features throughout the site are maintained by avoiding significant disturbance of the species.*
- *The supporting habitats and processes relevant to the qualifying features and their prey/food resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.”*

106. Black-legged Kittiwake and other species are considered to be in an unfavourable condition and therefore there is an overarching ‘restore’ objective for the site. Should plans or projects compromise the ability of the unfavourable qualifying features to recover (e.g. result in a further decline or accelerate the rate of decline, or prevent a recovery from occurring), then the Outer Firth of Forth and St Andrews Bay Complex SPA will not make an appropriate contribution to achieving Favourable Conservation Status (FCS) across the Atlantic Biogeographic Region.

## Appendix 2

### RSPB Scotland commentary on the Applicant's proposed compensation measures

1. The fundamental issues with the Applicant's assessment, along with the presentation of the outputs of the modelling of population scale impacts, in our view mean the appropriate assessment is inadequate, and therefore insufficient for the robust consideration required to enable a proper understanding of all potential adverse effects of the Application. Whilst we appreciate the Applicant may provide more information (and we reserve the right to review our comments and concerns in light of it) unless the Applicant resolves these fundamental issues, in our view the assessment currently provided is not fit for purpose and therefore the full extent of the compensation measures required cannot be calculated.

#### RSPB Scotland approach to evaluating compensation measures

2. In short - it is vital that details and evidence are provided to enable confidence ecologically, financially and legally, in the compensation proposals and such information must be available for review by all Interested parties. This section sets out RSPB Scotland's approach to evaluating compensation measures. It includes our general approach to assessing compensation proposals and the level of detail we consider is required in order to evaluate compensation proposals as part of the Application's determination, before drawing out some general issues raised by the Applicant's proposals. We have set it out under the following headings:
  - RSPB Scotland's approach to assessing compensation proposals;
  - What level of detail is required on proposed compensation measures?
  - Generic issues raised by the Applicant's compensation proposals:
    - Lack of specific proposals and locations for compensation measures
    - Scale of compensation
    - Lead-in times for compensation
    - Lifetime of compensation in relation to damage
    - Environmental assessment of the proposed compensation measures.

#### RSPB Scotland's approach to assessing compensation proposals

3. Set out in Table 1 below is the key criteria and requirements from the EC guidance<sup>1</sup> on compensatory measures, along with additional commentary based on RSPB Scotland's experience of the principles that should be applied when assessing compensatory measures.

EC criteria	EC guidance summary (emphasis added)	RSPB Scotland additional commentary
Targeted	Measures should be the <b>most appropriate to the impact predicted and focused on objectives and targets addressing the Natura 2000 elements affected.</b> Must <b>refer to structural and functional aspects of site integrity and habitats/species affected.</b> <b>Must consist of ecological measures:</b> payments to individuals/funds are not appropriate.	Clear objectives and success criteria must be established for the compensation measures. Must address the ecological functions and processes required by impacted species/habitat. Requires shared understanding and agreement on what the impacts are i.e. need to agree nature, magnitude including that they will continue for as long as the project's impacts. This includes the time likely to be required for the SPAs to recover from those impacts in the case of proposals that are in place for a specified time period.  This is in order to define objectives for compensation measures and to set out the

		success criteria to determine whether those objectives have been/are being achieved.
<b>Effective</b>	<p><b>Based on best scientific knowledge available alongside specific investigations for the location where the measures will be implemented.</b> Must be <b>feasible and operational in reinstating the conditions needed to ensure the overall coherence</b> of the Natura 2000 network.</p> <p><b>Measures where no reasonable guarantee of success should not be considered.</b> The likely success of the compensation scheme should influence final approval of the plan or project in line with the prevention principle.</p> <p><b>The most effective option, with the greatest chance of success, must be chosen.</b></p> <p><b>Detailed monitoring required</b> to ensure long-term effectiveness with remediation provisions if shown to be less effective.</p>	<p>Scientific evaluation of proposed measures must be carried out before consent is granted to avoid agreeing to measures that is/are not effective or technically feasible. This should include appropriate baseline survey and assessment. Compensation must address the impacted SPAs features to ensure overall coherence of the network for that feature is maintained. Substitution is not acceptable.</p> <p>Must be clearly defined timescales for delivery and measuring success (See success criteria under Targeted above).</p> <p>Monitoring must directly relate to the target species and the relevant ecological functions and processes.</p> <p>The compensation measures should be provided in perpetuity in line with obligations to ensure the overall coherence of the UK Site Network is maintained.</p> <p>Where it is not possible to devise compensatory measures to offset the adverse effects on site integrity, the project should not proceed.</p>
<b>Technical feasibility</b>	<b>Design must follow scientific criteria and evaluation</b> in line with best scientific knowledge and take into account the specific requirements of the ecological features to be reinstated.	See <b>Effective</b> above.
<b>Extent</b>	<p>Extent required <b>directly related to:</b></p> <ul style="list-style-type: none"> <li>• the <b>quantitative and qualitative aspects inherent to the elements of integrity likely to be impaired</b></li> <li>• <b>estimated effectiveness of the measure(s)</b></li> </ul> <p>Therefore, ratios best set on a case-by-case basis. Ratios should generally be well above 1:1. Ratios of 1:1 or below only considered when shown measures will be fully effective in reinstating structure and functionality in a short period of time.</p>	<p>Based on an assessment of the necessary ecological requirements to restore species' populations and the related habitat structure and functions identified in the compensation objectives. Determining the minimum appropriate quantity will require an understanding of the quality of the compensation measures and how effective they will be in reinstating the required structures and functions. Any identified uncertainty in success should be factored in to increased ratios. Ratios need to be used where they make ecological sense and will help secure a successful outcome by providing more of something. Simply multiplying capacity to address uncertainty risks giving a false level of confidence.</p> <p>If there is no reasonable guarantee of success that measure should not be considered (see <b>Effective</b> under EC criteria).</p>
<b>Location</b>	<p><b>Located in areas where they will be most effective</b> in maintaining overall coherence of the Natura 2000 network.</p> <p>Pre-conditions to be met include:</p> <ul style="list-style-type: none"> <li>• <b>must be within same range/ migration route/wintering areas for bird</b></li> </ul>	<p>While the preference is for compensation measures as geographically close to the location of the damage, it is important to consider whether or not the compensation measures will be subject to pressures impacting their efficacy in that location e.g. prey availability, disturbance, and/or other impacts from the</p>

	<p><b>species and provide functions comparable those justifying selection of original site esp. geographical distribution;</b></p> <ul style="list-style-type: none"> <li><b>• must have/be able to develop the ecological structure and functions required by the relevant species (or habitat)</b></li> <li><b>• must not jeopardise integrity of any other Natura 2000 site.</b></li> </ul> <p>Spatial search hierarchy starting as close as possible to the impacted Natura 2000 site and working out from there.</p>	<p>same or similar developments such as collision risk or displacement due to offshore wind farms. Therefore, compensation measures should be located so as to maximise proximity while minimising external pressures that may reduce likelihood of success.</p> <p>Compensation measures proposed to benefit SPA features must not result in damage to the integrity of any other SPA, SAC or Ramsar site and their features.</p>
<b>Timing</b>	<p>Case by case approach but <b>must provide continuity in the ecological processes essential to maintain the structure and functions that contribute to the Natura 2000 network coherence.</b></p> <p>Requires <b>tight co-ordination between implementation of the plan or project and the compensation measures.</b></p> <p>Factors to consider include:</p> <ul style="list-style-type: none"> <li><b>• no irreversible damage to the site before compensation in place</b></li> <li><b>• compensation operational at the time damage occurs.</b> If not possible, over-compensation required</li> <li><b>• time lags only admissible if will not compromise objective of “no net loss” to coherence of Natura 2000 network;</b></li> <li>• May be possible to scale down in time depending on whether the negative effects are expected to arise in short, medium or long term.</li> </ul> <p><b>All technical, legal or financial provisions must be completed before plan or project implementation starts</b> to prevent unforeseen delays that compromise effective compensation measures.</p>	<p>Compensation measures should be fully functional before any damage occurs to ensure the overall coherence of the UK Site Network is protected. This requires careful alignment of the timelines for implementing the plan or project and the compensation measures.</p> <p>Suggested time lags in delivering fully functional compensation will need to be carefully considered and can only be accepted where this will not compromise the continuity of essential ecological processes,</p> <p>Any effect of delay should be factored into the design and additional compensation measures provided (see also <b>Extent</b> above).</p>
<b>Long-term implementation</b>	<p><b>Legal and financial security required for long-term implementation and for protection, monitoring and maintenance of sites to be secured before impacts occur.</b></p>	<p>Legal rights to secure and implement the compensation measures must be in place prior to consent being granted.</p> <p>And robust financial guarantees are required to fund implementation, monitoring and any necessary remediation measures.</p>

Table 1: Criteria for designing compensatory measures

## RSPB Scotland's response to specific proposals

4. Compensation proposals are put forward for Kittiwake, Gannet, Guillemot and Puffin on a 'without prejudice' basis

### Strategic Compensation

5. The applicant's preferred option is to utilise the developing strategic compensation approach via the Scottish Marine Recovery Fund. We welcome this approach and encourage the developer to use this route where measures will be more strategic, comprehensive, and because of this potentially more successful.
6. The approach sets out 4 different delivery pathways for compensation from strategic through to project level. The prioritised pathways are useful, and we would support this approach that gives priority to strategic compensation. It may be the case that depending upon the type of compensation required a combination of pathways would be required. However, we would support the priority of the strategic approach as being the starting point and the mechanism by which most compensation will be targeted.

### Kittiwake

7. Mammalian predator eradication is also suggested. However, development of an existing program is suggested as being more beneficial than individual project- based proposals. Reference to mink control is referred to and we understand further research and discussions are taking place on this measure.
8. We would agree with the conclusion and commentary provided by NatureScot that Kittiwake hammocks are not an appropriate measure as nesting sites are not a limiting factor for Kittiwake in Scotland.

### Gannet

9. Potential for reducing disturbance at Gannet colonies is referred to as a potential project measure. However, we would agree with the conclusion that given the limited number and remote location of colonies this is unlikely to work on a significant, larger scale basis.
10. Bycatch mitigation is also referred to with the potential for collaborative approaches with other developers and this is welcomed.

### Guillemot

11. Both drainage measures and reduction of disturbance at colonies are referenced for Guillemot. The commentary notes that there is some evidence of this species being negatively affected by recreational activity. It is suggested that this provides ecological evidence for the disturbance threat that compensation measures including path diversions,

signage, and warden coverage measures are intended to address. Discussions on potential collaboration have been held, again this is welcomed.

12. Mammalian predator management and eradication are also referred to. This approach is like the approach for the species mentioned above.

### **Puffin**

13. A key measure for this species is the restoration or maintenance of breeding sites. This includes the removal of vegetation that restricts access to the nesting burrows of puffins, which has, for example, allowed the recovery of puffin populations in the Forth Islands. Consequently, it is considered that there is ecological evidence for this measure, and existing guidelines for habitat restoration and vegetation removal are available. This measure is thus viewed as technically feasible. Again, we view it as positive that collaborative discussions with other developers have taken place.

### **Summary**

14. Several options are put forward regarding predator eradication and reducing disturbance measures for several species. The measures proposed are regarded as technically feasible. However, they may require the agreement of third-party landowners and the co-operation of other groups, such as fishing operators regarding by-catch for instance. As mentioned above, the measures are generic rather than site-based proposals that have been subject to some level of investigation and demonstration of feasibility.
15. There is no sound methodology and research basis at this time that would allow us to conclude that the measures proposed are appropriate in terms of compensation, and there is limited evidence of engagement with sites where compensation may be carried out. There is reference to relevant SPAs where work could be carried out for which species, and reference to previous studies and projects for various interventions. However, they are generic and not related to what work may be carried out at a particular site. We do not think consent can be granted for the project on an IROPI basis without further, more detailed assessment of these measures on specific, geographic sites. If this is dealt with by granting consent on a conditional basis, we do not consider at this stage that there could be any real confidence that such conditions could be fulfilled.
16. In terms of the timing of any compensation this must be carried out before the impacts of the development occur. It would be unacceptable if both the need for compensation and any provision of it was to be delivered 'post impact occurring'. All compensation measures (whether project specific or strategic) must be delivered ahead of impacts occurring if they are to be ecologically efficacious, especially as many of the proposed measures would take time to plan, secure permissions for, implement and take effect.
17. Currently the measures are not targeted at a specific enough level (on a project level basis), but the applicant's preferred route is via strategic compensation and RSPB Scotland support this approach. However, we do have concerns about the ability of any approach to

compensate for the in-combination measures that would be required to support both Berwick Bank and other projects. This is particularly the case where we are seeing similar measures put forward in the same places by multiple developers to compensate for impacts on Forth area populations of seabirds in particular.

18. Should Scottish Ministers support the proposal based on project level measures, RSPB Scotland would not want to see a situation where consent is granted without a detailed and realistic assessment and associated plan setting how compensation measures (should they be required) would be achieved. We would welcome reference to adaptive management measures and the establishment of a steering group to oversee implementation of compensation measures. RSPB Scotland generally welcome involvement in these groups, alongside NatureScot, although we are unlikely to have the capacity to engage as we might ideally like, given the number of similar requests likely to be made by multiple developers within a similar time frame. For capacity and other reasons, we are currently limiting the extent to which we will engage in compensation discussions outside of a strategic compensation framework for development proposals that are not approaching finalisation.

**Scottish  
Environment  
Protection Agency**

**From:** [Planning.North](#)  
**To:** [MD Marine Renewables](#)  
**Cc:** [Redacted]  
**Subject:** SEPA Response to MS-00011409 / MS-00011410 (SEPA reference PCS-20006695)  
**Date:** 10 September 2025 13:19:58  
**Attachments:** [image.png](#)

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To Whom It May Concern,

MS-00011409 / MS-00011410

Aspen offshore wind farm, approximately 84km east of Peterhead – EIA Section 36 consent and Marine Licence Applications

Thank you for the above consultation. Section 1.2.3, Volume 1 of the submitted Offshore Environmental Impact Assessment Report states that "The Applicant is not seeking deemed planning permission as part of the Section 36 consent application. Instead, a separate application for onshore infrastructure will be submitted under the Town and Country Planning (Scotland) Act 1997, which is anticipated to be submitted in early 2026. As noted above in paragraph 1.2, a dedicated Onshore EIAR is being prepared to describe the onshore components of the Project, landward of MLWS, along with an assessment of the likely significant effects. That report will support the onshore consent and licence applications.". Therefore, based on the information provided, it appears that this application falls below the thresholds that SEPA would provide site specific advice. Please refer to our standing advice and other guidance that is available on our [website](#), along with our standing advice for the Department for Business, Energy and Industrial Strategy and Marine Scotland on marine consultations, which is available [here](#).

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

from  
Nina Caudrey  
Senior Planning Officer

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Dh'fhaodadh gum bi am fiosrachadh sa phost-d seo agus ceanglachan sam bith a tha na chois diomhair, agus cha bu chòir am fiosrachadh a bhith air a chleachdadh le neach sam bith ach an luchd-faighinn a bha còir am fiosrachadh fhaighinn. Chan fhaod neach sam bith eile cothrom fhaighinn air an fhiosrachadh a tha sa phost-d no a tha an cois a' phuist-d, chan fhaod iad lethbhreac a dhèanamh dheth no a chleachdadh arithist. Mura h-ann dhuibhse a tha am post-d seo, feuch gun inns sibh dhuinn sa bhad le bhith cur post-d gu [postmaster@sepa.org.uk](mailto:postmaster@sepa.org.uk). Togalach Aonghais Mhic a' Ghobhainn, 6 Craobhruid Parklands, Eurocentral, Baile a' Chuilinn, Siorrachd Lannraig a Tuath, ML1 4WQ. Faodar conaltradh còmhla ri SEPA a sgrùdadh no a chlàradh no a sgaoileadh gus obrachadh èifeachdach an t-siostaim a ghlèidheadh agus airson adhbharan laghail eile.

# Scottish Fishermen's Federation



Our Ref: OB MS-00011410 and MS-00011409 Aspen OWF EIA/0025/001

Your Ref: MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – EIA Section 36 consent and Marine Licence Applications

13<sup>th</sup> November 2025

Amy Woodward  
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**SFF Response to MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – EIA Section 36 consent and Marine Licence Applications**

On behalf of the Scottish Fishermen's Federation (SFF), I write in response to the statutory consultation on the Section 36 Consent and associated Marine Licence Applications submitted by Cerulean Winds Aspen Project Limited, pursuant to the Electricity Act 1989, the Marine (Scotland) Act 2010, the Marine and Coastal Access Act 2009, and the relevant Environmental Impact Assessment Regulations for the proposed Aspen Offshore Wind Farm (Aspen OWF).

The SFF represents the 450 plus 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 Producer's 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.

The SFF acknowledges the strategic importance of offshore renewable energy in meeting Scotland's climate and energy targets. However, following a review of the submitted application and supporting documentation, we wish to raise the following concerns and recommendations on behalf of our members:

**INTOG-Specific Impacts  
Targeted Oil and Gas (TOG)**

Please consider this response as a comprehensive and unequivocal objection to the planning application for the proposed Aspen Offshore Wind Farm.

Acknowledging the need for the energy transition, the above-mentioned organisations who represent the 450 plus fishing vessels fully acknowledge the need to decarbonise the Oil and gas sector as part of the North Sea Transition Deal (10% in 2025, 25% in 2027 and 50% in 2030, while reducing carbon emissions to zero by 2050).

Members:

Anglo Scottish Fishermen's Association · Fife Fishermen's Association · Fishing Vessel Agents & Owners Association (Scotland) Ltd · Mallaig & North-West Fishermen's Association Ltd · Orkney Fisheries Association · Scottish Pelagic Fishermen's Association Ltd · The Scottish White Fish Producers' Association Ltd · Shetland Fishermen's Association

VAT Reg No: 605 096 748

However, the construction, operation, and maintenance of large-scale offshore wind farms to achieve these goals and the CO2 emissions associated with these activities seem to contradict the rationale around decarbonisation in the first instance. Given that there is no guidance document for INTOG, there are two very bold and frequently used statements in the National Marine Plan and the Sectoral Marine Plan for Offshore Wind Energy.

Development can only be progressed if:

- No alternative plan/sites available
- Imperative reasons of overriding public interest (IROPI) that require development to proceed.

Addressing IROPI first off, construction of large-scale Offshore Wind Farms to decarbonise Oil and Gas Energy assets is NOT in the public interests as there is a clear alternative with a considerably less carbon footprint. There is tried and tested technology of cable laying, using electricity from the grid to decarbonise the Oil and Gas Sector seems to be the common-sense approach, with the least financial, technological, and environmental risk.

Two Hundred and Twenty-Seven million pounds were paid out to offshore wind developers during 2022 as constraint payments, this has seen an increase of 60% on the previous year as Beatrice and Moray East are now fully operational. This figure will only increase as further developments come on stream<sup>1 2 3</sup>. According to the UK Government "Clean power 2030 Action Plan" the total UK figure for constraint payments could potentially reach £8bn by 2030. All this latent energy could be utilised to decarbonise the Oil and Gas assets that are not due to be decommissioned and would be a continuous supply of electricity as opposed to an intermittent one.

The spatial squeeze in the marine environment is well documented, as is food security, therefore the fishing industry are deeply concerned about the use of marine areas for Offshore Windfarms when there is a clear and risk-free alternative. The SFF & constituent member associations object to this application.

The Aspen OWF forms part of the Innovation and Targeted Oil and Gas (INTOG) leasing round, which introduces a distinct planning and infrastructure model compared to conventional offshore wind developments. We understand that INTOG projects are designed to supply power directly to oil and gas platforms, requiring dual-purpose cable infrastructure and proximity to existing O&G assets. However, this configuration often results in spatial footprints, cable routing, and anchoring systems that increase the risk of gear conflict and displacement for fishing vessels.

Furthermore, the cumulative impact of multiple INTOG projects on traditional fishing grounds has not yet been fully assessed within the Sectoral Marine Plan framework. SFF is concerned that the current marine planning and consenting processes do not adequately safeguard fisheries access or mitigate spatial pressures arising from INTOG-specific development patterns. We therefore request that Scottish Ministers ensure fisheries are meaningfully integrated into strategic planning and cumulative impact assessments for all INTOG-related developments.

### **Jurisdictional Coordination and Regulatory Structure**

We note that part of the proposed offshore transmission infrastructure lies beyond the 12 nautical mile limit. As acknowledged in both the applicant's cover letter<sup>4</sup> and application documentation<sup>5</sup>, this may require

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<sup>1</sup> SeaGreen Wind Farm (2023): <https://www.seagreenwindenergy.com/>

<sup>2</sup> Neart na Gaoithe (NnG) Wind Farm (2024): <https://nngoffshorewind.com/>

<sup>3</sup> Moray West Wind Farm (2025): <https://www.moraywest.com/>

<sup>4</sup> Cerulean Winds Aspen Project Limited (2025). Cover Letter: Application for Section 36 Consent and Marine Licences – Aspen Floating Offshore Wind Farm. Submitted to the Scottish Government Marine Directorate Licensing Operations Team, 26 August 2025

<sup>5</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 1, Chapter 2: Policy and Legislative Context. Section 2.6 Consenting Process. Prepared by GoBe Consultants Ltd

additional consent under the Marine and Coastal Access Act 2009, subject to the Marine Directorate's determination. This application therefore comprises three interrelated regulatory components:

1. Section 36 Consent under the Electricity Act 1989 for the offshore generating station.
2. A Marine Licence under the Marine (Scotland) Act 2010 for works within 12 nautical miles.
3. A potential Marine Licence under the Marine and Coastal Access Act 2009 for infrastructure beyond 12 nautical miles.

While this multi-tiered structure is typical for offshore wind developments, the SFF is concerned about the jurisdictional overlap and the practical coordination between regimes. While the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009 provide robust statutory frameworks for marine licensing and planning, the SFF notes that practical coordination between these regimes particularly where infrastructure spans the 12 nautical mile boundary may present challenges in implementation. We therefore recommend that the consenting process explicitly address cross-jurisdictional coordination to ensure transparency, legal certainty, and equitable outcomes for all marine stakeholders.

### **Habitats Regulations and Derogation Case**

The SFF acknowledges the submission of the Habitats Regulations Appraisal (HRA) and the Report to Inform Appropriate Assessment (RIAA), which conclude no Adverse Effect on Site Integrity (AEoSI) for any European-designated sites. However, the inclusion of a "without prejudice" derogation case indicates residual uncertainty. Should Scottish Ministers reach a different conclusion, compensatory measures may be required under the Habitats Regulations that will include Gannet bycatch mitigation in Scottish waters. These could introduce new spatial management constraints or affect access to fishing grounds, particularly if spatial offsets or habitat enhancement areas overlap with existing fishing activity. The SFF therefore recommends that any compensatory measures proposed under a derogation scenario be:

- Not fisheries related. SFF reiterate that we oppose any nature compensation measures to offset the environmental damage from offshore wind developments that impose any types of restrictions on commercial fisheries including Gannet bycatch mitigation in Scottish waters. Once again, it is unconscionable that the fishing industry should be expected to pay the price for the environmental harms of the offshore wind industry.
- Subject to full stakeholder consultation, including with affected fisheries interests.
- Clearly assessed and transparently disclosed, particularly in terms of spatial implications for fishing access and marine resource use.

### **Legislative and Policy Framework**

The SFF has reviewed the Legislation and Policy chapter<sup>6</sup> and acknowledges the inclusion of several key environmental and planning frameworks. However, we note that certain international and sector-specific instruments of direct relevance to the fishing industry are omitted. We ask that this be supplemented to include:

- The Marine Strategy Framework Directive (MSFD)<sup>7</sup>. Given its role in assessing Good Environmental Status (GES) of marine waters, including Descriptor 3 (commercial fish and shellfish) and Descriptor 6 (sea-floor integrity), its exclusion is concerning. These descriptors are directly relevant to the ecological and economic sustainability of fisheries and should be explicitly considered in the EIA.
- International instruments such as the United Nations Convention on the Law of the Sea (UNCLOS)<sup>8</sup> and the International Covenant on Economic, Social and Cultural Rights (ICESCR)<sup>9</sup>.

Inclusion of these frameworks would provide a more complete legislative context and demonstrate the developer's commitment to environmental stewardship and socio-economic equity. It would also align the

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<sup>6</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 1, Chapter 2: Policy and Legislative Context. Prepared by GoBe Consultants Ltd.

<sup>7</sup> Marine Strategy Framework Directive (2008/56/EC)

<sup>8</sup> UNCLOS: [https://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf)

<sup>9</sup> ICESCR: <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-economic-social-and-cultural-rights>

assessment with broader marine governance principles and ensure that fisheries interests are adequately considered in spatial planning and impact mitigation.

### **Scale and Spatial Footprint of Development<sup>10</sup>**

Aspen is among the larger INTOG developments proposed, both in terms of site area and infrastructure density. The project spans approximately 333 km<sup>2</sup>,<sup>11</sup> and forms part of Cerulean Winds' three-site North Sea Renewables Grid (NSRG), which collectively aims to deliver over 3 GW of renewable power to decarbonise oil and gas operations. The Aspen site alone includes 72 floating wind turbines, each potentially anchored by up to six mooring lines, resulting in 432 mooring lines<sup>12</sup>. Depending on the anchoring solution selected, this could involve up to 324 piled anchors or 216 suction anchors. The total seabed footprint for suction anchors may reach up to 38,232 m<sup>2</sup>, contributing to a cumulative seabed footprint in the tens of millions of square metres<sup>13</sup>. Additional seabed disturbance arises from scour protection (up to 600 m<sup>2</sup> per anchor, totalling 194,400 m<sup>2</sup>), inter-array cables (up to 5,280,000 m<sup>2</sup>), and export cables (up to 12,400,000 m<sup>2</sup>), with further impacts from seabed preparation. The cable infrastructure comprises 300 km of inter-array cables and up to four export cables, each extending up to 155 km, with associated scour and cable protection<sup>14</sup>. The mooring systems introduce excursion radii of up to 1200 m per turbine, further expanding the spatial influence of the development beyond the nominal site boundary. This level of infrastructure density and seabed disturbance poses significant risks to mobile fishing operations, particularly in terms of gear entanglement, displacement, and long-term access exclusion. SFF urges Scottish Ministers to fully account for the spatial scale and operational footprint of Aspen in cumulative impact assessments and marine spatial planning processes.

### **Cable Crossings, Construction Activity, and Long-Term Seabed Interaction**

The Aspen Offshore Wind Farm anticipates up to 10 cable crossings per export cable, with protection measures such as rock berms and separation layers used to stabilise and shield crossing points<sup>15</sup>. These structures introduce additional hard substrate and seabed alteration, which may affect fishing gear compatibility and benthic habitats. The construction phase alone is expected to generate over 1,400 vessel return trips, with 375 trips per year during operations and maintenance<sup>16</sup>. SFF is concerned that the intensity of construction and maintenance operations, combined with permanent seabed infrastructure, will compound spatial pressures and operational risks for fishing vessels. SFF therefore requests that:

- All cable crossing locations and protection measures be clearly communicated to the fishing industry in advance, including coordinates in WGS 84 datum for inclusion in Horizon Watch and Kingfisher Bulletins.
- The developer commits to post-construction over-trawl surveys to verify seabed clearance and gear compatibility.
- A fisheries-specific risk assessment be undertaken for cable crossings and vessel traffic, with mitigation measures co-developed with affected fleets.
- Any permanent seabed structures incompatible with fishing gear be subject to compensation agreements for affected fishers.

### **Infrastructure Retention and Long-Term Seabed Occupation**

Project documentation confirms that up to 25% of the total cable length may require surface protection, including rock berms, concrete mattresses, and frond mattresses<sup>17</sup>. These structures are incompatible with bottom-contact fishing gear and will result in permanent exclusion zones for demersal fisheries. Additionally,

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<sup>10</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 1, Chapter 3: Project Description

<sup>11</sup> Ibid Section 3.5, Table 3.1

<sup>12</sup> Ibid Table 3.3

<sup>13</sup> Ibid Table 3.5, Table 3.6

<sup>14</sup> Ibid Table 3.8, Table 3.12

<sup>15</sup> Ibid Table 3.13

<sup>16</sup> Ibid Table 3.19, Table 3.21

<sup>17</sup> Ibid Section 3.5, Table 3.15

the project documentation confirms that some anchors, cables, and scour protection may be left in situ if full removal is deemed impractical or environmentally detrimental.

While repowering is not assessed in the current EIA, the lease allows for up to 50 years of seabed occupation, significantly extending the potential duration of spatial exclusion beyond the 35-year operational life.

SFF is concerned that long-term retention of infrastructure may erode generational fishing rights and reduce access to traditional grounds. We recommend that all retention decisions be transparently justified and subject to consultation with affected fisheries stakeholders. Additionally, strategic compensation should be considered for the affected fishermen in the form of a commercial fisheries compensation fund.

### **Cable Protection – Seabed Alteration and Gear Risk**

Where cable burial is not feasible, Aspen proposes extensive engineered protection requiring measures such as rock berms, concrete mattresses, grout bags, and frond mattresses. The combined seabed footprint is up to 690,000 m<sup>2</sup>, with a volume exceeding 1.38 million m<sup>3</sup> across inter-array and export cables<sup>18</sup>. These structures significantly alter seabed morphology and pose high snagging risks for bottom-contact gear, particularly demersal trawls and static gear.

SFF opposes the use of concrete mattresses and similar structures in open fishing grounds. We support the use of rock protection with industry-standard rock size (1"–5") and a 1:3 slope profile, followed by over-trawl sweeping and long-term monitoring. We recommend:

- Optimising burial depth to reduce reliance on external protection.
- Providing clear spatial justification for protection volumes and locations.
- Communicating all cable routes, burial depths, and protection measures through a structured process:
  - Initial notification via Horizon Watch bulletin
  - Followed by Notices to Mariners and Notices to Fishermen (minimum 14 days in advance).
  - Updates to UKHO Admiralty chart updates
  - Final dissemination of as-laid information via KIS-ORCA

### **Decommissioning – Infrastructure Removal and Long-Term Risks**

The Aspen Offshore Wind Farm proposes that anchors, cables, and scour protection may be left in situ if full removal is deemed environmentally detrimental or impractical<sup>19</sup>. The SFF maintains a clear position: all anchors, mooring components, and concrete mattresses should be fully removed, particularly in areas of active fishing. These structures pose long-term snagging risks and are incompatible with safe bottom-contact gear operations. SFF recommends that the applicant:

- Commit to full removal of all anchors, mooring components, and concrete mattresses in fishing areas.
- Engage fisheries stakeholders in the development of decommissioning plans.
- Verify and document seabed clearance through over-trawl sweep or equivalent method.
- Share detailed coordinates of any retained infrastructure using WGS 84 datum, and ensure inclusion in Admiralty charts, Notices to Mariners, and the Horizon Watch bulletin.

### **Cumulative Effects on Commercial Fisheries**

The Environmental Impact Assessment (EIA) for the Aspen Offshore Wind Farm acknowledges the potential for cumulative effects on commercial fisheries. These may arise in combination with other offshore wind farms and marine activities. However, several concerns arise from the way these cumulative effects are assessed and mitigated.

#### **1. Significance of Cumulative Effects**

The EIA identifies multiple cumulative impacts on commercial fisheries as being of moderate adverse significance, including:

- Reduction in access to or exclusion from established fishing grounds;

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<sup>18</sup> Ibid

<sup>19</sup> Ibid Section 3.8 – Decommissioning

- Displacement leading to gear conflict and increased pressure on adjacent grounds;
- Disturbance of commercially important fish and shellfish resources.

These effects are considered significant in EIA terms<sup>20</sup> (Volume 2, Chapter 13, Tables 13.33–13.35), particularly for demersal otter trawl, scallop dredge, and potting fleets. The consistent classification of these effects as moderate across multiple receptor groups suggests a substantial cumulative burden on the fishing industry that should seriously be taken into consideration at determination stage.

## 2. Lack of Additional Cumulative Mitigation

Despite the recognition of significant cumulative effects, the EIA does not propose any additional mitigation beyond project-level commitments. This is concerning given the scale of overlapping developments in the region, including INTOG and ScotWind projects. The reliance on project-specific Fisheries Mitigation, Monitoring and Communication Plans (FMMCPs) may not be sufficient to address regional-scale spatial squeeze or displacement pressures. Therefore, strategic compensation should be considered for the affected fishermen in the form of a commercial fisheries compensation fund.

## 3. Monitoring and Adaptive Management

While the EIA proposes regional monitoring and participation in a Regional Commercial Fisheries Working Group, these measures are not yet standardised or secured across all projects. Without a coordinated and enforceable framework, there is a risk that cumulative effects will not be adequately tracked or mitigated over time. We recommend that a regional cumulative effects mitigation strategy be developed and the significance of cumulative effects be re-evaluated in light of spatial overlap, temporal stacking, and the limited availability of alternative fishing grounds.

### Design Envelope Flexibility and Worst-case Scenario

The EIA for the Aspen Offshore Wind Farm adopts a design envelope approach, incorporating a worst-case scenario that includes an increase in turbine tip height from 283 m to 310 m and an increase in the number of turbines from 67 to 72<sup>21</sup>. While this flexibility is methodologically justified to accommodate engineering and supply chain uncertainties, it introduces significant concerns for the commercial fishing industry.

#### 1. Spatial Footprint and Exclusion Zones

The worst-case scenario assumes:

- Up to 72 floating turbines with catenary mooring lines extending up to 1,200 m from each foundation
- A mooring spread that could occupy up to 98% of the Aspen Array Area (333 km<sup>2</sup>)<sup>22</sup>
- Safety zones of 500 m around construction and maintenance activities<sup>23</sup>

This results in a de facto exclusion of fishing activity from the entire array area during construction and likely throughout the 35-year operational phase. The EIA acknowledges that while fishing is not legally prohibited, it is “unlikely to be practically feasible”.<sup>24</sup>

#### 2. Implications for Fisheries

The increased spatial footprint and infrastructure density:

- Complicate gear deployment and tow path planning, particularly for demersal otter trawl and nephrops fisheries.

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<sup>20</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 13, Tables 13.33–13.35

<sup>21</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 1, Chapter 4, Section 4.5 – “Parameter Updates Since Scoping”

<sup>22</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 13, Table 13.10 – “Worst-case Design Scenarios with Respect to the Commercial Fisheries Assessment”

<sup>23</sup> Ibid

<sup>24</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 13, Section 13.7 – Impact 1: Reduction in Access to, or Exclusion From Established Fishing Grounds Within the Aspen Array Area

- Increase the risk of gear conflict and displacement, especially where mooring lines and anchors are present in the water column.
- Reduce access to traditional fishing grounds, with the EIA identifying a major adverse effect on the UK demersal otter trawl fleet prior to mitigation.

### **3. Mitigation and Residual Effects**

The proposed Obstacle Free Zones (OFZs) cover only 12% of the array area and are intended to preserve access to key nephrops grounds<sup>25</sup>. While this is a positive step, it is not sufficient to offset the spatial loss experienced by mobile gear fleets. The residual effect is downgraded to minor adverse, but this relies heavily on assumptions about fleet adaptability and the effectiveness of the OFZs.

Importantly, the Scottish Fishermen's Federation (SFF) submitted a counterproposal to expand the OFZ along the western edge of the array. This expansion would serve a dual purpose: (1) enabling full access to historic nephrops and whitefish fishing grounds, and (2) addressing operational safety concerns related to the pipeline located at the southern boundary of the array. Vessels crossing this pipeline must approach as close to perpendicular as possible to minimise gear snagging and ensure trawl door stability—an approach supported by industry guidance<sup>26</sup>. This recommendation has not been addressed in the current mitigation strategy.

Given the scale of spatial exclusion and the reliance on a highly flexible design envelope, it is recommended that a precautionary approach be applied in assessing cumulative spatial pressures, especially where multiple projects adopt similarly expansive envelopes. Additionally, strategic compensation should be considered for the affected fishermen in the form of a commercial fisheries compensation fund.

### **The 'Do-Nothing' Option and Future Baseline**

The EIA addresses the “Do-Nothing” scenario in Section 13.5: Future Baseline Conditions (Volume 2, Chapter 13: Commercial Fisheries), outlining how commercial fisheries might evolve in the absence of the Aspen Offshore Wind Farm. While this section acknowledges several relevant factors such as market dynamics, climate change, and post-Brexit policy shifts there are several limitations that reduce its effectiveness as a comparative baseline:

#### **1. Lack of Quantitative Forecasting**

The future baseline is described qualitatively, without modelling or projecting future fishing effort, spatial use, or economic trends. This limits the ability to meaningfully compare the “Do-Nothing” scenario with the proposed development's impacts.

#### **2. Underestimation of Spatial Pressure**

The assessment notes that displaced effort from other areas (e.g. Dogger Bank SAC, sandeel closures) may increase pressure on the local study area. However, it does not quantify how this might intensify fishing activity in the Aspen OWF footprint if the project were not built.

#### **3. No Fisheries-Specific Scenario Testing**

There is no scenario analysis comparing the “Do-Nothing” case with the project case in terms of spatial access, economic value, or fleet viability. This is a missed opportunity to demonstrate the relative impact of the development on fishing operations.

#### **4. Limited Integration with Cumulative Effects**

Although future pressures are acknowledged, they are not clearly linked to the cumulative effects assessment. This results in an underestimation of baseline stress on fishing grounds and the compounding effects of multiple developments.

SFF recommends that Scottish Ministers require the applicant to strengthen the “Do-Nothing” scenario by incorporating quantitative projections, fisheries-specific scenario testing, and integration with cumulative

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<sup>25</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 13, section 13.7.36

<sup>26</sup> Det Norske Veritas (DNV). DNV-RP-F111: Interference Between Trawl Gear and Pipelines. Recommended Practice, October 2010.

effects. This will ensure a more accurate and policy-relevant comparison of development impacts and safeguard fisheries interests in the decision-making process.

## **Marine and Coastal Processes**

### **1. Suspended Sediment Concentration (SSC) and Seabed Disturbance**

The EIA acknowledges that construction activities such as jet-trenching, dredging, and anchor drilling will generate elevated SSCs, with sediment plumes potentially extending up to 20 km from the source. While these are assessed as short-lived and of low magnitude, the cumulative and additive effects of overlapping sediment plumes from multiple developments (e.g. INTOG, ScotWind) are not fully quantified<sup>27</sup>. This is particularly concerning for sensitive fishing grounds, including nephrops and scallop dredge areas, where sedimentation can affect catch quality and gear efficiency. Notably, no fisheries-specific monitoring is proposed to validate these assumptions or detect unanticipated impacts<sup>28</sup>. Given the sensitivity of nephrops and scallop dredge grounds to sedimentation, SFF recommends a precautionary approach that includes:

- Fisheries-specific monitoring of SSC levels during construction, particularly in nephrops and scallop grounds.
- Implement adaptive management measures if sedimentation exceeds thresholds affecting catch quality or gear efficiency.
- Include sediment plume modelling for cumulative effects across INTOG and ScotWind projects.

### **2. Seabed Morphology and Spoil Mounds**

The EIA confirms that sandwave clearance and cable protection (e.g. rock berms) will alter seabed morphology, especially in the OTC Corridor, which is described as an active sediment transport zone<sup>29</sup>. These changes may interfere with gear deployment and tow paths for mobile gear fleets. The persistence of spoil mounds in low-mobility areas such as the Aspen Array Area could further constrain access and increase operational risk for fishing vessels. To safeguard mobile gear operations, SFF recommends:

- Conduct pre- and post-construction seabed surveys to assess changes in morphology and tow path viability.
- Avoid spoil mound placement in low-mobility areas used by mobile gear fleets.
- Share seabed alteration data with fisheries stakeholders via Horizon Watch and Kingfisher Bulletins.

### **3. Scour and Cable Protection**

The installation of up to 690,000 m<sup>2</sup> of cable protection and 326,000 m<sup>2</sup> of scour protection introduces hard substrates into previously soft-bottom habitats<sup>30</sup>. These features can pose snagging risks for trawlers and potting gear and could alter benthic habitats, potentially affecting the distribution of target species. The EIA does not assess the implications of these changes for fisheries productivity or operational safety.

In particular, Aspen OWF will cross an existing oil and gas pipeline that is actively fished for haddock. Trawlers typically tow along the pipeline route to target this species. The introduction of rock protection over the pipeline crossing could force vessels to deviate from their normal path, increasing the likelihood of crossing at acute angles. This raises the risk of gear snagging and trawl door instability, especially in areas with pipeline spans.

Given the snagging risks and habitat alteration, SFF recommends:

- Avoid hard substrate protection (e.g. concrete mattresses) in active fishing grounds.
- Prioritise full cable burial and use rock protection with industry-standard specifications.
- Assess and disclose implications for benthic habitats and target species distribution.

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<sup>27</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 7, Section 7.7.1–7.7.2.

<sup>28</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 7, Section 7.7 – Proposed Monitoring

<sup>29</sup> Ibid

<sup>30</sup> Ibid Table 7.10

- Considering pipeline crossing safety and trawl gear interaction in final design and mitigation planning.

#### **4. Cumulative Effects Underestimated**

The Cumulative Effects Assessment (CEA) relies heavily on analogues from the Muir Mhòr project and qualitative assessments<sup>31</sup>. Given the density of proposed developments in the region, the lack of quantitative cumulative modelling for SSC, scour, and stratification impacts is a significant gap. This limits the ability to assess regional-scale pressures on fishing grounds and undermines confidence in the residual impact conclusions. To ensure regional-scale pressures are properly assessed, SFF recommends:

- Quantitative cumulative modelling of SSC, scour, and stratification impacts across regional developments.
- Integrate fisheries spatial data into cumulative effects assessments to reflect real-world pressures.

#### **5. No Monitoring Proposed<sup>32</sup>**

The chapter explicitly states that no marine and coastal processes monitoring is proposed, as no significant effects are predicted. This is problematic given the acknowledged uncertainty around floating foundation impacts, particularly on stratification and sediment dynamics. Without monitoring, there is no mechanism to detect or respond to unforeseen effects on fisheries or the marine environment. SFF recommends:

- Establishment of a marine and coastal processes monitoring programme, including sediment dynamics and seabed integrity.
- Inclusion of fisheries representatives in monitoring design and review.
- Public availability of monitoring results and adaptive mitigation commitments.

#### **Electromagnetic Fields (EMF) – Assessment and Fisheries Implications**

The EIA concludes that the significance of EMF impacts on benthic subtidal and intertidal receptors is negligible to minor<sup>33</sup>. This is based on the assumption that cables will be buried where practicable, and that EMF levels typically dissipate within 1 metre of the cable surface<sup>34</sup>. While this is reassuring from a regulatory standpoint, the fishing industry wishes to seek further clarity on cumulative EMF exposure, particularly in areas where multiple cable corridors overlap and where burial is not feasible. Recent studies have shown that species such as lobsters and crabs may exhibit behavioural and developmental responses to EMF exposure, especially during early life stages<sup>35</sup>. Given the increasing density of subsea infrastructure in Scottish waters, a precautionary approach to monitoring and adaptive management is recommended.

To support this, SFF recommends use of the Horizon Watch during the export cable route definition phase. This platform enables fishers particularly from the inshore fleet to provide previously unavailable input on local fishing patterns and sensitivities. Early engagement through Horizon Watch can help identify lesser-known trends and inform route planning to minimise disruption and safeguard fisheries interests.

#### **Scallop Dredge Constraints – OTC Corridor<sup>36</sup>**

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<sup>31</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 7, Section 7.7.5, Table 7.18, and Figure 7.10, Section 7.7.1, Section 7.8

<sup>32</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 7, Section 7.7

<sup>33</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 9, Section 9.7 and Table 9.41;

<sup>34</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 13, Section 13.7 & 13.11

<sup>35</sup> Harsanyi et al. (2022). The Effects of Anthropogenic Electromagnetic Fields (EMF) on the Early Development of Two Commercially Important Crustaceans. SEER Brief <https://tethys.pnnl.gov/summaries/electromagnetic-field-effects-marine-life>

<sup>36</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 13, Section 13.7, Impact 2

The Aspen OWF EIA identifies a moderate adverse impact on scallop dredge fisheries due to the overlap of the OTC Corridor with key scallop grounds in ICES rectangles 43E8 and 42E7. These areas are actively targeted by the UK dredge fleet, with average annual landings of £790,000 from ICES 43E8 alone. The EIA acknowledges that up to 25% of the OTC length may require cable protection, equating to 0.465 km<sup>2</sup> of seabed, and that scallop dredge gear may be unable to operate over these areas due to its penetration depth and snagging and catch contamination risks. Despite this, no scallop-specific mitigation is proposed beyond general commitments in the Fisheries Mitigation, Monitoring and Communication Plan (FMMCP).

SFF recommends that Horizon Watch be used proactively to identify active scallop grounds prior to cable installation. This would help avoid placing rock protection over productive beds, which would otherwise permanently eliminate their viability. Early identification and avoidance would reduce long-term impacts and help safeguard continued access to productive scallop grounds by the dredge fleet.

### **Mooring Lines Impacts on Seabed**

The potential damages to the seabed that the proposed mooring lines will cause has totally been ignored. Our experience from the oil and gas industry's similar floating infrastructures (e.g. floating production storage and offloading (FPSOs) show that mooring lines with contact to the seabed have created extensive scours/crates that will require mechanical back-fill at decommissioning stage. This will damage the marine environment, and its remediation efforts will require rock-dump which will change benthic ecology and introduce invasive non-native species to the area. We need clarity how the mooring line impacts on seabed is prevented and how the licencing authorities will consider this in determination stage. We propose this effect to be noted and taken serious at the determination stage.

### **Nephrops Grounds and Obstacle Free Zones (OFZs)<sup>37</sup>**

The Aspen OWF EIA identifies the western and southeastern boundaries of the array area as locally important nephrops grounds, based on stakeholder engagement and spatial data. In response, the developer has proposed Obstacle Free Zones (OFZs) covering approximately 12% of the array area, which are intended to remain free of moorings, anchors, and floating infrastructure. While this is a step toward maintaining access to key tow paths, however, the proposed OFZ is not enough as it does not cover all of the nephrops grounds. Additionally, the Applicant is aiming to take cables through the OFZ and use it for sheltering during adverse weather conditions and construction phase which make it unfit for purpose therefore cannot reduce the development's residual effect on demersal trawl fleet from moderate/significant to minor/insignificant. . Additionally, the final location of OFZs is subject to post-consent refinement via the Fisheries Mitigation, Monitoring and Communication Plan (FMMCP), which has not yet been agreed with stakeholders (Comments on FMMCP below). Given that SFF has not signed up to FLOWW protocols, we request that any mitigation measures including OFZ design and governance be developed in direct collaboration with Scottish fisheries representatives and reflect national best practice rather than defaulting to FLOWW guidance.

### **Fisheries Mitigation, Monitoring and Communication Plan (FMMCP)**

The SFF notes with concern that the applicant had not fully consulted with us on the proposed Fisheries Mitigation, Monitoring and Communication Plan (FMMCP) in advance of the application. It was shared for our comments on 19<sup>th</sup> August 2025 but was published for consultation as part of the development application package before our comments were taken and considered. This is contrary to the Scottish Government's published guidance, which states:

"Prospective applicants should consult all relevant fisheries stakeholders on the content of the plan throughout the pre-application stage. All efforts should be made to agree the Fisheries Mitigation, Monitoring and Communication Plan with those interests."<sup>38</sup>

The failure to engage with the SFF and other relevant fisheries stakeholders on the FMMCP prior to submission is contrary to the Scottish Government's published guidance, which clearly states that applicants should consult stakeholders and make all efforts to reach agreement. While this may not constitute a formal

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<sup>37</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 13, Section 13.7 (Construction Phase, Impact 1)

<sup>38</sup> Scottish Government (2025). Marine licensing and consenting: offshore renewable energy projects – Mitigation and monitoring plans.

breach of regulation, it undermines the principles of transparency and meaningful stakeholder engagement that the guidance seeks to promote. We request that this procedural shortcoming be formally noted and addressed during the determination process, and that the applicant be required to undertake retrospective consultation and revision of the FMMCP in collaboration with affected fisheries interests.

After reviewing the draft FMMCP, we express concern that the plan lacks clear and binding commitments to address fisheries-related issues. In particular, we believe the proposed Obstacle Free Zone (OFZ) falls short of meeting the expectations of commercial fisheries and requires further enhancements and assurances to be considered fit for purpose. Below are our detailed comments, structured according to the sequence of topics presented in the draft FMMCP.

## **1.2 Purpose of This Document**

**1.2.2** - The SFF notes from subsection 1.2.2 (p12) that one of the objectives of FMMCP is to: *“Set out procedures to manage interactions between the Applicant and the fishing industry, including procedures relating to cooperation agreements and associated payments, to gear loss and gear relocation or removal.”*

We seek clarification on whether the reference to 'gear relocation or removal' within the stated objectives includes compensation for the displacement of mobile fishing gear from the Array Area and Offshore Transmission Corridor (OTC) during both construction and operational phases. If compensation is not currently covered, we propose that it be explicitly included, given the Environmental Impact Assessment Report (EIAR) has identified significant effects on several UK fishing fleets during the construction phase of the Proposed Development. Specifically, significant effects were observed in the Array Area for demersal otter trawl and pelagic trawl fleets, and in the Offshore Transmission Corridor (OTC) for demersal otter trawl, scallop dredge, and potting fleets. During the operational phase, the EIAR has highlighted continued significant effects in the Array Area, particularly affecting the UK demersal otter trawl fleet (subsections 3.5.1 & 3.5.2).

**1.2.3** - The SFF note from subsection 1.2.3 that the FMMCP is built on the premise of co-existence: *“The Applicant regards co-existence as the joint presence of both industries, working together within and around the Proposed Development and believes that application of measures that set out in this FMMCP support opportunities for co-existence.”*

We are of the view that co-existence is a misleading premise in this FMMCP. This concept is not viable within FLOW developments. The physical infrastructure, dynamic moorings, and safety exclusion zones render fishing operations impossible within the array. This reality must be acknowledged upfront. The fishing industry cannot “co-exist” in areas where access is permanently denied.

**1.2.5** - The SFF note from subsection 1.2.5 that *“This FMMCP covers the construction and operational phases of the Proposed Development. A separate FMMCP will be prepared ahead of decommissioning in line with any conditions of the relevant Marine Licences and the Decommissioning Programme, that may be required at that time under the Energy Act 2004.”*

We acknowledge the legal requirement for a separate FMMCP for the decommissioning stage. However, we seek a firm commitment from the Developer—under the current FMMCP—that a detailed and robust plan will be developed and implemented for the decommissioning phase, in full consultation with the fishing industry, to ensure transparency and continuity of engagement.

## **1.3 Relevant Guidance**

### **1.3.1 FLOWW Guidance – No Longer Supported**

The plan relies heavily on outdated FLOWW guidance (2014, 2015), which is no longer endorsed by the SFF. This undermines the credibility of the FMMCP and signals a disconnect between the Applicant and the

current stance of the fishing industry. Future plans must be based on contemporary, co-developed frameworks that reflect the evolution of offshore wind technologies and their impacts.

**1.3.3** - The SFF notes from subsection 1.3.3 (p13) that in preparation of this FMMCP, other relevant guidance and proposals have also been considered, including Moray Firth and Forth and Tay Commercial Fisheries Working Groups (CFWG) Proposal for Consideration of Mobile Gear Disruption Payments for Construction Phase of Fixed Bottom Offshore Renewable Energy Installations (2024) and Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries (Draft) prepared by the United States Bureau of Ocean Energy Management (2022). Engagement to date with fisheries stakeholders have also informed the development of this document.

We enquire why the Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries (Draft) prepared by the United States Bureau of Ocean Energy Management (2022) has been included? We propose this to be removed as it is not relevant to activity in Scottish waters.

In terms of engagement to date with fisheries stakeholders, we propose this reference to be removed as we have had one meeting with the developer in the last year when the FMMCP was not discussed.

### **1.5 Linkages with Other Consent Plans**

Table 1.1. (p14) refers to 'In principle fish mitigation plan'.

We would like to state that this plan has not been consulted with SFF including the pelagic fisheries stakeholders previously. Following is our comment:

#### **1. Spawning season**

The mitigation plan from page 18 onward is generally logical, but a key concern lies in Section 4.2 regarding the definition of "peak spawning." The plan fails to clarify how the broader "spawning season" is defined, which is crucial for effective mitigation. Herring gathers on spawning grounds weeks before actual spawning, engaging in sensitive social behaviours while their eggs and milt mature at varying rates. Focusing solely on the date spawning begins overlooks this critical pre-spawning period. Since herring leave quickly after spawning, mitigation efforts must account for the entire spawning season—especially the pre-spawning phase—to avoid disrupting essential behaviours.

#### **2. Herring migratory route**

Aspen could be an obstacle to herring migrating on to the Buchan area spawning ground to the south and southwest.

### **2.2 Fisheries Stakeholders and Engagement**

Engagement with NECRIFG should also be confirmed.

## **3 Mitigation**

### Mitigation Measures – Generic and Inadequate

The proposed mitigation measures are overly generic and do not adequately reflect the diversity of fishing methods employed in the region. Demersal, pelagic, and static gear fleets each operate under distinct conditions and face unique risks. Therefore, mitigation strategies must be fishery-specific—tailored to the operational realities of trawl, seine, creel, and dredge fisheries— and developed in close consultation with affected stakeholders to ensure they are both practical and effective. A one-size-fits-all approach is insufficient and risks undermining the viability of multiple sectors within the fishing industry.

Additionally, the timing of construction should be considered to reduce impact on fisheries.

Following needs to be considered regarding the proposed mitigations measures:

### 3.2 Principles of Mitigation

3.2.1. - Remove the reference to FLOWW (this should be considered throughout of the document—see reason above).

### 3.3 Embedded Measures

**C-OFF-09** – efforts should be made for all cases to report and retrieve dropped objects as they may have the potential for either snagging or spoiling catch.

**C-OFF-24** – Addition of Offshore FLO (OFLO) is required.

**C-OFF-30** – Additional to KIS-ORCA when as laid; add to Horizon Watch via SFF when it is a proposed cable route.

#### **C-OFF-57 p22**

- Needs to be omitted.

**C-OFF-58** - States that boulder removal will be disclosed in a timely manner and in an accessible format.

SFF recommends that:

- Boulder relocation positions be issued in WGS 84 DDM format via Notices to Mariners (NTMs).
- Coordinates also be made available in pendrive format compatible with popular plotter systems. This ensures practical usability for fishers and avoids the burden of manually inputting large coordinate datasets, which has been a challenge in previous offshore developments.

### Safety Zones

How many safety zones would be active at any one time?

The number of safety zones in force at any one time should be clearly defined and limited to avoid excessive disruption to fishing activities. SFF recommends that no more than five safety zones be active concurrently, in line with precedent set by other offshore wind developments such as Sofia OWF<sup>39</sup>. Safety zones should be implemented on a rolling basis, aligned with the actual progression of construction works. This approach allows for more targeted restrictions, minimizing the spatial and temporal footprint of exclusion zones while still ensuring safety. A transparent schedule and clear communication with the fishing industry will be essential to manage expectations and operational planning.

3.4.4 – Addition of OFLO on construction, maintenance or decommissioning vessels should be considered.

3.4.6 – Add Kingfisher Bulletin alongside to Notice to Mariners (NtM).

### Marking and Charting

3.4.10 – All buoys should be fitted with active AIS transponders (not passive) and preferably not solar powered due to rising failure rates. To ensure reliability, buoys must include backup power capability, as recent incidents have shown that buoys without backup systems can become unlit, posing navigational hazards. AIS must remain continuously active to support safe navigation and awareness for fishing vessels.

### Dropped Objects

3.4.11 – States, *“The EMP confirms that any objects dropped on the seabed during works associated with the Proposed Development will be reported, and objects will be recovered where they pose a hazard to fishing or safe navigation, and where recovery is practicable.”*

We propose all efforts should be made for all cases to report and retrieve dropped objects as they have the potential for either snagging or spoiling the catch.

3.4.12 – states, *“Should the dropped object pose a navigational risk, an NtM and Kingfisher Notice will be issued once the location, and details of the object can be established.”* As Navigation and Fishing operations are two separate definitions therefore, SFF recommends that this be amended to include fishing risk explicitly, recognising that navigation and fishing are distinct operational concerns. Additionally, a guard

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<sup>39</sup> Department for Energy Security and Net Zero. Sofia Offshore Wind Farm: Safety Zone Decision under Section 95(2) of the Energy Act 2004. Published 18 August 2023

vessel should be deployed to alert other sea users to the hazard prior to any retrieval campaign. This would provide real-time mitigation and reduce the risk of gear damage or vessel incidents during the interim period.

### **Cable Protection Survey**

3.4.13 – Commitment to be made to allow review of MBES as-laid data for any rock placement prior to an over-trawl campaign, to allow targeted areas of concern. We wish to reiterate that over-trawl sweeps remain the sole measure that provides fishermen with the necessary confidence to safely resume fishing activities in the affected area. Without this assurance, there will be a significant hesitation within the industry to re-engage, due to concerns over gear damage and seabed obstructions.

The SFF/ NECRIFG do not support the use of concrete mattresses, rock/grout bags or any other cable protection measures of such nature in open water due to the snagging risk they pose to fishing gears. Complete cable burial is our preference followed by rock placement if depth of cover is not achieved. Final as laid positions to be relayed to the Fishing Industry as soon as reasonably possible (ASARP) with any rock protection positions also highlighted. To support practical use by the fishing industry, final cable and rock placement positions should be provided in a format compatible with plotters. This includes:

- USB Pendrive delivery
- Converted to plotter-compatible format
- Issued via a Notice to Mariners (NTM)
- Using WGS84 DDM (Degrees Decimal Minutes) coordinate system

### **Procedures Specific to Fisheries Interactions**

#### **Procedure in Relation to Gear Fastening or Loss**

3.4.14 – Only refers to use of KIS-ORCA. We have concerns that KIS-ORCA is issued once per year; possible non-inclusion for 11 months if the roll-out is missed. Therefore, we propose utilising Horizon Watch via SFF to highlight cable route as a mitigation prior to being issued as laid on KIS-ORCA.

### **Secondary and Alternative Measures**

3.5.1 – Identifies demersal otter trawl and pelagic trawl in the Array area only. However, this project has already paid a disruption agreement payment to a vessel that was deploying static gear in the array during survey, so this needs to be highlighted and considered as a way forward.

3.5.3 – States no significant effects identified in OTC corridor during operation. We cannot agree with this conclusion because in case rock placement is undertaken at crossings or areas of scallop grounds this can have a significant effect during the whole operation phase, so it needs to be considered.

### **Disruption Agreements – Short-Term and Incomplete**

3.5.5/Table 3.2 - The FMMCP treats disruption as a temporary issue linked to construction. This ignores the **permanent loss of access** and long-term economic impacts. Compensation must:

- Extend to long-term or permanent displacement.
- Reflect inability to catch quotas, income reduction, and community-level effects.
- Be transparent, fair, and accessible to affected fishers,
- Considered for both affected mobile and static gears, and
- Paid during construction, maintenance and operation and decommissioning both in array area and OTC.

### **Obstacle free zones**

The obstacle free zone indicated is not obstacle free as there are still plans to lay cables in this area. It will also be used for the following purposes so cannot be classed as an OFZ:

1. During construction
  - as a vessel shelter area.
  - May serve as a temporary area for construction activities for cable (inter-array, inter-link and OTC) installation and also for infrastructure located out of the OFZs and inside the Array Area and/or OTC Corridor.
2. During Operation, the OFZs will function per a-d for construction, plus:
  - May serve as temporary area for maintenance vessels undertaking maintenance on infrastructure inside and outside the OFZs.

The SFF recommends that the OFZ must remain entirely free of obstruction and not be used for any other activities by the Project. Examples of the OFZs in Scottish waters e.g. GreenVolt and other OWF projects should be followed.

To be effective, we propose extending the Western boundary of the OFZ. This adjustment is necessary to accommodate the route commonly used by fishers when crossing the pipeline to the south, which must be approached at near right angles to minimise contact time, reduce the risk of gear snagging, and prevent door destabilisation. We propose the West section could be extended by another 0.4nm further East, the centre section extended 1nm further East and the Northern section extended 1.4nm further East to be of full benefit to the Nephrops fleet).

### **Adaptation Fund**

The SFF notes from subsection 3.5.11 (p31) that *“As part of the adaptation fund described immediately above, the Applicant may enter into disruption agreements in relation to the OTC Corridor, where likely significant effects remain after reduction and mitigation efforts have been considered for any construction, or pre-construction phase temporary disruption to fishers.”*

The SFF seeks the following clarifications:

- **Adaptation Fund Description:** While the above section refers to an adaptation fund, it is not described in the Fisheries Mitigation and Management and Compensation Plan (FMMCP). We request further elaboration on the scope, structure, and intended use of this fund.
- **Disruption Agreements – Array Area:** The reference to disruption agreements is limited to the OTC Corridor. There is no mention of similar provisions for the array area. The SFF requires that disruption payments be considered for the array area as well, where temporary or residual impacts to fishing activity may occur. This is essential to ensure equitable treatment across all impacted zones.

### **3.5.13 and 14**

- Take out FLOWW and what does “the Applicant will not consider association agreements” mean?

### **The Applicant**

**5.2.2** The SFF notes from bullet point 4 of the above subsection (p36) that the Applicant will produce and ensure implementation of Standard Operating Procedures (SOPs) to minimise and appropriately manage potential interactions with fishing vessels.

We want to know who will monitor the implementation of these SOPs?

### **Monitoring (p34)**

- What will this monitoring achieve?
- What will happen if there is a reduction in landings or a reduction in the number of vessels?

### **4.3 Reporting Deliverables**

**4.3.1 (bullet point 4)** states that post-construction phase: **end of construction to three years** after the completion of construction, or as agreed with MD-LOT.

- In the new guidance brought out by the Scottish Government it states a requirement to monitor for every five years after completion until decommissioning of the development. This needs to be adjusted in light to the new guidance. We are concerned that the new guidance has not been properly adhered to.

### **Communication – One-Way and Developer-Controlled**

The role of Fisheries Liaison Officers (FLOs) is limited to information dissemination. There is no mechanism for fishermen to influence project design, scheduling, or cable burial. True co-existence requires:

- Shared governance, not passive consultation.
- A standing fisheries working group with equal representation and decision-making authority.
- Not if and when, has to be instigated and must be a part of the commercial fisheries working group (INTOG specific).

### **5.3 Ongoing Engagement**

#### **Table 5.2 Proposed Development Information Communication Summary (p43)**

Row 4 of the Table 5.2 refers to CFWG with uncertain statement: “(if established and active)”.

We enquire who needs to set the CFWG up? This needs to be instigated.

### **Guard Vessels**

We propose local guard vessels, including local fishing vessels be utilised during construction and operational phases. Their familiarity with the area and existing maritime activity provides valuable situational awareness, enhances communication with the wider fishing fleet, and supports safer navigation around exclusion zones.

### **Stakeholder Engagement on the FMMCP**

A1.1. The reference to the 4th of August 2025 meeting should be removed. The meeting in question was merely a one-to-one check-in call with the SFF leadership, arranged in response to the developer’s repeated outreach. No representatives from the SFF’s constituent member Associations were present. While we do not intend to prevent the developer from engaging with the SFF leadership, only meetings involving the SFF member Associations and the technical team—specifically focused on the project—should be cited in the FMMCP or other relevant documentation.

### **Cumulative Impacts – Ignored**

The FMMCP fails to address cumulative impacts across multiple offshore wind projects. Displacement into already pressured grounds, ecological disruption, and socio-economic consequences are serious concerns.

The Applicant must:

- Undertake socio-economic assessments aligned with ScotMER evidence gaps.
- Recognize the regional and national scale of offshore wind’s impact on fisheries.

### **Conclusion and Industry Position**

The fishing industry cannot support the FMMCP in its current form. To move forward constructively, the following must be addressed:

- Acknowledgement that fishing cannot occur within FLOW arrays. – to the level that existed before the development is in place.
- Abandonment of outdated FLOWW guidance.
- Development of fishery-specific mitigation measures.
- Implementation of independent, joint monitoring.
- Definition and verification of safe fishing zones that encompass current fishing activity (OFZs). – vessel shelter not acceptable

- Establishment of long-term compensation frameworks.
- Creation of shared governance structures.
- Commitment to cumulative impact assessment.
- Assurances that the FMMCP is properly implemented and indication of any consequences in case of breach of the plan.

It should be noted that there has been very poor engagement to date on the proposed development, in comparison to other developments. Fishing communities must be treated as equal stakeholders, not as obstacles to development. We remain open to dialogue and collaboration, but only based on mutual respect, transparency, and recognition of the realities we face.

#### **Assessment Methodology and Fisheries Relevance<sup>40</sup>**

The EIA adopts a two-stage methodology to assess impacts on commercial fisheries, combining magnitude of impact with receptor sensitivity to determine overall significance. While this approach is consistent with standard EIA practice, it relies heavily on assumptions about fleet adaptability and access to alternative grounds. For example, the classification of impacts as “minor” or “moderate” often hinges on the availability of substitute fishing areas, without fully accounting for operational constraints such as weather, fuel costs, or gear compatibility. The fishing industry notes that while the methodology references Scottish Government guidance on displacement, it does not incorporate fisheries-led validation of sensitivity ratings or displacement pathways.

#### **Shipping and Navigation**

The Aspen OWF presents several notable risks to commercial fisheries, particularly demersal trawlers and static gear operators active in the southwest boundary of the array area. The EIA acknowledges that this region is a high intensity nephrops ground, and displacement from these areas may lead to congestion in surrounding waters, increasing navigational hazards and competition among vessels (Section 14.4, Table 14.3). The risk of gear snagging on moorings and cables is also elevated, especially near the perimeter of the array and the OTC Corridor. While embedded mitigation measures such as cable burial and safety zones are proposed, the Scottish Fishermen’s Federation (SFF) has requested stronger safeguards, noting that snagging risks remain significant (Section 14.7, Impact 5; Table 14.15). Additionally, fishing vessels are identified as the most vulnerable to collision and allision events, particularly during construction and maintenance phases, with risk modelling showing fishing vessels as having the highest hazard scores (Section 14.7, Impacts 2 & 3; Tables 14.12 & 14.13). The potential for WTGs or buoys to break free and become hazards was raised during stakeholder consultation, with concerns about visibility and response times in poor conditions (Section 14.7, Impact 6; Table 14.16). Seasonal fisheries operating near Stonehaven Harbour may also face temporary disruption due to OTC construction, affecting access to ports and harbours (Section 14.7, Impact 11; Table 14.21). Finally, cumulative effects from adjacent projects such as Green Volt and Muir Mhòr could exacerbate spatial squeeze and displacement pressures, further intensifying risks to fishing operations (Section 14.8, Cumulative Effects Assessment). Therefore, SFF propose that the above-mentioned gaps to be thoroughly considered at determination stage. In particular, agreement to extend the western Offshore Fisheries Exclusion Zone (OFZ) as proposed would significantly reduce the risk of allision and collision. By safeguarding key fishing grounds, this extension would discourage entry into the array area, thereby lowering navigational risks and more practical separation between offshore infrastructure and fishing activity.

#### **Socioeconomic Impacts from Reduced Fishing Activity and Sector Underrepresentation<sup>41</sup>**

While Chapter 17 of the Aspen Offshore Wind Farm Environmental Impact Assessment (EIA) provides a detailed account of employment and Gross Value Added (GVA) benefits associated with offshore wind supply chains, it notably omits a quantified assessment of the fishing sector’s economic contribution. The chapter

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<sup>40</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 13, Section 13.6: Commercial Fisheries Assessment Methodology

<sup>41</sup> Cerulean Winds Aspen Project Limited (2025). Aspen Offshore Wind Farm – Offshore Environmental Impact Assessment Report, Volume 2, Chapter 14: Shipping and Navigation

focuses primarily on direct, indirect, and induced impacts from offshore wind development, with employment and GVA estimates derived from supply chain modelling and multipliers applied to sectors such as manufacturing, logistics, and operations (see Tables 17.28–17.33 and Figures 17.14–17.15). However, the fishing industry despite being a key marine user is not explicitly integrated into these economic impact tables. This underrepresentation risks overlooking the potential loss of income for local fishers, disruption to associated supply chains (e.g., processors, transport), and longer-term demographic shifts in coastal communities where fishing is a primary livelihood. The absence of fishing-specific economic metrics in the socioeconomic chapter may lead to an incomplete understanding of the full spectrum of impacts, particularly in areas near the OTC Corridor and array boundaries where displacement and spatial squeeze are anticipated. Therefore, we propose that lack of consideration of fishing industry to be re-evaluated and considered at determination stage.

### **Impacts on Fish and Shellfish Ecology and Habitat Connectivity<sup>42</sup>**

The RIAA confirms that Likely Significant Effects (LSE) have been identified for fish and shellfish receptors, including migratory species such as Atlantic salmon and sea trout. Chapter 4 of the RIAA outlines potential risks to commercially important stocks (e.g. nephrops, haddock, scallop), spawning and nursery grounds, and habitat connectivity particularly in the intertidal and nearshore zones near Stonehaven, where the OTC Corridor makes landfall. These areas are known to support small-scale and seasonal fisheries, and disruption to habitat connectivity could affect stock movement, recruitment, and local fishing viability. We are also of the opinion that Aspen OWF may have impact on herring migratory route.

The Aspen OWF forms part of the North Sea Renewables Grid (NSRG), alongside Beech and Cedar OWFs, and the RIAA considers in-combination effects with these and other projects. Given the scale and proximity of multiple developments, there is a risk that cumulative impacts on fish and shellfish ecology and fishing operations may be underestimated. Therefore, we propose the Aspen OWF's on fish and shellfish ecology be thoroughly re-evaluated to ensure fish and shellfish habitats are not negatively impacted by the development.

While FLOWW protocols are referenced in the EIA, we note that these are not universally adopted in Scotland. The Scottish Fishermen's Federation and its constituent associations have not signed up to draft FLOWW Best Practice Guidelines and has withdrawn from FLOWW Group, and therefore requests that mitigation measures be developed in line with Scottish fisheries governance and stakeholder preferences. This includes bespoke disruption agreements, monitoring frameworks, and adaptive management protocols that reflect the operational realities of Scottish fleets.

### **Conclusion**

In conclusion, while the SFF acknowledges the strategic importance of offshore renewable energy, we remain concerned about the cumulative and site-specific impacts of the Aspen Offshore Wind Farm on commercial fisheries, marine access, and migratory fish populations. We urge Scottish Ministers to ensure that fisheries interests are fully integrated into the consenting process through robust monitoring, transparent mitigation, and meaningful stakeholder engagement. A precautionary and evidence-led approach is essential to safeguard the sustainability of Scotland's fishing communities and marine ecosystems.

The SFF stresses that our primary concern is protecting the marine environment which has supported the fishers and the wider communities which depend upon them for decades. If fishers are denied the right to earn their living, SFF will not support the proposal of any windfarm development therefore we reiterate that we strongly object to this application.

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<sup>42</sup> Cerulean Winds Aspen Project Limited (2025), Report to Inform Appropriate Assessment (RIAA), Chapter 4: Fish and Shellfish Ecology.

Furthermore, as this is a Transmission Offshore Grid (TOG) project, the absence of an identified export route to an oil & gas asset is a critical omission. This should be addressed prior to consent being granted, as clarity on the export pathway is fundamental to assessing the viability and strategic alignment of the project.

For and on behalf of the Scottish Fishermen's Federation  
[Redacted]

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

**Scottish Water**

Friday, 12 September 2025



Marine Licensing  
375 Victoria Road

Aberdeen

Development Operations  
The Bridge  
Buchanan Gate Business Park  
Cumbernauld Road  
Stepps  
Glasgow  
G33 6FB

Development Operations  
Freephone Number - 0800 3890379  
E-Mail - [DevelopmentOperations@scottishwater.co.uk](mailto:DevelopmentOperations@scottishwater.co.uk)  
[www.scottishwater.co.uk](http://www.scottishwater.co.uk)



Dear Customer,

**Aspen Offshore Wind Farm, Transmission Infrastructure East of, Peterhead,  
AB42 3BU**

**Planning Ref: MS-00011410**

**Our Ref: DSCAS-0140442-L85**

**Proposal: Construction of Offshore Transmission Infrastructure – Aspen  
Offshore Wind Farm.**

**Please quote our reference in all future correspondence**

## **Audit of Proposal**

Scottish Water has no objection to this proposal. Please read the following carefully as there may be further action required. Scottish Water would advise the following:

### **Drinking Water Protected Areas**

A review of our records indicates that there are no Scottish Water drinking water catchments or water abstraction sources, which are designated as Drinking Water Protected Areas under the Water Framework Directive, in the area that may be affected by the proposed activity.

### **Surface Water**

For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will not accept any surface water connections into our combined sewer system.

There may be limited exceptional circumstances where we would allow such a connection for brownfield sites only, however this will require significant justification from the customer taking account of various factors including legal, physical, and technical challenges.

In order to avoid costs and delays where a surface water discharge to our combined sewer system is anticipated, the developer should refer to our guides which can be found at <https://www.scottishwater.co.uk/Help-and-Resources/Document-Hub/Business-and-Developers/Connecting-to-Our-Network> which detail our policy and processes to support the application process, evidence to support the intended drainage plan should be submitted at the technical application stage where we will assess this evidence in a robust manner and provide a decision that reflects the best option from environmental and customer perspectives.

## Next Steps:

All developments that propose a connection to the public water or waste water infrastructure are required to submit a Pre-Development Enquiry (PDE) Form via our Customer Portal prior to any formal technical application being submitted, allowing us to fully appraise the proposals

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

Yours sincerely,

### Ruth Kerr

Development Services Analyst  
[PlanningConsultations@scottishwater.co.uk](mailto:PlanningConsultations@scottishwater.co.uk)

### Scottish Water Disclaimer:

*"It is important to note that the information on any such plan provided on Scottish Water's infrastructure, is for indicative purposes only and its accuracy cannot be relied upon. When the exact location and the nature of the infrastructure on the plan is a material requirement then you should undertake an appropriate site investigation to confirm its actual position in the ground and to determine if it is suitable for its intended purpose. By using the plan you agree that Scottish Water will not be liable for any loss, damage or costs caused by relying upon it or from carrying out any such site investigation."*

## Supplementary Guidance

- Scottish Water asset plans can be obtained from our appointed asset plan providers:
  - Site Investigation Services (UK) Ltd
  - Tel: 0333 123 1223
  - Email: [sw@sisplan.co.uk](mailto:sw@sisplan.co.uk)
  - [www.sisplan.co.uk](http://www.sisplan.co.uk)
- Scottish Water's current minimum level of service for water pressure is 1.0 bar or 10m head at the customer's boundary internal outlet. Any property which cannot be adequately serviced from the available pressure may require private

pumping arrangements to be installed, subject to compliance with Water Byelaws. If the developer wishes to enquire about Scottish Water's procedure for checking the water pressure in the area, then they should write to the Development Operations department at the above address.

- If a connection to the public sewer and/or water main requires to be laid through land out-with public ownership, the developer must provide evidence of formal approval from the affected landowner(s) by way of a deed of servitude.
- Scottish Water may only vest new water or waste water infrastructure which is to be laid through land out with public ownership where a Deed of Servitude has been obtained in our favour by the developer.
- The developer should also be aware that Scottish Water requires land title to the area of land where a pumping station and/or a Sustainable Drainage System (SUDS) proposed to vest in Scottish Water is constructed.
- Please find information on how to submit application to Scottish Water at our Customer Portal.

Friday, 12 September 2025



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[www.scottishwater.co.uk](http://www.scottishwater.co.uk)



Dear Customer,

**Aspen Offshore Wind Farm, Generating Station 84km east of Peterhead.  
AB42 3BU  
Planning Ref: MS-00011409  
Our Ref: DSCAS-0140436-KJC  
Proposal: Construction of Generating Station – Aspen Offshore Wind Farm –  
00011409.**

**Please quote our reference in all future correspondence**

## **Audit of Proposal**

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Yours sincerely,

### Ruth Kerr

Development Services Analyst  
[PlanningConsultations@scottishwater.co.uk](mailto:PlanningConsultations@scottishwater.co.uk)

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- Please find information on how to submit application to Scottish Water at our Customer Portal.

Royal Yachting  
Association  
Scotland

**From:** [Redacted]  
**To:** [MD Marine Renewables](#)  
**Subject:** RE: MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm – EIA Section 36 consent and Marine Licence Applications - Consultation – Response Required by 23 October 2025  
**Date:** 19 September 2025 16:15:28  
**Attachments:** [image002.png](#)  
[image003.png](#)

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Hi Amy,

I write to inform you that RYA Scotland has no objections to this application.

Kind Regards

Pauline

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

**Royal Yachting Association Scotland**

**T:** [Redacted]

**E:** [Redacted]



Protecting your personal information is important to us, view our full Privacy Statement [here](#)

**Ugie District  
Salmon Fishery  
Board**

**From:** [Ugie Salmon](#)  
**To:** [MD Marine Renewables](#)  
**Cc:** [Redacted]  
**Subject:** RE: MS-00011410 and MS-00011409 - Cerulean Winds Aspen Project Limited – Aspen OffshCerulean Winds Aspen Project Limited – Aspen Oore Wind Farm – EIA Section 36 consent and Marine Licence Applications - Consultation – Response Required by 23 October 2025  
**Date:** 17 September 2025 11:29:49  
**Attachments:** [image001.png](#)

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Dear Amy

On behalf of the Ugie District Salmon Fishery Board, I would like assurances from Cerulean Winds Aspen Project Limited – Aspen Offshore Wind Farm that during the construction stage and the operational stage of this project, in the sea and on the land, that there will be no detriment to the populations of migrating Salmon and Seatrout and of the resident brown trout in the River Ugie.

We need to know what mitigation will be in place if after the installation and subsequent operating of the project that there proves to be damage done to the ecology of the river or the various stock of juveniles and adult populations of salmon, seatrout and brown trout in the river Ugie and its associated feeder burns?

We would also like the operators to reply to the comments and observations made by the FMS (Fishery Management Scotland) on behalf of their members regarding windfarm projects in their area.

Kind regards

[Joseph Yule \(Convener\)](#)  
[Ugie District Salmon Fishery Board](#)

Lunar Ugie Salmon  
Salmon Fish House  
Golf Road  
Peterhead  
AB42 1LS  
Tel.no. [Redacted]  
Email [Redacted]  
Website/online shop [www.ugie-salmon.co.uk](http://www.ugie-salmon.co.uk)  
Open Monday to Friday 8am – 5pm