

**SCOTTISH MINISTERS ASSESSMENT OF THE PROJECT'S
IMPLICATIONS FOR DESIGNATED SPECIAL AREAS OF
CONSERVATION AND SPECIAL PROTECTION AREAS IN VIEW OF
THE SITES' CONSERVATION OBJECTIVES.**

APPLICATION FOR THE VARIATION OF MARINE LICENCES UNDER THE
MARINE (SCOTLAND) ACT 2010 AND THE VARIATION OF THE SECTION 36
CONSENT UNDER THE ELECTRICITY ACT 1989 FOR THE CONSTRUCTION
AND OPERATION OF UP TO SIX WIND TURBINE GENERATORS AND
ASSOCIATED ANCILLARY WORKS

SITE DETAILS: PENTLAND FIRTH, CAITHNESS

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SECTION 1: BACKGROUND

1 Appropriate assessment conclusion

- 1.1 This Appropriate Assessment (“AA”) concludes that there will be no adverse effect on the site integrity of the Berriedale and Langwell Waters Special Area of Conservation (“SAC”), Endrick Water SAC, Faray and Holm of Faray SAC, Inner Hebrides and the Minches SAC, Little Gruinard River SAC, Langavat SAC, Moray Firth SAC, North Harris SAC, River Bladnoch SAC, River Borgie SAC, River Dee SAC, River Moriston SAC, River Naver SAC, River Oykel SAC, River South Esk SAC, River Spey SAC, River Tay SAC, River Teith SAC, River Thurso SAC, River Tweed SAC, Sanday SAC, Ailsa Craig Special Protection Area (“SPA”), Aiskerry SPA, Buchan Ness to Collieston Coast SPA, Caithness and Sutherland Peatlands SPA, Calf of Eday SPA, Canna and Sanday SPA, Cape Wrath SPA, Copinsay SPA, East Caithness Cliffs SPA, Fair Isle SPA, Fetlar SPA, Flannan Isles SPA, Forth Islands SPA, Foula SPA, Fowlsheugh SPA, Handa SPA, Hermaness, Saxa Vord and Valla Field SPA, Hoy SPA, Marwick Head SPA, Mingulay and Berneray SPA, Mousa SPA, North Caithness Cliffs SPA, North Rona and Sula Sgeir SPA, Noss SPA, Rousay SPA, Rum SPA, Priest Island SPA, Ramna Stacks and Gruney SPA, St. Kilda SPA, Sule Skerry and Sule Stack SPA, Sumburgh Head SPA, Troup, Pennan and Lion’s Heads SPA and West Westray SPA from Highland Wind Limited’s (“HWL”) proposed variation to its section 36 consent and associated marine licences (“HWL Proposal”), either in isolation or in combination with other plans or projects, providing that the conditions set out in Section 4 are complied with.
- 1.2 The Scottish Ministers consider that the most up to date and best scientific advice available has been used in reaching the conclusion that the HWL Proposal will not adversely affect the integrity of the above sites and is satisfied that no reasonable scientific doubt remains.

2 Introduction

- 2.1 This is a record of the AA undertaken by the Scottish Ministers in regard to the HWL Proposal to construct and operate a floating offshore wind farm and associated offshore transmission infrastructure as required under Regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 and Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (together, “the Habitats Regulations”). The Scottish Ministers, as the ‘competent authority’ under the Habitats Regulations, have to be satisfied that the project will not adversely affect the integrity of any European site (special areas of conservation and special protection areas), either alone or in combination with other plans or projects, before they can grant consent for the project.
- 2.2 NatureScot, operating name of Scottish Natural Heritage, has been consulted.

3 Details of proposed project

- 3.1 HWL proposes to construct a floating wind farm with an installed capacity of around 100 megawatts (“MW”) in a site within the Pentland Firth, approximately 7.5 kilometres (“km”) seaward of mean high water springs (“MHWS”) at Dounreay, Caithness, at its closest point to shore. A section 36 consent and marine licences were granted for the project on 28 June 2023 (“the Existing Consent”). The Existing Consent was supported by an Appropriate Assessment (“the 2023 AA”).
- 3.2 HWL has refined the parameters of the proposed wind farm and has therefore applied to vary the Existing Consent. A comparison between the Existing Consent Wind Turbine Generator (“WTG”) design parameters and the refined HWL Proposal is detailed in Table 1. The application was supported by the [Pentland Floating Offshore Wind Farm Section 36C Consent and Marine Licence Variation Application Report](#) (“the Variation Report”) including an addendum to the Report to Inform the Appropriate Assessment (“RIAA Addendum”).

Table 1 Comparison between the Existing Consent and the HWL Proposal

Design Parameters	Existing Consent	HWL Proposal
Maximum number of WTGs	Up to 7	Up to 6
Maximum hub height above highest astronomical tide (“HAT”)	Up to 190 m	Up to 190 m
Maximum height to blade tip above HAT	Up to 300 m	Up to 300 m
Maximum rotor diameter	Up to 260 m	1 WTG 220 m, 5 WTG 250 m
Minimum blade clearance from sea-level	35 m	35 m
Minimum spacing between WTGs	800 m	800 m
Associated floating substructures	Up to 7	Up to 6
Nine mooring lines for each floating substructure	63 in total	54 in total
Nine anchors or piles for each floating substructure	63 in total	54 in total
Inter-array cables (dynamic and static)	7	7
WTG footprint area ¹	Up to 10 square kilometres (“km ² ”)	Up to 5.85 km ²

¹ The WTG footprint area comprises the area of sea surface occupied by the WTGs and associated floating substructure, excluding the mooring lines.

- 3.3 The Existing Consent is valid for a 10 year operational period from the date of Final Commissioning of the wind farm. The HWL Proposal also includes an extension to the operational period of the wind farm from 10 to 25 years.
- 3.4 The voltage level, maximum length and trench-width of the inter-array cables remains unchanged. Additionally, the voltage level, length, burial depth, and protection required for the export cable remains unchanged. Further details on the cables can be found in the [EIA Report](#) for the Existing Consent.
- 3.5 Offshore construction activities for the HWL Proposal are now anticipated to commence in April or May 2027 with the horizontal directional drilling works at the landfall. Installation of the offshore components is then likely to be completed over two, seven month stages. Stage 1 is anticipated to commence in spring 2027 with a winter break before moving onto Stage 2 in spring/summer 2028. It is planned for Stage 1 to include export cable and anchor installation. WTGs, substructures, moorings, and inter-array cables will be installed in Stage 2.

4 Consultation

- 4.1 NatureScot and the Royal Society for the Protection of Birds Scotland (“RSPB Scotland”) were consulted on the HWL Proposal on 20 October 2023 and responded, respectively, on 20 December 2023 and 12 December 2023.
- 4.2 The Scottish Ministers sought clarity from NatureScot on 9 February 2024 to confirm that its representation in relation to the other sites assessed in the 2023 AA remains valid. NatureScot responded on 20 February 2024.
- 4.3 Further clarification from NatureScot was requested on 4 March 2024 regarding the advice for the different in-combination scenarios. This was received on 12 March 2024.

5 Main points raised during consultation

- 5.1 NatureScot, in its advice dated 20 December 2023, advised that the main ornithological concerns in relation to the HWL Proposal are black-legged kittiwake and Atlantic puffin at the North Caithness Cliffs SPA. It advised that it largely agrees with the conclusions in the RIAA Addendum and that the HWL Proposal presents a reduction in predicted impacts compared to the Existing Consent.
- 5.2 In its advice dated 20 February 2024, NatureScot confirmed that the HWL Proposal will not cause additional impacts to any other European Site and therefore the conclusions reached in the 2023 AA remain valid. As such, the Scottish Ministers conclude that the 2023 AA for the Existing Consent remains valid in its conclusions regarding the effect of the HWL Proposal in isolation on all sites listed above, excluding the North Caithness Cliffs SPA and these do not need to be addressed further. This AA will solely focus on the kittiwake and puffin qualifying interests of the North Caithness Cliffs SPA. However, the in-combination assessment will be reviewed for all

sites assessed in the 2023 AA to account for any new plans or projects not previously considered.

- 5.3 RSPB Scotland, in its response dated 12 December 2023, advised that it had not had capacity to review the modelling in detail and had not inspected inputs and other parameters. Focussing its advice on the outputs, RSPB Scotland advised that the HWL Proposal would result in a greater impact to the kittiwake qualifying interest of the North Caithness Cliffs SPA than the Existing Consent and that in its view, this would constitute an adverse effect on site integrity. In relation to puffin, RSPB Scotland noted that in comparison to the Existing Consent, the HWL Proposal would be beneficial, resulting in a lower impact.

SECTION 2: INFORMATION ON EUROPEAN SITES

6 Background information and qualifying interests for the relevant European sites

- 6.1 This section provides links to the NatureScot SiteLink website (“SiteLink”) where the background information on the site being considered in this assessment is available. The qualifying interests for the site are listed as are the conservation objectives.

Table 2: Name of European site affected and relevant link to SiteLink.

<p><u>North Caithness Cliffs SPA</u> https://sitelink.nature.scot/site/8554</p>
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Table 3: Qualifying interests

<p><u>North Caithness Cliffs SPA</u></p> <ul style="list-style-type: none"> • Fulmar (<i>Fulmarus glacialis</i>) (breeding) * • Guillemot (<i>Uria aalge</i>) (breeding) • Kittiwake (<i>Rissa tridactyla</i>) (breeding) * • Peregrine (<i>Falco peregrinus</i>) (breeding) • Puffin (<i>Fratercula arctica</i>) (breeding) * • Razorbill (<i>Alca torda</i>) (breeding) * • Seabird assemblage <p>* indicates assemblage qualifier only</p>

Table 4: Conservation objectives

<p><u>North Caithness Cliffs SPA</u></p> <p>To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and</p>
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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

SECTION 3: ASSESSMENT IN RELATION TO REGULATION 48 OF THE CONSERVATION (NATURAL HABITATS, &C.) REGULATIONS 1994 AND REGULATIONS 63 OF THE CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017

7 Requirement for appropriate assessment

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

The project is not directly connected with or necessary to the conservation management of the site.

7.2 *Is the project likely to have a significant effect on the qualifying interest(s)?*

7.2.1 NatureScot, in its response dated 20 December 2023, advised that the main ornithological concerns in relation to the HWL Proposal relate to potential collision and displacement impacts to the puffin and kittiwake qualifying interests of the North Caithness Cliffs SPA.

7.2.2 The Scottish Ministers agree with NatureScot's advice regarding the qualifying interests requiring further assessment and have undertaken an AA for the puffin and kittiwake interests of the North Caithness Cliffs SPA.

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

8.1 Review of modelling and assessment approaches

8.1.1 HWL has updated both the alone and in-combination assessments in the Variation Report to reflect updated avoidance rates in collision modelling and application of a 10% sabbatical rate where it was certain this was not used previously in the in-combination assessment in the 2023 AA.

- 8.1.2 HWL raised limitations in its understanding of some aspects of the SeabORD modelling used for the assessment of displacement effects, based on available information. For example, variations in calibration results between the HWL's SeabORD modelling and that undertaken by UKCEH on behalf of NatureScot. NatureScot considered this in its advice of 20 December 2023 by highlighting that the SeabORD modelling undertaken by HWL may increase precaution/uncertainty and result in a slightly increased predicted impact. This is due to variation in the baseline values used for survival and how that is implemented in SeabORD predictions based on mass survival relationships (which affect calibration results).
- 8.1.3 The AA notes that the application of a 2km windfarm footprint boundary in the displacement analysis is potentially being overly precautionary. Whilst the 2km boundary was advised by NatureScot, the development is for six turbines, with over 1.5km between turbines (Figure 1, page 178 of the Variation Report). As such, this spacing could have the potential to reduce displacement impacts, meaning the assessment could be overly precautionary with the addition of the 2km boundary.
- 8.1.4 The AA determines that without additional modelling it is not possible to quantify any changes to the magnitude of estimated impacts if the seabORD baseline issue is corrected, but that it is reasonable to conclude that predicted impacts would not be greater than those currently and are likely to be lower than those currently predicted. This would result in population metrics, particularly the Counterfactual of Population Size ("CPS") to be lower than presented in this AA. This conclusion is in agreement with the response from NatureScot of 20 December 2023.
- 8.1.5 NatureScot also highlighted that HWL's in-combination assessment used seabird densities for the three Moray Firth windfarm areas that were presented by Moray East Offshore Windfarm and an overall density (for the overall windfarm area and not the three subsites) taken from the original Moray East Offshore Windfarm EIA Report, which were subsequently amended for the AA to inform the Moray East Offshore Windfarm consents. These amended values were provided to HWL by NatureScot, for the HWL's assessment on 7 August 2023. However, NatureScot highlighted in its response of the 20 December 2023 that the densities in the Moray East EIA Report and those amended in the subsequent AA have their own underlying issues (due to both the temporal, spatial and methodological collection of the data and subsequent analysis methods applied to them), which are unresolvable in the absence of requesting further analysis from the Moray Firth developers. NatureScot advised that additional information on this aspect was not necessary for it to provide its advice. The Scottish Ministers agree with NatureScot that additional information here is unnecessary as the original values are a satisfactory representation of site density.
- 8.1.6 HWL's in-combination assessment considers multiple potential scenarios, based on different options for estimated impacts and windfarm parameters (see Section 9). These scenarios captured differences between consented windfarm parameters and those that will be built. The latter is based on more up to date information and

particularly relating to wind farms in England. Wind farms in the English North Sea undertake assessments often under a more precautionary approach than that advised by NatureScot. For example, Natural England do not advise that a stable age structure is used in modelling or the use of sabbatical rates. HWL in undertaking its assessment has recalculated estimated effects from English windfarms, following the NatureScot advice where possible such as applying both the stable-age structure and a 10% sabbatical rate to those developments where this had not previously been undertaken.

- 8.1.7 Five North Sea wind farms included in the in-combination assessment are based on consented and not as built impacts: Dogger Bank A, B and C, East Anglia 3 and Hornsea 2. All of these developments have design refinements post consent that indicate the number of turbines to be constructed are substantially fewer than the number consented (see Table 5).

Table 5: Windfarms included in the in-combination assessment where the number of turbines to be constructed is lower than those consented and assumed in the assessment, taken from Table C1.2 Difference in turbine numbers between Consented and Final project designs for which CRM will need to be updated in future from the [Variation Report](#)

Development	Consented	Final
Dogger Bank A,B,C	600	277
East Anglia 3	172	Up to 100
Hornsea 2	300	165

- 8.1.8 HWL highlights in the [Variation Report](#) that this reduced number of turbines will lead to a 25% inflated collision mortality estimate.
- 8.1.9 HWL presents a breakdown for the North Caithness Cliffs SPA of wind farms contributing to the in-combination total mortality from collision and the associated variation in estimates (see the [Habitats Regulations Assessment Report](#) for the Existing Consent). In Table 9.18 of that report, HWL presents discrepancies in kittiwake collision mortality apportioned to the North Caithness Cliffs SPA, see Table 6.

Table 6: Discrepancies in kittiwake mortality estimates apportioned to North Caithness Cliffs SPA. This table is based on information provided in Table 9.18 of the Pentland [Habitats Regulations Assessment Report](#)

Development	Moray West EIA addendum	Hornsea Project Four Environmental Statement	Difference
Seagreen	8	13.9	5.9
Inch Cape	4	6.9	2.9
Near Na Gaoithe	0	1.4	1.4
Dogger A,B,C (Creyke Beck)	8	11.4	3.4

Dogger Bank Teeside	5	8.2	3.2
Total			16.8

- 8.1.10 HWL highlights the use of the Hornsea Four assessment values for informing this assessment and provides a comparison of the figures used in the in-combination assessment in the Moray West application. HWL notes the discrepancy in source materials that have been used in informing in-combination assessments and that the apportioned Moray West estimates have previously been agreed for use in assessment in Scotland and on which consenting decisions have been based. Here, the AA acknowledges the discrepancy in figures, which will arise due to variation in methods applied in specific applications and notes this furthers the awareness of added uncertainty and the potential for over-estimation.
- 8.1.11 Given the substantially lower number of turbines to be constructed at the five English windfarms compared to the number consented, and that this has not been reflected in the mortality apportioned to the kittiwake feature of the North Caithness Cliffs SPA this will result in an over-estimation of impacts in the in-combination assessment.
- 8.1.12 The AA considers the application documentation and consultee representations, in particular those of NatureScot and RSPB Scotland. The AA considers site conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects. It also considers the influence of uncertainty and precaution in the assessment particularly that derived from the seabORD analysis over-estimation of displacement effects and the substantial reduction in the number of turbines to be constructed at five English windfarms, and the anticipated reduction in collision mortality that would result.
- 8.1.13 In 2021 there was an outbreak of Highly Pathogenic Avian Influenza (“HPAI”) in wild birds. In 2022 and to a lesser extent in 2023 further outbreaks of HPAI impacted many species and colonies of UK seabirds. HWL’s ornithology assessment was largely undertaken prior to the HPAI outbreak that occurred during the 2022 seabird breeding season. It is unclear to what extent mass mortality events such as HPAI have had on seabird populations. The AA’s conclusions consider the implications of HPAI on kittiwake and puffin at the North Caithness Cliffs SPA. In the absence of an appropriate quantitative mechanism for considering this information, the AA considers HPAI in terms of precaution built into the RIAA Addendum assessment, the size and scale of the development and the reported ranges of predicted impact.
- 8.1.14 In reaching its conclusions, the Scottish Ministers consider the Counterfactual of Population Size (“CPS”) and the Counterfactual Growth Rate (“CGR”). The CPS is the ratio of the predicted impacted population size to that of the predicted population size in the absence of the HWL Proposal, at the end of the 25 year operating period e.g. if the CPS returned a value of 0.5, that would indicate a 50% reduction in the population size predicted as a result of the proposal. The CGR is the ratio of the growth rate of an impacted versus an unimpacted population where a value of 0.5 indicates a 50% reduction in growth rate, is also presented and provides additional context. The CGR

is a useful metric to consider in stochastic modelling as it is less sensitive to a seabird population's status or trend. HWL provides the median and upper and lower confidence intervals of each metric. This approach provides a range of values to help inform conclusions, of particular use in the context of uncertainty. The AA relies on median values but takes into consideration the full range of values presented, given the additional precaution in the assessment, and overall contextual information of the species and colonies considered.

8.2 In Isolation Assessment of Kittiwake – North Caithness Cliffs SPA

- 8.2.1 NatureScot in its response of 20 December 2023, agreed with the conclusions of the Variation Report that the HWL Proposal in isolation would result in no adverse effect on site integrity for kittiwake as a qualifying interest of North Caithness Cliffs SPA.
- 8.2.2 RSPB Scotland, in its response of 12 December 2023, disagreed with the conclusions of the Variation Report that the HWL Proposal in isolation would result in no adverse effect on site integrity for kittiwake as a qualifying interest of the North Caithness Cliffs SPA. While not providing separate conclusions for project-alone and in-combination scenarios, RSPB Scotland considered the proposal will impact site integrity for kittiwake.

Table 7: Estimated annual kittiwake mortality at North Caithness Cliffs SPA from the HWL proposal for Scenario 1 over the 25 year operational period plus Population Viability Analysis (“PVA”) outputs ([Variation Report](#) Technical Appendix D4: Marine Ornithology Population Modelling).

Impact type	Age class	Estimated annual mortality (individuals)
Displacement	Adults	1.00
	Chicks	9.00
Collision	Adults	2.24*
	Immatures	0.15
Total no. mortalities	Adults	3.24
	Immatures	0.15
	Chicks	9.00
CPS (95% CIs)		0.983 (0.937-1.030)
CGR (95% CIs)		0.999 (0.998-1.000)

* This figure is calculated from those provided in the [Variation Report](#).

- 8.2.3 The CPS of 0.983 reported for the in-isolation assessment translates as a 2% reduction in population size after 25 years compared to an unimpacted population (CI: 0.937, 1.030).
- 8.2.4 The CGR reported for the in-isolation assessment was 0.999 (CI: 0.998 – 1.000) which translates as <1% reduction in growth rate after 25 years compared to an unimpacted population.

8.2.5 Given the influence of the mass-survival relationship used in the seabORD analysis, the Scottish Ministers conclude that displacement mortalities are over-estimated.

8.2.6 In reaching a conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland. **The Scottish Ministers conclude that there will be no adverse effect on the site integrity of the North Caithness Cliffs SPA in respect of the kittiwake qualifying interest as a result of the HWL Proposal in isolation.**

8.3 In Isolation Assessment of Puffin – North Caithness Cliffs SPA

8.3.1 NatureScot in its response of 20 December 2023, agreed with the conclusions of the Variation Report that the HWL Proposal in isolation would result in no adverse effect on site integrity for puffin as a qualifying interest of the North Caithness Cliffs SPA.

8.3.2 RSPB Scotland considered the variation impacts for puffin to be reduced compared to the Existing Consent but noted that it has not been able to check implementation of the seabORD model.

Table 8: Estimated annual puffin mortality at North Caithness Cliffs SPA from the HWL Proposal alone (Scenario 1) over the 25 year operational period (Scenario 1; [Variation Report](#)) plus PVA outputs.

Impact type	Age class	Estimated annual mortality (individuals)
Displacement	Adults	1.0
	Chicks	0.60
Total no. mortalities	Adults	1.00
	Chicks	0.60
CPS (95% CIs)		0.988 (0.869-1.120)
CGR (95% CIs)		1.000 (0.995-1.000)

8.3.3 The CPS of 0.988 reported for the in-isolation assessment translates as a 1% reduction in population size after 25 years compared to an unimpacted population (CI:0.869,1.120).

8.3.4 The CGR reported for the in-isolation assessment was 1.000 (CI: 0.995 – 1.000), which translates as <1% reduction in growth rate after 25 years compared to an unimpacted population.

8.3.5 Given the influence of the mass-survival relationship used in the seabORD analysis, we conclude that displacement mortalities are over-estimated.

8.3.6 In reaching its conclusion, the Scottish Ministers have considered the conservation objectives, the populations at the site, the predicted levels of impact and population

consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland. **The Scottish Ministers conclude that, there will be no adverse effect on the site integrity of the North Caithness Cliffs SPA in respect of the puffin qualifying interest as a result of the HWL Proposal in isolation.**

9 In-combination assessment

- 9.1 The Scottish Ministers have carried out an in-combination assessment to ascertain whether the HWL Proposal will have a cumulative effect with other plans or projects which, in combination, would have the potential to affect the qualifying interests of the North Caithness Cliffs SPA.
- 9.2 The Scottish Ministers have also considered whether any additional projects have been applied for or licensed since the 2023 AA was carried out and could adversely affect the Berriedale and Langwell Waters SAC, Endrick Water SAC, Faray and Holm of Faray SAC, Inner Hebrides and the Minches SAC, Little Gruinard River SAC, Langavat SAC, Moray Firth SAC, North Harris SAC, River Bladnoch SAC, River Borgie SAC, River Dee SAC, River Moriston SAC, River Naver SAC, River Oykel SAC, River South Esk SAC, River Spey SAC, River Tay SAC, River Teith SAC, River Thurso SAC, River Tweed SAC, Sanday SAC, Ailsa Craig SPA, Auskerry SPA, Buchan Ness to Collieston Coast SPA, Caithness and Sutherland Peatlands SPA, Calf of Eday SPA, Canna and Sanday SPA, Cape Wrath SPA, Copinsay SPA, East Caithness Cliffs SPA, Fair Isle SPA, Fetlar SPA, Flannan Isles SPA, Forth Islands SPA, Foula SPA, Fowlsheugh SPA, Handa SPA, Hermaness, Saxa Vord and Valla Field SPA, Hoy SPA, Marwick Head SPA, Mingulay and Berneray SPA, Mousa SPA, North Rona and Sula Sgeir SPA, Noss SPA, Rousay SPA, Rum SPA, Priest Island SPA, Ramna Stacks and Gruney SPA, St. Kilda SPA, Sule Skerry and Sule Stack SPA, Sumburgh Head SPA, Troup, Pennan and Lion's Heads SPA and West Westray SPA in combination with the HWL Proposal.
- 9.3 A review has been carried out of all the projects which currently have an active, or open application for, a marine licence, section 36 consent, European Protected Species licence or basking shark licence and associated AA which identified a likely significant effect on the qualifying interests of the same designated sites as are affected by the HWL Proposal.
- 9.4 Construction on the HWL Proposal is not likely to commence until at least April 2027 so any licences which expire before this date have been discounted. A number of licences to carry out periodic dredging of existing harbours including sea deposit of dredged material have also been issued; however, any impact from these projects will be minor and short term and therefore not have a significant contribution to in-combination effects with the HWL Proposal. There are also several active marine licences to deposit fish farms; however, effects from these projects are also minor and not likely to lead to significant in-combination effects with the HWL Proposal.

- 9.5 The identified projects (including those identified in the RIAA Addendum) have been separated into Moray Firth wind farms (Table 9), other North Sea wind farms (Table 10) and non-wind farm projects (Table 11).

Table 9: Wind farms in the Moray Firth which are considered in the in-combination assessment for the HWL Proposal

Project Name	Description
Beatrice Offshore Wind Farm	Operational wind farm, 13.5 km offshore in the outer Moray Firth, consisting of 84 turbines. An EPS licence for post consent benthic and geophysical surveys has also been issued. https://marine.gov.scot/ml/beatrice-offshore-windfarm
Moray East Offshore Wind Farm	Operational wind farm 22km from Caithness consisting of 100 turbines. https://marine.gov.scot/ml/moray-east-offshore-windfarm
Moray West Offshore Wind Farm	Under construction wind farm consisting of a maximum of 60 turbines off the Caithness coast. Expected to be operational by June 2025. https://marine.gov.scot/ml/moray-west-offshore-windfarm

Table 10: Wind farms in the wider North Sea area which are considered in the in-combination assessment for the HWL Proposal

Project Name	Description
Blyth Demo Phase 1	Operational wind farm consisting of 15 turbines
Dogger Bank A & B (formerly Creyke Beck) Dogger Bank C (formerly Teesside A)	Under construction wind farms consisting of a total of 277 turbines
Dudgeon	Operational wind farm consisting of up to 67 turbines
Dudgeon Extension	Application for up to 30 turbines
East Anglia One	Operational wind farm consisting of up to 240 turbines
East Anglia One North	Consented wind farm consisting of up to 67 turbines
East Anglia Two	Consented wind farm consisting of up to 75 turbines
East Anglia Three	Consented wind farm consisting of up to 100 turbines
EOWDC (Aberdeen Bay)	Operational wind farm consisting of 11 turbines. https://marine.gov.scot/ml/european-offshore-wind-deployment-centre

Forthwind Demonstration Project	Single test and demonstration turbine and met mast located approximately 1.5km from the shore at Methil in the Firth of Forth. https://marine.gov.scot/ml/forthwind-demonstration-project
Galloper	Operational wind farm consisting of up to 56 turbines
Greater Gabbard	Operational wind farm consisting of 140 turbines
Gunfleet Sands (1 and 2)	Operational wind farm consisting of up to 30 turbines
Hornsea One	Operational wind farm consisting of up to 240 turbines
Hornsea Two	Under construction wind farm consisting of up to 165 turbines
Hornsea Three	Consented wind farm consisting of up to 231 turbines
Hornsea Four	Consented wind farm consisting of up to 180 turbines
Humber Gateway	Operational wind farm consisting of up to 83 turbines
Hywind Scotland	Operational wind farm consisting of five 6MW floating turbines installed ~25km off the coast of Peterhead. https://marine.gov.scot/ml/hywind-scotland-pilot-park
Inch Cape	Consented wind farm consisting of up to 72 WTG 15-22km from the Angus coastline. https://marine.gov.scot/ml/inch-cape-offshore-windfarm-revised-design
Kentish Flats 1	Operational wind farm consisting of up to 30 turbines
Kentish Flats 2	Operational wind farm consisting of up to 17 turbines
Kincardine	Operational floating wind farm consisting of five 9.5MW turbines located about 8 miles to the south east of Aberdeen. https://marine.gov.scot/ml/kincardine-offshore-windfarm-0
Levenmouth Demonstration Turbine (Methil)	Site for the testing of new designs of offshore WTGs with a capacity of up to 7MW at the Fife Energy Park, Methil. One turbine operational. https://marine.gov.scot/ml/levenmouth-demonstration-turbine
Lincs, Lynn & Inner Dowsing	Operational wind farms consisting of up to 75 turbines (Lincs) and 54 turbines (Lynn & Inner Dowsing)
London Array	Operational wind farm consisting of up to 175 turbines
Neart na Gaoithe	Under construction wind farm consisting of up to 54 turbines located 15.5km east of Fife Ness in the Firth of Forth. https://marine.gov.scot/ml/neart-na-gaoithe-offshore-wind-farm-revised-design
Norfolk Boreas	Consented wind farm consisting of up to 158 turbines
Norfolk Vanguard	Consented wind farm consisting of up to 200 turbines
Race Bank	Operational wind farm consisting of 91 turbines
Rampion	Under construction wind farm consisting of up to 175 turbines
Scroby Sands	Operational wind farm consisting of 30 turbines
Seagreen & Seagreen 1a	Consented wind farm consisting of up to 150 turbines with 114 operational (known as Phase 1) located approximately 27km off the Angus coastline. https://marine.gov.scot/ml/seagreen-alpha-and-bravo-offshore-wind-farms

Sheringham Shoal	Operational wind farm consisting of 88 turbines
Sheringham Shoal Extension	Application for up to 23 turbines
Teesside	Operational wind farm consisting of 27 turbines
Thanet	Constructed wind farm consisting of 100 turbines
Triton Knoll	Operational wind farm consisting of 90 turbines
Westermost Rough	Operational wind farm consisting of 35 turbines

Table 11: Other non-wind farm projects which are considered in the in-combination assessment for the HWL Proposal

Project Name	Description
Cable Geophysical Surveys - Argyll Region	Geophysical surveys of 24 cables routes contained within 19 cable corridors, with a maximum total survey area of 211km ² . Surveys are expected to occur over a 280 day period and be complete by 31 July 2028. https://marine.gov.scot/node/24368
Cable Geophysical Surveys - North Coast and Orkney	Geophysical surveys of 24 cables routes contained within 17 cable corridors, with a maximum total survey area of 240km ² . Surveys are expected to occur over a 360 day period and be completed by 30 September 2028. https://marine.gov.scot/node/24821
Cable Geophysical Surveys - Outer Hebrides Marine Region	Geophysical surveys of 16 cable routes contained within 13 cable corridors, with a maximum total survey area of 260km ² . Surveys are expected to occur over a 173 day period and be completed by the end of September 2028. https://marine.gov.scot/node/23735
Cable Geophysical Surveys - West Highland Region	Geophysical surveys of 23 cables routes contained within 17 cable corridors, with a maximum total survey area of 517km ² . Surveys are expected to occur over a 411 day period and be completed by 15 June 2028. https://marine.gov.scot/node/24817
Cable Installation - Orkney to Mainland Scotland	Installation of a 53km HVAC cable from Warebeath, Orkney to Dounreay, Caithness within a 200m corridor. Horizontal directional drilling will be used at the landfalls. The cable will be trenched and buried where possible but, where burial can't be achieved, additional protection will be used. https://marine.gov.scot/ml/marine-licence-hvac-cable-orkney-mainland-scotland-06889
Cable Replacement – Pentland Firth East	Partial removal and replacement of existing faulted PFE (2) 33kV distribution submarine electricity cable across the Pentland Firth, landing at Rackwick Bay, Hoy, Orkney Islands and Murkle Bay, Thurso, Highland. https://marine.gov.scot/node/23287

Fair Isle Harbour Improvements	Upgrading a harbour to accommodate a new, larger ferry. This will involve 3000m ³ of rock armour, construction of a new quay (prefabricated concrete caissons backfilled with aggregate), expanding the existing breakwater and noust, replacing the old slipway with a new one 48m in length and improving/repairing the existing pier. Additionally, capital dredging and sea deposit of 5,340 wet tonnes of sediment will be required. https://marine.gov.scot/ml/fair-isle-harbour-improvement-works
Grutness Harbour Improvements	Piled extension to the existing pier, protected by rock armour. Additional rock armour being added to increase the height of the existing defences. https://marine.gov.scot/node/24591
Magallanes ATIR Tidal Turbine	A 1.5MW tidal turbine installed in Berth 1 at the EMEC Fall of Warness site in Orkney. It uses a further four temporary deployment sites around Scapa Bay, Shapinsay Sound and Deerness for maintenance activities. The device is fixed to the seabed using four gravity-based anchors. https://marine.gov.scot/node/24248
MeyGen Tidal Turbines	Tidal array in the Inner Sound of the Pentland Firth. Four turbines have been installed. Consent for phase 1b consisting of an additional four turbines has been granted but plans for the remaining 53 turbines have not yet been confirmed. https://marine.gov.scot/ml/meygen-tidal-energy-project
Nova Shetland Tidal Array, Bluemull Sound	Operational tidal turbine array consisting of up to 6 tidal turbines located in the Bluemull Sound, Shetland just offshore from the Ness of Cullivoe and between the islands of Yell and Unst. The Nova M100 device is a 100kW seabed mounted tidal turbine with a two blade rotor. Decommissioning of 3 of the tidal turbines was completed in October 2023 leaving only 3 turbines deployed. https://marine.gov.scot/ml/shetland-tidal-array
OpenHydro	A tidal research platform installed at Berth 4, Fall of Warness, EMEC, Orkney. The device was removed in 2022 and never replaced, leaving only the platform in situ. The current licence is to remove the platform. https://marine.gov.scot/node/24328

- 9.6 Marine licences have also been issued for maintenance of the M90 Friarton bridge, repairs to an existing slipway at Brough Bay and construction of a jetty and slipway at Scammalin Bay. However, these works are all small scale, and any residual impacts will be very localised, so will not contribute significantly to in-combination effects with the HWL Proposal and are not considered further.
- 9.7 Applications have been received for the Berwick Bank Offshore Wind Farm (“Berwick Bank”) consisting of 307 WTGs, 47.6km from the coast of East Lothian. A determination has not yet been made on the applications for this project however, the

AA has concluded that it will have an adverse effect on the site integrity of a number of qualifying interests of SPAs including kittiwake of the North Caithness Cliffs SPA. Berwick Bank can therefore only be consented if a derogation case is agreed, including compensatory measures to offset its impacts on those species/sites where the AA cannot conclude that there will be no adverse effect on site integrity. This means that if Berwick Bank is consented, the effects from Berwick Bank on these species/sites will be compensated for and on this basis will not be considered in the in-combination assessment. Berwick Bank will be considered in the in-combination assessment for those species/sites where it has a likely significant effect but no adverse effect on site integrity.

9.8 **Assessment of in-combination effects on the North Caithness Cliffs SPA**

9.8.1 A likely significant effect on the North Caithness Cliffs SPA was identified for the following projects:

- Berwick Bank Offshore Wind Farm (subject to note in section 9.7 above)
- Cable Geophysical Surveys - North Coast and Orkney
- Cable Installation - Orkney to Mainland Scotland
- Cable Replacement - Pentland Firth East
- Meygen Tidal Turbines
- Moray Firth wind farms (Table 9)
- North Sea wind farms (Table 10)

Kittiwake

9.8.2 HWL provides several scenarios for kittiwake in-combination impacts in the RIAA Addendum including the HWL Proposal in-combination with Moray Firth wind farms (scenario 2) and in-combination with North Sea wind farms (scenarios 3a-3d). The estimated impacts for these four North Sea scenarios are based on differences between as built and consented mortality estimates for the in-combination Collision Risk Modelling. Scenario 3a uses values from Hornsea 4 and East Anglia 1&2 EIA Reports, scenario 3b is based on the compilation of wind farm effects contained in the Inch Cape EIA Report, scenario 3c is based on the compilation of wind farm effects in the Inch Cape application information taking account of planned construction/built East Anglia 1 and Hornsea 1, and scenario 3d uses scenario c but is adjusted to enable the seasons assumed in the Biologically Defined Meaningful Population Scale (“BDMPS”) to match NatureScot guidance for apportioning impacts in the non-breeding season.

9.8.3 The RIAA Addendum uses these scenarios to calculate total in-combination impacts resulting from:

- HWL Proposal and Moray Firth wind farms (scenario 2)
- HWL Proposal and North Sea wind farms using scenarios a-d (scenario 3a-3d)

- HWL Proposal, Moray Firth wind farms and North Sea wind farms using scenarios a-d (scenario 4a-4d)
- 9.8.4 NatureScot's response of 20 December 2023 and the clarification response of 12 March 2024 highlight that scenarios 4c and 4d are the most pertinent and it therefore put the most weight on them.
- 9.8.5 Whilst NatureScot did not provide a conclusion on scenario 4d in its response of 20 December 2023. In its response of 12 March 2024, it emphasises that there is no substantive difference between scenarios c and d and confirms that its advice is the same for both scenario 4c and 4d.
- 9.8.6 The Scottish Ministers agree with NatureScot in emphasising that of the four scenarios, scenario 4d is the most reflective of contemporary information of realistic build and impacts and follows NatureScot guidance on BDMPS. Therefore, it is concluded that scenario 4d supersedes scenarios 4a, 4b and 4c.
- 9.8.7 For kittiwake, the AA follows NatureScot's advice that scenarios 4c and 4d are most pertinent and ultimately draws conclusions from scenario 4d. Scenario 4c is presented for context, with respect to the NatureScot advice received 20 December 2023 and 12 March 2024. The focus on scenario 4d is because this scenario assesses the HWL Proposal in combination with the Moray Firth offshore wind farms and the North Sea wind farms and utilises both the most up to date windfarm parameters and adheres to the NatureScot guidance on seasons to be used when apportioning impacts in the non-breeding season impacts. The other scenarios exclude some windfarms, do not use the most current windfarm scenario parameters, or do not apply the NatureScot guidance in relation to seasons when considering non-breeding season impacts. Scenarios 4a and 4b are not considered further in the AA.
- 9.8.8 NatureScot in its response of 20 December 2023, agreed with the conclusions of the Variation Report that the HWL Proposal in combination with Moray Firth Offshore Wind Farms (scenario 2) would result in no adverse effect on site integrity for kittiwake as a qualifying interest of the North Caithness Cliffs SPA.
- 9.8.9 However, NatureScot was in disagreement with the conclusions of the Variation Report for the HWL Proposal in combination with Moray Firth and other North Sea wind (scenarios 4a-c) and considered that there is potential for adverse effect on site integrity. Specifically considering scenario 4c which NatureScot considered to be the most pertinent, NatureScot expressed concern about the CPS of 0.905, but concluded that the upper range of the confidence interval for this metric (0.952) would result in no adverse effect on site integrity for kittiwake. On 12 March, NatureScot confirmed that its advice for scenarios 4c and 4d is the same.
- 9.8.10 RSPB Scotland, in its response of 12 December 2023, did not consider all the scenarios detailed in the RIAA Addendum and instead only considered the impact of the HWL Proposal in combination with Moray Firth and other North Sea wind farms

including Berwick Bank. In addition, RSPB Scotland did not inspect the inputs and other parameters of the modelling and instead focussed its advice on the outputs. RSPB Scotland considered that the impact from the HWL Proposal in combination with Moray Firth and other North Sea wind farms including Berwick Bank would impact the site integrity for kittiwake. The Scottish Ministers acknowledge RSPB Scotland's representation however are not considering Berwick Bank in the in-combination assessment for kittiwake at the North Caithness Cliffs SPA for the reasons given in section 9.7.

Table 12: Estimated annual kittiwake mortality at North Caithness Cliffs SPA from the HWL proposal for Scenario 4d over the 25 year operational period plus PVA outputs ([Variation Report](#)).

Impact type	Age class	Estimated annual mortality (individuals)
Displacement	Adults	5.00
	Chicks	21.60
Collision	Adults	22.65
	Immatures	13.28
Total no. mortalities	Adults	27.65
	Immatures	13.28
	Chicks	21.60
CPS (95% CIs)	-	0.909 (0.863-0.955)
CGR (95% CIs)	-	0.996 (0.995-0.998)

- 9.8.11 The scenario 4d CPS of 0.909 reported for the in-combination assessment translates as a 9% reduction in population size after 25 years compared to an unimpacted population (CI: 0.863 – 0.955). The equivalent values for scenario 4c were 0.905 (CI: 0.860 – 0.952).
- 9.8.12 The scenario 4d CGR reported for the in-combination assessment was 0.996 (CI: 0.995 – 0.998), which translates as a <1% reduction in growth rate after 25 years compared to an unimpacted population). The equivalent values for scenario 4c were 0.996 (CI: 0.994 – 0.998).
- 9.8.13 Given the influence of the mass-survival relationship used in the seabORD analysis, the Scottish Ministers conclude that displacement mortalities are over-estimated. In the absence of further quantification, the AA cannot determine how much influence that over-estimation has on the mortality values and subsequent PVA. However, the Scottish Ministers consider that there is likely to be a reduction in impact. Scenario 4d reports an upper CPS of 0.955 for the in-combination assessment, which translates to a 4.5% reduction in population size. Given the additional inference of the over-estimation of seabORD, the AA can conclude that the likely impact at this range is lower.

- 9.8.14 Given the over-precaution in the in-combination assessment, originating both from the variation in consented versus updated design plans for some English wind farms (see Table 5) and the potential for discrepancy of mortality used for assessment in the context of this variation (see Table 6), the Scottish Ministers conclude that collision mortality values are over-estimated. In the absence of further quantification, the Scottish Ministers cannot determine the magnitude of this difference, however, the Scottish Ministers consider that there is likely to be a reduction in impact.
- 9.8.15 In determining the in-combination impact to the kittiwake qualifying interest of the North Caithness Cliffs SPA, the AA can determine from the upper confidence interval of the CPS values there is no adverse effect on site integrity even in the presence of the over-estimated seabORD and collision mortality levels. This is in agreement with the advice from NatureScot dated 20 December 2023.
- 9.8.16 In determining the in-combination assessment for the kittiwake qualifying interest of the North Caithness Cliffs SPA, the Scottish Ministers consider the mean and lower confidence interval of the CPS value such that both would be reduced given the over-estimation of both displacement and collision effects.
- 9.8.17 The Scottish Ministers conclude that sufficient evidence exists for the over-estimation of effects, even in the absence of further quantification. The Scottish Ministers conclude no adverse effect on site integrity based on the median and upper confidence CPS values due to the precaution in the assessment resulting from the use of consented not planned windfarm parameters resulting in over-estimation of collision impacts, and the overestimation of displacement effects resulting from seabORD modelling and the use of a 2km buffer at HWL offshore wind farm.
- 9.8.18 In reaching its conclusion, the AA has considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland. **The Scottish Ministers conclude that there will be no adverse effect on the site integrity of the North Caithness Cliffs SPA in respect of the kittiwake qualifying interest as a result of the HWL Proposal in combination with other projects.**

Puffin

- 9.8.19 For puffin, two in-combination scenarios are reported in the RIAAAddendum. Scenario 2 is the Moray Firth Offshore Wind farms only, while scenario 3 is the HWL Proposal plus the Moray Firth Offshore Wind Farms.
- 9.8.20 This AA considers the in-combination scenario 3 from the Variation Report, including the HWL Proposal and Moray Firth Offshore Wind Farms.
- 9.8.21 NatureScot in its response of 20 December 2023, agreed with the conclusions of the Variation Report that the HWL Proposal in combination with the Moray Firth and other

North Sea wind farms would result in no adverse effect on site integrity for puffin as a qualifying interest of the North Caithness Cliffs SPA.

- 9.8.22 RSPB Scotland, in its response of 12 December 2023, did not comment specifically on the conclusions of the Variation Report that the HWL Proposal in combination with Moray Firth and other North Sea wind farms (excluding Berwick Bank) would result in no adverse effect on site integrity for puffin as a qualifying interest of North Caithness Cliffs SPA. RSPB Scotland commented only on in-combination effects including Berwick Bank. While not concluding separately for project-alone and in-combination scenarios, RSPB Scotland considered the proposal would result in a reduced impact on site integrity for puffin as a qualifying interest of the North Caithness Cliffs SPA compared to the Existing Consent.

Table 13: Estimated annual puffin mortality at North Caithness Cliffs SPA from the HWL proposal and Moray Firth offshore wind farms (Scenario 3) over the 25 year operational period plus PVA outputs (Pg 166, Table 3 [Variation Report](#)).

Impact type	Age class	Estimated annual mortality (individuals)
Displacement	Adults	3.90
	Chicks	2.40
Total no. mortalities	Adults	3.90
	Chicks	2.40
CPS	-	0.959 (0.828-1.110) *
CGR	-	0.998 (0.993-1.000)

* Two different CPS values are presented within the [Variation Report](#), with the AA based upon Technical Appendix D4: Marine Ornithology Population Modelling Table 6 (p274) rather than the value of 0.961 (0.827-1.105) presented in Technical Appendix D1: Marine Ornithology Modelling Results Summary ([Table 3 P166](#)).

- 9.8.23 The scenario 3 CPS of 0.959 reported for the in-combination assessment translates as a 4% reduction in population size after 25 years compared to an unimpacted population (CI: 0.828, 1.110).
- 9.8.24 The scenario 3 CGR reported for the in-combination assessment was 0.998 (CI: 0.993 – 1.000), which translates as a <1% reduction in growth rate after 25 years compared to an unimpacted population.
- 9.8.25 Given the influence of the mass-survival relationship used in the seabORD analysis, the Scottish Ministers conclude that the displacement mortalities are over-estimated. In the absence of further quantification, the AA cannot determine how much influence that over-estimation has on the mortality values and subsequent population viability analysis. However, the Scottish Ministers conclude there is likely to be a reduction in impact.

- 9.8.26 In reaching its conclusion, the AA has considered the conservation objectives, the populations at the site, the predicted levels of impact and population consequences of the predicted effects, the precaution in the assessment methods and the consultation responses from NatureScot and RSPB Scotland. **The Scottish Ministers conclude that there will be no adverse effect on the site integrity of the North Caithness Cliffs SPA in respect of the puffin qualifying interest as a result of the HWL Proposal in combination with other project.**

Other Qualifying Interests

- 9.8.27 The Scottish Ministers conclude that, providing any conditions of the AAs for all the above projects are adhered to, the conclusions of the 2023 AA are still valid, and any in-combination effects will not have an adverse effect on the site integrity of the North Caithness Cliffs SPA with respect to the fulmar, guillemot, peregrine, razorbill, and seabird assemblage qualifying interests.
- 9.9 **Assessment of in-combination effects on the Berriedale and Langwell Waters SAC, Endrick Water SAC, Little Gruinard River SAC, Langavat SAC, North Harris SAC, River Bladnoch SAC, River Borgie SAC, River Moriston SAC, River Naver SAC, River Oykel SAC, River Spey SAC, River Thurso SAC, Ailsa Craig SPA, Auskerry SPA, Caithness and Sutherland Peatlands SPA, Canna and Sanday SPA, Flannan Isles SPA, Mingulay and Berneray SPA, Mousa SPA, Rum SPA, Priest Island SPA, Ramna Stacks and Gruney SPA and St. Kilda SPA**
- 9.9.1 No projects were identified that could have a likely significant effect on the above SPAs in combination with the HWL Proposal that were not already assessed in the 2023 AA. Therefore, the Scottish Ministers confirm that the conclusion of the 2023 AA with respect to these sites is still valid in that there will be no adverse effect on site integrity from the HWL Proposal in combination with other projects.
- 9.10 **Assessment of in-combination effects on the Faray and Holm of Faray SAC, Inner Hebrides and the Minches SAC, Moray Firth SAC, River Dee SAC, River South Esk SAC, River Tay SAC, River Teith SAC, River Tweed SAC, Sanday SAC, Buchan Ness to Collieston Coast SPA, Calf of Eday SPA, Cape Wrath SPA, Copinsay SPA, East Caithness Cliffs SPA, Fair Isle SPA, Fetlar SPA, Forth Islands SPA, Foula SPA, Fowlsheugh SPA, Handa SPA, Hermaness, Saxa Vord and Valla Field SPA, Hoy SPA, Marwick Head SPA, North Rona and Sula Sgeir SPA, Noss SPA, Rousay SPA, Sule Skerry and Sule Stack SPA, Sumburgh Head SPA, Troup, Pennan and Lion's Heads SPA and West Westray SPA**
- 9.10.1 The following projects have been identified that were not assessed in the 2023 AA or have since been significantly varied and could have a likely significant effect on one or more of the above sites:
- Berwick Bank Offshore Wind Farm (subject to note in section 9.7 above)
 - Cable Geophysical Surveys - Argyll Region
 - Cable Geophysical Surveys - North Coast and Orkney

- Cable Geophysical Surveys - Outer Hebrides Marine Region
- Cable Geophysical Surveys - West Highland Region
- Fair Isle Harbour Improvements
- Grutness Harbour Improvements
- Magallanes ATIR Tidal Turbine
- Nova Shetland Tidal Array
- OpenHydro

9.10.2 The Scottish Ministers conclude that, providing any conditions of the AAs for all the above projects are adhered to, the conclusions of the 2023 AA are still valid, and any in-combination effects will not have an adverse effect on the site integrity of the above sites.

10 Scottish Ministers Conclusion

10.1 The Scottish Ministers conclude that the 2023 AA is still valid in its conclusion that there will be no adverse effect on the site integrity of the Berriedale and Langwell Waters SAC, Endrick Water SAC, Faray and Holm of Faray SAC, Inner Hebrides and the Minches SAC, Little Gruinard River SAC, Langavat SAC, Moray Firth SAC, North Harris SAC, River Bladnoch SAC, River Borgie SAC, River Dee SAC, River Moriston SAC, River Naver SAC, River Oykel SAC, River South Esk SAC, River Spey SAC, River Tay SAC, River Teith SAC, River Thurso SAC, River Tweed SAC, Sanday SAC, Ailsa Craig SPA, Auskerry SPA, Buchan Ness to Collieston Coast SPA, Caithness and Sutherland Peatlands SPA, Calf of Eday SPA, Canna and Sanday SPA, Cape Wrath SPA, Copinsay SPA, East Caithness Cliffs SPA, Fair Isle SPA, Fetlar SPA, Flannan Isles SPA, Forth Islands SPA, Foula SPA, Fowlsheugh SPA, Handa SPA, Hermaness, Saxa Vord and Valla Field SPA, Hoy SPA, Marwick Head SPA, Mingulay and Berneray SPA, Mousa SPA, North Rona and Sula Sgeir SPA, Noss SPA, Rousay SPA, Rum SPA, Priest Island SPA, Ramna Stacks and Gruney SPA, St. Kilda SPA, Sule Skerry and Sule Stack SPA, Sumburgh Head SPA, Troup, Pennan and Lion's Heads SPA and West Westray SPA either from the HWL proposal alone or in any in combination scenario providing the conditions of the 2023 AA are adhered to, subject to the amendment of the duration of the consent from 10 to 25 years. The conditions are reproduced in section 4 of this AA for the avoidance of doubt.

10.2 In relation to the North Caithness Cliffs SPA, the Scottish Ministers also conclude that the 2023 AA is still valid in its conclusions regarding the fulmar, guillemot, razorbill, and peregrine qualifying interests that there will be no adverse effect on the site integrity.

10.3 With respect to the puffin and kittiwake qualifying interests of the North Caithness Cliffs SPA, the Scottish Ministers have considered the assessment undertaken in this AA and conclude that there will be no adverse effect on site integrity from the HWL proposal in isolation or in combination with other projects.

- 10.4 In reaching its conclusions, the Scottish Ministers have given considerable weight to NatureScot advice. As such, divergence from NatureScot advice is limited to differing conclusions in relation to site integrity for kittiwake at North Caithness Cliffs SPA. In reaching a different conclusion, the Scottish Ministers consider that assessing the level of adverse impact to the site integrity of the North Caithness Cliffs SPA requires a subjective opinion to be formed after considering the assumptions used in compiling the relevant data. In reaching their own conclusions, the Scottish Ministers have taken account of the entire context of this assessment, in particular some of its precautionary assumptions, which make it unlikely the number of impacted individuals will be as large as the values presented in the assessment. For these reasons, the Scottish Ministers consider the levels of assessed impact to be reasonable and are convinced there will be no adverse effects on site integrity of the North Caithness Cliffs SPA.

SECTION 4: CONDITIONS

11 Requirement for conditions

- 11.1 The following conditions are required to ensure the HWL Proposal will not adversely affect the site integrity of any European sites including the North Caithness Cliffs SPA:

11.1.1 Duration of the Consent

The consent is valid from the date of this consent until 25 years from the date of Final Commissioning of the Development. Written confirmation of the date of Final Commissioning of the Development must be provided by the Company to the Scottish Ministers and to the Highland Council no later than one calendar month after this date.

11.1.2 Piling Strategy

If piling is to be undertaken, the Company must, no later than six months prior to the Commencement of the Development, submit a Piling Strategy ("PS"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot, and any such other advisors as may be required at the discretion of the Scottish Ministers. Commencement of the Development cannot take place until such approval is granted.

The PS must include, but not be limited to:

- a) Details of expected noise levels from pile-drilling/driving in order to inform point d) below;
- b) Full details of the proposed method and anticipated duration of piling to be carried out at all locations;
- c) Details of soft-start piling procedures and anticipated maximum piling energy required at each pile location; and

- d) Details of any mitigation such as Passive Acoustic Monitoring (“PAM”), Marine Mammal Observers (“MMO”), use of Acoustic Deterrent Devices (“ADD”) and monitoring to be employed during pile-driving, as agreed by the Scottish Ministers.

The PS must be in accordance with the Application and must also reflect any relevant monitoring or data collection carried out after submission of the Application. The PS must demonstrate the means by which the exposure to and/or the effects of underwater noise have been mitigated in respect to cetaceans, harbour seal, grey seal, and Atlantic salmon. The PS must, so far as is reasonably practicable, be consistent with the Environmental Management Plan (“EMP”), the Project Environmental Monitoring Programme (“PEMP”) and the Construction Method Statement (“CMS”).

Reason: To mitigate the underwater noise impacts arising from piling activity.