

Minister for Energy, Just Transition and Fair Work

**APPLICATION UNDER SECTION 36C OF THE ELECTRICITY ACT 1989 TO VARY THE CONSENT GRANTED UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 TO CONSTRUCT AND OPERATE THE PENTLAND FLOATING OFFSHORE WINDFARM, LOCATED 7.5 KILOMETRES (“KM”) OFF THE COAST OF DOUNREAY, CAITHNESS.**

**Priority and Purpose**

1. Immediate priority. The Developer requires a decision to enable them to apply for the Contracts for Difference Allocation Round 6 which closes on 19 April 2024.
2. To seek your approval to vary the section 36 (“s.36”) consent granted on 28 June 2023 to construct and operate the Pentland Floating Offshore Windfarm (“the Development”).

**Recommendation**

3. Recommends that you: agree to vary the s.36 consent for the Development, in accordance with s.36C of the Electricity Act 1989 (“the Electricity Act”), and on the basis that the requirements in the Electricity Generating Stations (Applicant for Variation of Consent) (Scotland) Regulations 2013 (“the Variation Regulations”) have been complied with.

**Context and Issues**

4. Consent for the Development was granted on 28 June 2023 under s.36 of the Electricity Act for a 10 year operational period (“the Existing Consent”). An application was made by Highland Wind Limited (“the Company”) on 11 October 2023 to vary the Existing Consent as follows (“the Variation Application”):
  - Reduce the number of Wind Turbine Generators (“WTGs”) from seven to six;
  - Reduce the WTG footprint area from 10 squared kilometres (“km<sup>2</sup>”) to 5.85 km<sup>2</sup>. This comprises the area of sea surface occupied by the WTGs and associated floating substructure, excluding the mooring lines;
  - Reduce the rotor swept area from 316,673 squared metres (“m<sup>2</sup>”) to 283,448 m<sup>2</sup>. This comprises the installation of one WTG with rotor diameter up to 220 m and five WTGs with rotor diameter up to 250 m;
  - Reduce the number of floating substructures from seven to six;
  - Reduce the number of mooring lines from 63 to 54;
  - Reduce the number of anchors or piles from 63 to 54; and,
  - Extend the operational life of the Development from 10 to 25 years;
5. Prior to receiving the Variation Application, the Scottish Ministers adopted a screening opinion on 15 September 2023 under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 and (in respect of the associated marine licence variation applications) the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (together “the EIA Regulations”). The screening opinion concluded that the Variation Application does not require Environmental Impact Assessment (“EIA”) (as defined in the EIA Regulations).

6. Alongside the Variation Application the Company provided a Report to Inform the Appropriate Assessment Addendum (“RIAA Addendum”) summarising the remodelling and reassessment undertaken in relation to marine ornithology in respect of the proposed variation.
7. In addition to the Variation Application the Company has also requested a variation to the associated generating station marine licence and the offshore transmission works marine licence to align the proposed design refinements within the associated marine licences and to amend several licence conditions. This will be considered separately under the Marine (Scotland) Act 2010 (“the 2010 Act”).
8. The Existing Consent was subject to an Appropriate Assessment (“AA”), completed on 7 June 2023. A new AA (“the 2024 AA”) has been undertaken in respect of the Variation Application. In line with the Conservation (Natural Habitats, &c.) Regulations 1994 (in respect of the associated marine licence variation applications) and the Conservation of Habitats and Species Regulations 2017 (together “the Habitats Regulations”), it has been concluded that the Variation Application will not result in an adverse impact on site integrity (“AESI”) on any European site (either alone or in-combination with other plans or projects).

### **Options Considered and Advice**

9. Under s.36C(4) of the Electricity Act, the Scottish Ministers will exercise judgement as to whether any variation sought is appropriate, having regard (in particular) to:
  - (a) The applicant’s reasons for seeking the variation;
  - (b) The variations proposed;
  - (c) Any objections made to the proposed variations, the views of consultees and the outcome of any public inquiry.
10. The Variation Application seeks to refine the design parameters of the Development and to extend the operational life of the Development from the consented 10 years to 25 years, as detailed above.
11. The Company states that the rationale for the proposed variation is to ensure that the benefits of the Development are realised, both in terms of facilitating the development of floating offshore wind and the contribution of the Development to UK and Scottish climate targets and that, as a test and demonstrator project, the Development will facilitate the development of floating offshore wind farms in Scotland, the UK and worldwide. Furthermore, it states that the design refinements proposed in the Variation Application will ensure that the environmental effects of the Development are minimised, wherever possible, while enabling the Development to remain cost effective and deliver the lowest cost of energy to consumers.
12. The proposals in the Variation Application do not fundamentally alter the scale and/or nature of the Development and there will be no changes in the boundary of the Development.
13. Officials consider that you can be satisfied that, in this circumstance, the changes proposed are appropriate to be authorised (having regard to the variation proposed, the reasons for the variation, and the views of the consultees) in line with the requirements of the Electricity Act. Furthermore, you can be satisfied that the requirements of the Variation Regulations and the Scottish Government Applications for Variation of Section 36 Consents Guidance published in May 2019 have been complied with.
14. Consideration of any representations made concerning the proposed variations and recommendation not to cause a public inquiry are outlined in the following paragraphs.

## Assessment of Options

15. Twenty-four representations concerning the Variation Application were received during the consultation period. One formal objection was raised by a member of the public, and two consultees raised concerns which are summarised below. A full summary of the consultation responses and how they have been addressed are detailed in Annex A.
16. NatureScot largely agreed with the conclusions in the RIAA Addendum. In its review of the Population Viability Analysis (“PVA”) modelling provided for displacement and collision effects on puffin as a qualifying interest of the North Caithness Cliffs Special Protected Area (“SPA”) over a 25 year operational period, NatureScot advised, that in its view, there would be no AESI from the project alone or in combination with Moray Firth wind farms. In its review of the PVA modelling provided for displacement and collision effects on kittiwake as a qualifying interest of the North Caithness Cliffs SPA over a 25 year operational period, NatureScot disagreed with the conclusions of the RIAA Addendum. NatureScot advised, that in its view, there was the potential for AESI from the project in combination with North Sea wind farms and Moray Firth wind farms. Additionally, NatureScot advised, that in its view, there would be AESI for the project in-combination scenarios with Berwick Bank Wind Farm (“Berwick Bank”) if Berwick Bank is consented.
17. RSPB Scotland advised that it had not had the 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 Development in combination with the Moray Firth and North Sea wind farms, including Berwick Bank 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 AESI. RSPB Scotland did not provide a specific view on the impact of the Development in isolation, or for any of the other in combination scenarios discussed in the RIAA Addendum. In relation to the puffin qualifying interest, RSPB Scotland noted that in comparison to the Existing Consent, the Development would be beneficial, resulting in a lower impact.
18. A determination has not yet been made on the Berwick Bank consent applications. However, the Berwick Bank AA has concluded that it will have an AESI 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 by Scottish Ministers. This would include sufficient compensatory measures to offset its impacts on those species/sites where AESI cannot be ruled out. Consequently, should Berwick Bank be consented, the impacts from Berwick Bank on these species/sites will be compensated for and therefore in respect of these species/sites, we have taken the view not to include these in the in-combination assessment of the 2024 AA.
19. The 2024 AA considers the Variation Application, RIAA Addendum and consultee representations in particular those of NatureScot and RSPB Scotland. The 2024 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 areas of uncertainty and precaution in the assessment within the Variation Application. In particular those derived from the seabORD analysis, which it is concluded represent an over-estimation of displacement effects and the substantial reduction in the number of turbines to be constructed at five English windfarms compared to the number assessed in the Variation Application. Both of which will likely lead to a reduction in collision mortality. The 2024 AA conclusions also consider the implications of the outbreaks of Highly Pathogenic Avian Influenza in wild birds since 2021.

20. The 2024 AA concluded that there was sufficient evidence in respect of the over-estimation of effects to conclude that the Development would not adversely affect the site integrity of any Special Area of Conservation or SPA either in isolation or in combination with other projects. In reaching its conclusions, considerable weight was given to the NatureScot advice. Divergence from the advice is limited to differing conclusions in relation to site integrity for kittiwake at North Caithness Cliffs SPA in combination with North Sea wind farms and Moray Firth wind farms. In reaching a different conclusion, the 2024 AA considered that 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 data. The 2024 AA has taken account of the entire context of the assessment, in particular some of its precautionary assumptions, which make it unlikely that the number of kittiwake mortalities will be as large as the values presented in the assessment within in the Variation Application. Further detail is provided in Annex D.
21. A member of the public submitted a holding objection to the Variation Application (both a personal letter and a letter from their consultant) raising a number of concerns, including in relation to the change to the operational period of the Development; assessment of onshore infrastructure; consideration of significant grid connections and transmission; consideration of the proposed West of Orkney offshore wind farm; sustainability of and needs case for the Development; marine ecology; visual effects and comparative wirelines provided; and consideration of the Highland Wide Development Plan and National Planning Framework 4 (“NPF4”). The public representation concluded that it considered that the Company has failed to meet requirements in the Electricity Act and that the Variation Application is not in accordance with the Highland Wide Development Plan, particularly in respect of NPF4. MD-LOT has fully considered the concerns raised, alongside representations received from other stakeholders, including NatureScot and the Highland Council, and public representations with further detail provided in Annex A, section 1.7, and is content that they do not prevent approval of the Variation Application.
22. Before determining a variation application, in accordance with the Electricity Act and the Variation Regulations, Scottish Ministers may cause a public inquiry to be held if it is deemed appropriate to do so. Having considered the representations received and all other material considerations, officials recommend that it is appropriate not to cause a public inquiry to be held.

### **Bute House Agreement Implications**

23. Approval of the Variation Application is related to the commitment in the Bute House Agreement to manage the potential impacts on marine biodiversity alongside the growth of the marine renewables and offshore wind sectors in a proportionate manner.

### **Financial and Legal Considerations**

24. The Variation Application was made in accordance with the Electricity Act and the Variation Regulations. The legislative requirements of the Variation Regulations regarding publication and notification of s.36 variation applications have been met. Further information on the legislative requirements and how these have been satisfied can be found in Annexes A and B. An AA in respect of the Variation Application per the Habitats Regulations has been undertaken which can be found at Annex D.
25. While concerns have been raised by two stakeholders, NatureScot and the RSPB, in relation to the Variation Application, SGLD is satisfied that the concerns have been considered in the AA and notes that a different conclusion has been reached based on interpretation of the

scientific data. The additional issues raised by the member of the public who has objected to the Variation Application have also been appropriately considered in the decision-making process.

### **Sensitivities**

26. An assessment of the objection and concerns raised in respect of the Variation Application are detailed in paragraphs 15-22 above. No further sensitivities have been identified.

### **Quality Assurance**

27. This Submission has been approved by Iain Wallace, Deputy Director for Marine Directorate's Operations Portfolio.

### **Conclusions and next Steps**

28. Should the Minister choose to approve the Variation Application, a draft decision notice is attached in Annex C, which MD-LOT will finalise and issue to the Company on the Minister's behalf.

29. MD-LOT will exercise discretion, on behalf of the Scottish Ministers, under section 30(7) of the Marine Scotland Act 2010 to vary the generating station marine licence and the offshore transmission works marine licence attached to the Development as requested by the Company and to ensure consistency between the s.36 consent and the marine licences for the Development.

30. In order for the determination process to be fully open and transparent, MD-LOT recommends that this submission is published on the [Marine Scotland Information](#) website, alongside the Existing Consent and the Variation Application documentation.

Ben Walker  
Marine Directorate Licensing Operations Team

<b>Cabinet Secretaries and Ministers Copy List</b>	<b>For Action</b>	<b>For Information Portfolio interest</b>	<b>For Information Constituency interest</b>	<b>For Information General awareness</b>
Minister for Energy, Just Transition and Fair Work	X			
Cabinet Secretary for Wellbeing Economy, Net Zero and Energy		X		
Cabinet Secretary for Rural Affairs, Land Reform and Islands		X		
Minister for Green Skills, Circular Economy and Biodiversity		X		

### **Officials Copy List**

DG Economy  
 DG Net Zero  
 Director of Marine Directorate  
 Ian Wallace, Deputy Director Marine Directorate  
 Mike Palmer, Deputy Director Marine Directorate  
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 Julie Miller, Marine Directorate  
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 Kersti Berge, Energy Directorate  
 Andrew Hogg, Energy Directorate  
 David Moffat, Legal Directorate  
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 Alison Presly, Legal Directorate  
 Neil MacLeod, Legal Directorate  
 Stewart Cunningham, Legal Directorate  
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 Joan McHutchison, Legal Directorate  
 Leanne Dobson, Special Adviser  
 Callum McCaig, Special Adviser  
 Communications – Net Zero and Rural Affairs  
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## **ANNEX A Background and Consultation**

### **1.1 Background Information**

- 1.1.1 On 28 June 2023, the Scottish Ministers granted consent under section 36 (“s.36”) of the Electricity Act 1989 (“the Electricity Act”) for the construction and operation of the offshore generating station known as the Pentland Floating Offshore Wind Farm (“the Development”) located approximately 7.5 kilometres (“km”) from the coast of Dounreay, Caithness, with a generating capacity of around 100 Megawatts (“MW”) for a 10 year operational period (“the Existing Consent”).
- 1.1.2 On 11 October 2023, the Scottish Ministers received an application from Highland Wind Limited (“the Company”) under section 36C(1) of the Electricity Act in accordance with the Electricity Generating Stations (Applications for Variation of Consent) (Scotland) Regulations 2013 (“the Variation Regulations”) to vary its Existing Consent (“the Variation Application”). The Variation Application seeks to refine the design parameters of the Development by: reducing the number of Wind Turbine Generators (“WTGs”) and floating substructures from seven to six, reducing the WTG footprint area from 10 square kilometres (“km<sup>2</sup>”) to 5.85 km<sup>2</sup>, reducing the rotor swept area from 316,673 square meters (“m<sup>2</sup>”) to 283,448 m<sup>2</sup>, reducing the number of mooring lines and anchors/ piles from 63 to 54, and to extend the operational life of the Development from 10 to 25 years.
- 1.1.3 The Company stated that extending the operational life of the Development from 10 to 25 years will facilitate the development of floating offshore wind in Scotland, the UK and worldwide. The Company states that the innovations and technology trialled in the delivery of the Development will also be key to advancing the deployment of large-scale floating offshore wind in the UK (this includes the floating capacity allocated under the ScotWind and Innovation and Targeted Oil and Gas leasing rounds).
- 1.1.4 The Company stated that the refinement of the offshore design parameters will ensure that the environmental effects of the Development are minimised, wherever possible, while enabling the Development to remain cost effective and deliver the lowest cost of energy to consumers.
- 1.1.5 The Company has also applied for a variation to the associated generating station marine licence and offshore transmission works marine licence to align the proposed design refinements within the associated marine licences and to amend several marine licence conditions.

### **1.2 Application Documentation**

- 1.2.1 The Company submitted the following Variation Application documentation, which was issued for consultation on 20 October 2023:
- Section 36 Consent and Marine Licence Variation Application Report, including a request to vary the Existing Consent, updated assessment on seascape, landscape and visual and ornithological receptors and Report to Inform Appropriate Assessment Addendum
- 1.2.2 Full details of the consultation undertaken are set out below.



### 1.3 **Application publication, notification, and consultation**

1.3.1 In accordance with regulation 4 of the Variation Regulations, the Company:

- Placed the Variation Application documentation on the [application website](#) alongside a link to the Existing Consent;
- Served copies of the Variation Application on the Highland Council; and,
- Placed public notices relating to the Variation Application in the John O' Groats Journal for two successive weeks and for one week each in the Edinburgh Gazette, the Scotsman, Lloyds List and Fishing News Bulletin.

1.3.2 Marine Directorate - Licensing Operations Team ("MD-LOT") consulted a wide range of interested parties on the Variation Application including the Highland Council, NatureScot, Maritime Coastguard Agency ("MCA"), Northern Lighthouse Board ("NLB"), Scottish Environment Protection Agency ("SEPA") and Historic Environment Scotland ("HES") and placed the Variation Application documentation on the [Marine Scotland Information](#) website alongside the Existing Consent.

### 1.4 **Summary of consultation process**

1.4.1 Several of the consultees had no comments to make or did not provide a response to the consultation. In the case of no response, MD-LOT notified the relevant consultees that "nil returns" would be assumed.

1.4.2 Consultees and local authorities did not raise any formal objections; however, comments were submitted. Summaries of the comments received from the consultees are presented in section [1.5](#). Section [1.8](#) lists all consultees who made no representation.

1.4.3 A formal objection was received from a member of the public in relation to the Variation Application.

1.4.4 Copies of the full consultation representations received have been made available on the Pentland Floating Offshore Wind Farm page on the [Marine Scotland Information](#) website.

### 1.5 **Summary of consultation responses**

1.5.1 The following consultees raised no objections to the Variation Application.

#### 1.5.2 Aberdeen and Glasgow Airports

Aberdeen and Glasgow Airports had no comment to make on the Variation Application.

#### 1.5.3 Chamber of Shipping

The Chamber of Shipping had no objection to the Variation Application.

#### 1.5.4 Department of Agriculture, Environment and Rural Affairs ("DAERA")

DAERA submitted a nil response to the Variation Application.

#### 1.5.5 Food Standards Scotland

Food Standards Scotland commented that it is the responsibility of the operator to comply with environmental legislation to mitigate any potential impact on species and or fisheries products present in the surrounding area of the Development.

Food Standards Scotland reiterated previous advice that the Company should follow relevant guidance notes and regulations to mitigate any unacceptable effects on the human food chain from the emissions from this installation.

#### 1.5.6 Highlands and Islands Airports Limited (“HIAL”)

HIAL commented that its advice on the Existing Consent remained the same. Provided that the Company has an approved Construction Strategy Plan, HIAL has no objection. A condition is attached to the Existing Consent requiring the Company to submit a Construction Method Statement (“CMS”) to Scottish Ministers for its approval prior to the commencement of the Development which MD-LOT considers serves this purpose.

#### 1.5.7 Historic Environment Scotland (“HES”)

HES confirmed the Variation Application will not have significant impacts on heritage assets within its remit and that it had no comments to make.

#### 1.5.8 Inshore Fisheries Groups (“IFGs”) – North and East Coast Regional Inshore Fisheries Group

IFGs – North and East Coast Regional Inshore Fisheries Group had no comments to make on the Variation Application.

#### 1.5.9 Joint Radio Company

Joint Radio Company confirmed the Development is cleared with respect to radio link infrastructure operated by the local energy networks. Joint Radio Company notes that should any details of the Development change, particularly the disposition or scale of any WTGs, it will be necessary to re-evaluate the Development.

#### 1.5.10 MCA

The MCA had no objection to the Variation Application on the basis that all maritime safety legislation is followed, and the Existing Consent conditions are adhered to.

#### 1.5.11 National Air Traffic Services (“NATS”)

NATS had no objection to the Variation Application.

#### 1.5.12 NatureScot

NatureScot largely agreed with the conclusions in the Report to Inform the Appropriate Assessment Addendum (“RIAA Addendum”). In its review of the Population Viability Analysis (“PVA”) modelling provided for displacement and collision effects on puffin as a qualifying interest of the North Caithness Cliffs Special Protection Area (“SPA”) over a 25 year operational period, NatureScot advised, that in its view, there would be no adverse effect on site integrity (“AESI”) from the project alone or in combination with

Moray Firth wind farms. In its review of the PVA modelling provided for displacement and collision effects on kittiwake as a qualifying interest of the North Caithness Cliffs SPA over a 25 year operational period, NatureScot disagreed with the conclusions of the RIAA Addendum. NatureScot advised, that in its view, there was the potential for AESI from the project in combination with North Sea wind farms and Moray Firth wind farms. Additionally, NatureScot advised, that in its view, there would be AESI for the project in-combination scenarios with Berwick Bank Wind Farm (“Berwick Bank”) if Berwick Bank is consented.

MD-LOT notes that a determination has not yet been made on the Berwick Bank consent applications. However, the Berwick Bank Appropriate Assessment (“AA”) has concluded that it will have an AESI for 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 by Scottish Ministers. This would include sufficient compensatory measures to offset its impacts on those species/sites where AESI cannot be ruled out. Consequently, should Berwick Bank be consented, the impacts from Berwick Bank on these species/sites will be compensated for and therefore in respect of these species/sites, MD-LOT has taken the view not to include these in the in-combination assessment of the AA undertaken in respect of the Variation Application (“2024 AA”).

The 2024 AA considers the Variation Application, RIAA Addendum and consultee representations in particular those of NatureScot and RSPB Scotland. The 2024 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 areas of uncertainty and precaution in the assessment within the Variation Application. In particular those derived from the seabORD analysis, which it is concluded represent an over-estimation of displacement effects and the substantial reduction in the number of turbines to be constructed at five English windfarms compared to the number assessed in the Variation Application. Both of which will likely lead to a reduction in collision mortality. The 2024 AA conclusions also consider the implications of the outbreaks of Highly Pathogenic Avian Influenza in wild birds since 2021.

The 2024 AA concluded that there was sufficient evidence in respect of the over-estimation of effects to conclude that the Development would not adversely affect the site integrity of any Special Area of Conservation or SPA either in isolation or in combination with other projects. In reaching its conclusions, considerable weight was given to the NatureScot advice. Divergence from the advice is limited to differing conclusions in relation to site integrity for kittiwake at North Caithness Cliffs SPA in combination with North Sea wind farms and Moray Firth wind farms. In reaching a different conclusion, the 2024 AA considered 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 data. The 2024 AA has taken account of the entire context of the assessment, in particular some of its precautionary assumptions, which make it unlikely that the number of kittiwake mortalities will be as large as the values presented in the assessment within the Variation Application. Further detail is provided in Annex D.

Regarding the Seascape, Landscape and Visual Impact Assessment (“SLVIA”), NatureScot noted the Variation Application presents a reduction in impacts of the appearance of the Development when compared to the Existing Consent. NatureScot does not consider there to be any adverse significant effects on nationally important landscape interests.

1.5.13 NLB

The NLB had no objection to the Variation Application.

1.5.14 Orkney Harbours

Orkney Harbours submitted a nil response to the Variation Application.

1.5.15 Orkney Islands Council

Orkney Islands Council submitted a nil response to the Variation Application.

1.5.16 Royal Yachting Association (“RYA”) Scotland

RYA Scotland had no comments to make on the Variation Application.

1.5.17 RSPB Scotland

RSPB Scotland advised that it had not had the 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 Development in combination with the Moray Firth and North Sea wind farms, including Berwick Bank 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 AESI. RSPB Scotland did not provide a specific view on the impact of the Development in isolation, or for any of the other in combination scenarios discussed in the RIAA Addendum. In relation to the puffin qualifying interest, RSPB Scotland noted that in comparison to the Existing Consent, the Development would be beneficial, resulting in a lower impact.

MD-LOT highlights that the 2024 AA concludes no AESI on any European site (either alone or in-combination with other plans or projects) and refers to paragraph 1.5.12 of this annex for further narrative.

1.5.18 Scottish Canoe Association

Scottish Canoe Association had no comments to make on the Variation Application.

1.5.19 Scottish Fishermen’s Federation (“SFF”)

SFF submitted a nil response to the Variation Application.

1.5.20 Scottish Water

Scottish Water had no objections to the Variation Application.

1.5.21 Scrabster Harbour

Scrabster Harbour had no comments to make on the Variation Application.

1.5.22 SEPA

SEPA noted the Existing Consent condition regarding the requirement to submit a Particle Management Plan. SEPA did not provide any further site specific advice but highlighted its [standing advice](#). The Scottish Ministers consider that the relevant points from the standing advice on marine non-native species, good working practices, pollution prevention, the conservation of water bodies and decommissioning are covered by the Existing Consent.

#### 1.5.23 The Highland Council

The Highland Council had no objection to the Variation Application.

### 1.6 **Advice from third parties.**

#### 1.6.1 Transport Scotland – Roads

Transport Scotland – Roads had no objection to the Variation Application.

### 1.7 **The following consultees raised objections to the Variation Application.**

#### 1.7.1 Public Representation

A member of the public submitted a holding objection to the Variation Application (both a personal letter and a letter from their consultant). It was noted that the individual's property interests will likely be adversely affected, and that the individual has a wider interest in protecting the unique environment of Caithness. The representation noted that this objection should be read alongside the objection they submitted in respect of the Existing Consent, and raised a number of concerns, including in relation to the change to the operational period of the Development; assessment of onshore infrastructure; consideration of significant grid connections and transmission; consideration of the proposed West of Orkney offshore wind farm ("WOOWF"); sustainability of the Development; the needs case for the Development; marine ecology concerns; visual effects and comparative wirelines provided; and consideration of the Highland Wide Development Plan and National Planning Framework 4 ("NPF4"). The public representation concluded that it considered that the Company has failed to meet requirements in the Electricity Act in respect of adequate mitigation and that the Variation Application is not in accordance with the Highland Wide Development Plan, particularly in respect of NPF4.

1.7.2 The Company provided representation on the above objection noting that potential impacts of the Variation Application have an equal or reduced effect on environmental receptors when compared to the application for the Existing Consent ("Original Application"). It noted that onshore aspects are not considered within the Variation Application as no design changes are proposed to the onshore works, or to the operational life proposed for onshore infrastructure and that the potential impacts from the 'whole project' were assessed within the Original Application, including the Environmental Impact Assessment Report. With regards to WOOWF, the Company noted that this was not included in quantitative assessments as this was beyond the cut-off date agreed with MD-LOT and NatureScot with information unavailable to input into modelling assessments at this time. The Company highlighted that as impacts are now reduced compared to the application for the Existing Consent, the WOOWF assessment will be worst case in terms of including the Development in its cumulative assessment. With regards to sustainability of and need for the Development, the Company referred to the Planning and Policy Statement and Climate Change and Carbon Assessment

provided in support of the Original Application, noting that the proposed increase in the operational period of the Development would increase carbon savings. With regards to visual effects, the Company noted that the wirelines were produced in line with relevant guidance and that NatureScot had confirmed in its representation that the Variation Application presents a reduction in impacts of the appearance of the Development when compared to the consented project and there will not be any adverse significant effects on nationally important landscape interests.

1.7.3 MD-LOT has considered the above alongside representations received from other stakeholders, including NatureScot and the Highland Council. MD-LOT has reviewed its considerations on NPF4 in respect of the Existing Consent and considers that these continue to apply to the Variation Application. MD-LOT is content that the objection raised by the public representation has been addressed, that the Variation Application is compliant with the relevant legislation and that the concerns raised would not require approval of the Variation Application to be withheld.

## 1.8 Nil responses

1.8.1 The following consultees did not respond to the consultation and therefore nil responses have been assumed:

Angling Orkney	Association of Salmon Fishery
Brimms – Open Hyrdo	British Telecom (“BT”)
Civil Aviation Authority	Caithness Chamber of Commerce
Caithness District Salmon Fishery Board	Caithness Kayak Club
Caithness and Sutherland Visitor Attraction Group	Develop Durness Group
Dounreay Site Restoration Limited	Dounreay Stakeholder Group
Highlands and Islands Enterprise	IFGs – Orkney
IFGs – National	Marine Safety Forum
Meygen	Marine Planning and Policy
Northern District Salmon Fishery Board	North Shore Surf Club
Nuclear Decommissioning Authority	Orkney Ferries
Orkney Islands Sea Angling Association	Orkney Islands Council Marine Services
Orkney Sailing Club	Pentland Firth Yacht Club
Reay Golf Club	Scottish Creel Fishermen’s Federation
Scottish Fishermen’s Organisation	Scottish Government Planning and Architecture Division
Scottish Sea Farms	Scottish Sub Aqua Club

Scottish Surfers Federation	Scottish Wildlife Trust
Scrabster Fishery Office	Seafish
Sport Scotland	Surfers Against Sewage
Transport Scotland – Ports and Harbours	The Crown Estate
Visit Scotland	Whale and Dolphin Conservation
Wick Harbour	Caithness West Community Council
Melvich Community Council	Strathy and Armadale Community Council
Thurso Community Council	Castletown Community Council
Ministry of Defence – Defence Infrastructure Organisation (“MOD – DIO”)	Fisheries Management Scotland
National Trust	Scottish Canoe Association

## **ANNEX B Legislative Requirements**

### **1.1 Electricity Act Consenting and Variations**

- 1.1.1 Persons holding a section 36 consent (“s.36”) under the Electricity Act 1989 (“the Electricity Act”) may apply to the appropriate authority (in Scotland this is the Scottish Ministers) for a variation of their s.36 consent under s.36C of the Electricity Act.
- 1.1.2 The application procedure for varying a s.36 consent is set out in the Electricity Generating Stations (Applications for Variation of Consent) (Scotland) Regulations 2013 (“the Variation Regulations”).
- 1.1.3 The variation process is designed to apply to projects that have been consented under s.36, concerning the construction, extension or operation of electricity generating stations. This process is applied when the holder of a s.36 consent wishes to change aspects of their s.36 consent. The Scottish Government Applications for Variation of Section 36 Consents Guidance (published in May 2019) (“the Variation Guidance”) considers that the variation process is not intended as a way of authorising any change in a developer’s plans that would result in a generating station that would be fundamentally or substantially different in terms of scale and/or nature from what is authorised by the existing consent.
- 1.1.4 Under section 36C(4) of the Electricity Act, the Scottish Ministers may make variations to a consent as appear to them to be appropriate, having regard in particular to the company’s reasons for seeking the variation, the variation proposed, the views of consultees, any objections made to the proposed variation and the outcome of any public inquiry.
- 1.1.5 Highland Wind Limited (“the Company”) in its application to vary the s.36 consent for the construction and operation (“the Variation Application”) of the Pentland Floating Offshore Wind Farm (“the Development”), states that the rationale behind the proposed amendments is to ensure that the benefits of the Development are realised, both in terms of facilitating the development of floating offshore wind and the contribution of the Development to UK and Scottish Climate targets and that, as a test and demonstrator project, the Development will facilitate the development of floating offshore wind farms in Scotland, the UK and worldwide. Furthermore, it states that the design refinements proposed in the Variation Application will ensure that the environmental effects of the Development are minimised, wherever possible, while enabling the Development to remain cost effective and deliver the lowest cost of energy to consumers.
- 1.1.6 The variation proposed in the Variation Application does not fundamentally alter the nature or scale of the Development and there will be no changes to the Development boundary. Officials consider that you can be satisfied that, in this circumstance, the changes proposed are appropriate to be authorised by means of the variation procedure in line with the Electricity Act, the Variation Regulations, and the Variation Guidance
- 1.1.7 Objections to the Variation Application have been fully considered as set out in Annex A and Annex C. No public inquiry has been held.

### **1.2 Environmental Impact Assessment**

- 1.2.1 The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (“the 2017 EW Regulations”) provide that environmental impact assessment (“EIA”) is



required in relation to variation applications where the proposed changes are likely to have significant adverse effects on the environment.

- 1.2.2 Prior to receiving the Variation Application, the Scottish Ministers adopted a screening opinion on 15 September 2023 under the 2017 EW Regulations and the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (in reference to the associated marine licence variation applications) (together “the EIA Regulations”), which concluded that the Variation Application did not require EIA (as defined in the EIA Regulations)

### **1.3 Appropriate Assessment**

- 1.3.1 Regulation 48(1) of the Conservation (Natural Habitats, &c.) Regulations 1994 and regulation 63(1) of the Conservation of Habitats and Species Regulations 2017 (together “the Habitats Regulations”) require that before deciding to undertake, or give any consent, permission or other authorisation for a plan or project, a competent authority must make an appropriate assessment of the implications of the plan or project for the site in view of that site’s conservation objectives where it:

- a) is likely to have a significant effect on a European site (either alone or in combination with other plans or projects); and
- b) is not directly connected with or necessary to the management of the site.

- 1.3.2 An appropriate assessment (“AA”) under the Habitats Regulations was completed in June 2023 in respect of the application for the existing consent (“the 2023 AA”). The 2023 AA concluded that there would be no adverse effect on the site integrity of the Special Protection Area (“SPA”) and Special Areas of Conservation assessed either in isolation or in combination with other plans or projects. A new AA has been undertaken in respect of the Variation Application under the Habitats Regulations (“the 2024 AA”). The 2024 AA concludes that the Variation Application will not result in an adverse effect on site integrity on any European site (either alone or in-combination with other plans or projects).

### **1.4 Marine Licence Variation**

- 1.4.1 At the same time as the Variation Application, the Company applied to vary the marine licences for the Development under section 30(7) of the Marine (Scotland) Act 2010. The application to vary the offshore generating station marine licence requested changes to reflect amendments to the s.36 consent. The application to vary the offshore transmission infrastructure marine licence requested only an increase in lifespan from 10 to 25 years.
- 1.4.2 If the Variation Application for the s.36 consent is granted, MD-LOT, on behalf of Scottish Ministers, will also vary the marine licences in line with the consent variation.

### **1.5 Summary and conclusions**

- 1.5.1 MD-LOT considers that the legislative requirements set out above have been complied with throughout the process of determining the Variation Application.

## ANNEX C Draft Decision Notice and Proposed Variation

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



Mr Richard Copeland  
Highland Wind Limited  
4<sup>th</sup> Floor,  
115 George Street,  
Edinburgh,  
EH2 4JN

### DATE

Dear Mr Copeland,

### **APPLICATION UNDER SECTION 36C OF THE ELECTRICITY ACT 1989 TO VARY THE CONSENT GRANTED UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 ON 28 JUNE 2023 TO CONSTRUCT AND OPERATE THE PENTLAND FLOATING OFFSHORE WIND FARM, APPROXIMATELY 7.5 KILOMETRES (“KM”) FROM THE COAST OF DOUNREAY, CAITHNESS.**

I refer to the application to vary the consent for the Pentland Floating Offshore Wind Farm (“the Development”). This application (“the Variation Application”) was made by Highland Wind Limited (“the Company”) on 11 October 2023 for:

A variation under section 36C of the Electricity Act 1989 (“the Electricity Act”) to the consent granted under section 36 (“s.36”) of the Electricity Act on 28 June 2023 (“the Existing Consent”) for the construction and operation of the Development located approximately 7.5 km from the coast of Dounreay, Caithness.

**This letter contains the Scottish Ministers’ decision to vary the Existing Consent.**

#### **1 Nature of the Variation Sought**

1.1 The Variation Application seeks to vary Annex 1 of the Existing Consent granted on the 28 June 2023 to allow the following:

- Reduce the number of Wind Turbine Generators (“WTGs”) from seven to six;
- Reduce the WTG footprint area from 10 square kilometres (“km<sup>2</sup>”) to 5.85 km<sup>2</sup>. This comprises the area of sea surface occupied by the WTGs and associated floating substructure, excluding the mooring lines;
- Reduce the rotor swept area from 316,673 square metres (“m<sup>2</sup>”) to 283,448 m<sup>2</sup>. This comprises the installation of one WTG with rotor diameter up to 220 m and five WTGs with rotor diameter up to 250 m;
- Reduce the number of floating substructures from seven to six;
- Reduce the number of mooring lines from 63 to 54;
- Reduce the number of anchors or piles from 63 to 54; and,
- Extend the operational life of the Development from 10 to 25 years;

1.2 In addition to the Variation Application, a request was made to vary the generating station marine licence and the offshore transmission works marine licence. This request was made to align the refinements proposed in the Variation Application within the associated marine licences and to amend several licence conditions across both licences. This has been considered separately under the Marine (Scotland) Act 2010 (“the 2010 Act”).

## 2 Environmental Impacts

2.1 The Scottish Ministers are satisfied that the Variation Application will not have significant effects on the environment.

2.2 The Scottish Ministers have considered the following:

- Regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 (“the 1994 Habitats Regulations”) (in respect of the associated marine licence variation applications),
- Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (“the 2017 Habitats Regulations”),
- the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (“the 2017 EW Regulations”), and
- the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (“the 2017 MW Regulations”) (in respect of the associated marine licence variation applications).

2.3 The Scottish Ministers do not consider that the proposed changes within the Variation Application will alter the conclusions of the Environmental Impact Assessment Report supporting the application for s.36 consent in August 2022 (“the Original Application”). In accordance with the requirements set out in the 2017 EW Regulations and the 2017 MW Regulations, the Scottish Ministers did not deem it necessary for a new Environmental Impact Assessment report to be submitted in support of the Variation Application.

2.4 An appropriate assessment (“AA”) under the 1994 Habitats Regulations and the 2017 Habitats Regulations (“the Habitats Regulations”) was completed in June 2023 in respect of the application for the Existing Consent (“the 2023 AA”). The Scottish Ministers have reviewed the 2023 AA and have carried out a new AA (“the 2024 AA”) under the Habitats Regulations with regards to the Variation Application given the Variation Application seeks to extend the operational life of the Development from 10 to 25 years. The 2024 AA concludes that the Variation Application will not result in an adverse effect on site integrity (“AESI”) on any European site (either alone or in-combination with other plans or projects).

## 3 Consultation

3.1 Regulation 4 of the Electricity Generating Stations (Applications for Variation of Consent) (Scotland) Regulations 2023 (“the Variation Regulations”) provides that an applicant must publish a variation application relating to an offshore generating station on a website, serve a copy of the variation application on the planning authority, and also advertise the application by public notices in specified publications.

3.2 In line with Regulation 4, the Company served notice of the Variation Application on the Highland Council. The Company published the Variation Application documentation on its [website](#), public notices were placed in the John O’ Groats Journal for two successive weeks

and for one week each in the Edinburgh Gazette, the Scotsman, Lloyds List and Fishing News Bulletin.

3.3 Marine Directorate - Licensing Operations Team (“MD-LOT”) on behalf of the Scottish Ministers, consulted a wide range of relevant organisations on the Variation Application including: the Highland Council, NatureScot, Maritime Coastguard Agency (“MCA”), Northern Lighthouse Board (“NLB”), Scottish Environment Protection Agency (“SEPA”) and Historic Environment Scotland (“HES”) and placed the Variation Application documentation on the [Marine Scotland Information](#) website alongside the Existing Consent.

3.4 A summary of the representations is provided below, including consideration of the public representation objecting to the Variation Application received by MD-LOT. Several organisations did not provide a response. In the case of no response, MD-LOT notified the relevant consultees that “nil response” would be assumed.

**The following consultees raised no objections to the Variation Application.**

3.5 Aberdeen and Glasgow Airports

Aberdeen and Glasgow Airports had no comment to make on the Variation Application.

3.6 Chamber of Shipping

The Chamber of Shipping had no objection to the Variation Application.

3.7 Department of Agriculture, Environment and Rural Affairs (“DAERA”)

DAERA submitted a nil response to the Variation Application.

3.8 Food Standards Scotland

Food Standards Scotland commented that it is the responsibility of the operator to comply with environmental legislation to mitigate any potential impact on species and or fisheries products present in the surrounding area of the Development.

Food Standards Scotland reiterated previous advice that the Company should follow relevant guidance notes and regulations to mitigate any unacceptable effects on the human food chain from the emissions from this installation.

3.9 Highlands and Islands Airports Limited (“HIAL”)

HIAL commented that its advice on the Existing Consent remained the same. Provided that the Company has an approved Construction Strategy Plan HIAL has no objection. A condition is attached to the Existing Consent requiring the Company to submit a Construction Method Statement to Scottish Ministers for its approval prior to the commencement of the Development which the Scottish Ministers consider serves this purpose.

3.10 Historic Environment Scotland (“HES”)

HES confirmed the Variation Application will not have significant impacts on heritage assets within its remit and that it had no comments to make.

### 3.11 Inshore Fisheries Groups (“IFGs”) – North and East Coast Regional Inshore Fisheries

IFGs – North and East Coast Regional Inshore Fisheries Group had no comments to make on the Variation Application.

### 3.12 Joint Radio Company

Joint Radio Company confirmed the Development is cleared with respect to radio link infrastructure operated by the local energy networks. Joint Radio Company notes that should any details of the Development change, particularly the disposition or scale of any WTGs, it will be necessary to re-evaluate the Development.

### 3.13 MCA

The MCA had no objection to the Variation Application on the basis that all maritime safety legislation is followed, and the Existing Consent conditions are adhered to.

### 3.14 National Air Traffic Services (“NATS”)

NATS had no objection to the Variation Application.

### 3.15 NatureScot

NatureScot largely agreed with the conclusions in the Report to Inform the Appropriate Assessment Addendum (“RIAA Addendum”). In its review of the Population Viability Analysis (“PVA”) modelling provided for displacement and collision effects on puffin as a qualifying interest of the North Caithness Cliffs Special Protection Area (“SPA”) over a 25 year operational period, NatureScot advised, that in its view, there would be no AESI from the project alone or in combination with Moray Firth wind farms. In its review of the PVA modelling provided for displacement and collision effects on kittiwake as a qualifying interest of the North Caithness Cliffs SPA over a 25 year operational period, NatureScot disagreed with the conclusions of the RIAA Addendum. NatureScot advised, that in its view, there was the potential for AESI from the project in combination with North Sea wind farms and Moray Firth wind farms. Additionally, NatureScot advised, that in its view, there would be AESI for the project in-combination scenarios with Berwick Bank Wind Farm (“Berwick Bank”) if Berwick Bank is consented.

The Scottish Ministers note that a determination has not yet been made on the Berwick Bank consent applications. However, the Berwick Bank Appropriate Assessment (“AA”) has concluded that it will have an AESI 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 by Scottish Ministers. This would include sufficient compensatory measures to offset its impacts on those species/sites where AESI cannot be ruled out. Consequently, should Berwick Bank be consented, the impacts from Berwick Bank on these species/sites will be compensated for and therefore in respect of these species/sites, the Scottish Ministers have taken the view not to include these in the in-combination assessment of the 2024 AA undertaken in respect of the Variation Application.

The 2024 AA considers the Variation Application, RIAA Addendum and consultee representations in particular those of NatureScot and RSPB Scotland. The 2024 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 areas of uncertainty and precaution in the assessment within the Variation Application. In particular those derived from the seabORD analysis, which it is concluded represent an over-estimation of displacement effects and the substantial reduction in the number of turbines to be constructed at five English windfarms compared to the number assessed in the Variation Application. Both of which will likely lead to a reduction in collision mortality. The 2024 AA conclusions also consider the implications of the outbreaks of Highly Pathogenic Avian Influenza in wild birds since 2021.

The 2024 AA concluded that there was sufficient evidence in respect of the over-estimation of effects to conclude that the Development would not adversely affect the site integrity of any Special Area of Conservation or SPA either in isolation or in combination with other projects. In reaching its conclusions, considerable weight was given to the NatureScot advice. Divergence from the advice is limited to differing conclusions in relation to site integrity for kittiwake at North Caithness Cliffs SPA in combination with North Sea wind farms and Moray Firth wind farms. In reaching a different conclusion, the 2024 AA considered that assessing the level of adverse impact to the site integrity of the North Caithness Cliffs SPA requires is a subjective opinion to be formed after considering the assumptions used in compiling the data. The 2024 AA has taken account of the entire context of the assessment, in particular some of its precautionary assumptions, which make it unlikely that the number of kittiwake mortalities will be as large as the values presented in the assessment within the Variation Application.

Regarding the Seascape, Landscape and Visual Impact Assessment (“SLVIA”), NatureScot noted the Variation Application presents a reduction in impacts of the appearance of the project when compared to the Existing Consent. NatureScot does not consider there to be any adverse significant effects on nationally important landscape interests.

The Scottish Ministers are content that the concerns raised by NatureScot have been properly considered and do not prevent the Variation Application being approved.

3.16 NLB

The NLB had no objection to the Variation Application.

3.17 Orkney Harbours

Orkney Harbours submitted a nil response to the Variation Application.

3.18 Orkney Islands Council

Orkney Islands Council submitted a nil response to the Variation Application.

3.19 Royal Yachting Association (“RYA”) Scotland

RYA Scotland had no comments to make on the Variation Application.

3.20 Royal Society for the Protection of Birds (“RSPB”) Scotland

RSPB Scotland advised that it had not had the 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 Development in combination with the Moray Firth and

North Sea wind farms, including Berwick Bank 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 AESI. RSPB Scotland did not provide a specific view on the impact of the Development in isolation, or for any of the other in combination scenarios discussed in the RIAA Addendum. In relation to the puffin qualifying interest, RSPB Scotland noted that in comparison to the Existing Consent, the Development would be beneficial, resulting in a lower impact.

The Scottish Ministers highlight that the 2024 AA undertaken in respect of the Variation Application concludes no AESI on any European site (either alone or in-combination with other plans or projects) and refer to paragraph 4.11 of this decision notice for further narrative.

The Scottish Ministers are content that the concerns raised by RSPB Scotland have been properly considered and do not prevent the Variation Application being approved.

### 3.21 Scottish Canoe Association

Scottish Canoe Association had no comments to make on the Variation Application.

### 3.22 Scottish Fishermen's Federation ("SFF")

SFF submitted a nil response to the Variation Application.

### 3.23 Scottish Water

Scottish Water had no objections to the Variation Application.

### 3.24 Scrabster Harbour

Scrabster Harbour had no comments to make on the Variation Application.

### 3.25 SEPA

SEPA noted the Existing Consent condition regarding the requirement to submit a Particle Management Plan. SEPA did not provide any further site specific advice but highlighted its [standing advice](#). The Scottish Ministers consider that the relevant points from the standing advice on marine non-native species, good working practices, pollution prevention, the conservation of water bodies and decommissioning are covered by the Existing Consent.

### 3.26 The Highland Council

The Highland Council had no objection to the Variation Application.

## **Public Representations.**

3.27 A member of the public submitted a holding objection to the Variation Application (both a personal letter and a letter from their consultant). It was noted that the individual's property interests will likely be adversely affected, and that the individual has a wider interest in protecting the unique environment of Caithness. The representation noted that this objection should be read alongside the objection they submitted in respect of the Existing Consent, and raised a number of concerns, including in relation to the change to

the operational period of the Development; assessment of onshore infrastructure; consideration of significant grid connections and transmission; consideration of the proposed West of Orkney offshore wind farm (“WOOWF”); sustainability of the Development; the needs case for the Development; marine ecology concerns; visual effects and comparative wirelines provided; and consideration of the Highland Wide Development Plan and National Planning Framework 4 (“NPF4”). The public representation concluded that it considered that the Company has failed to meet requirements in the Electricity Act in respect of adequate mitigation and that the Variation Application is not in accordance with the Highland Wide Development Plan, particularly in respect of NPF4.

The Company provided representation on the above objection noting that potential impacts of the Variation Application have an equal or reduced effect on environmental receptors when compared to the application for the Existing Consent. It noted that onshore aspects are not considered within the Variation Application as no design changes are proposed to the onshore works, or to the operational life proposed for onshore infrastructure and that the potential impacts from the ‘whole project’ were assessed within the Original Application, including the Environmental Impact Assessment Report. With regards to WOOWF, the Company noted that this was not included in quantitative assessments as this was beyond the cut-off date agreed with MD-LOT and NatureScot with information unavailable to input into modelling assessments at this time. The Company highlighted that as impacts are now reduced compared to the application for the Existing Consent, the WOOWF assessment will be worst case in terms of including the Development in its cumulative assessment. With regards to sustainability of and need for the Development, the Company referred to the Planning and Policy Statement and Climate Change and Carbon Assessment provided in support of the Original Application, noting that the proposed increase in the operational period of the Development would increase carbon savings. With regards to visual effects, the Company noted that the wirelines were produced in line with relevant guidance and that NatureScot had confirmed in its representation that the Variation Application presents a reduction in impacts of the appearance of the Development when compared to the consented project and there will not be any adverse significant effects on nationally important landscape interests.

3.28 The Scottish Ministers have considered the above alongside representations received from other stakeholders, including NatureScot and the Highland Council. The Scottish Ministers have reviewed their considerations of NPF4 in respect of the Existing Consent and consider that these continue to apply to the Variation Application. The Scottish Ministers are content that the objection raised by the public representation has been addressed, that the Variation Application is compliant with the relevant legislation and that the concerns raised would not prevent the Variation Application being approved.

### **Advice from Third Parties**

3.29 Transport Scotland – Roads

Transport Scotland – Roads had no objection to the Variation Application.

## **4 The Scottish Ministers’ Determination**



4.1 The Scottish Ministers have considered the Variation Application documentation, all responses from consultees and public representations, and advice from Transport Scotland. Having granted consent (the Existing Consent) for the Development on 28 June 2023 and provided their reasons for doing so in the decision letter associated with that consent and being satisfied that the changes proposed in the Variation Application do not fundamentally alter the nature or scale of the Development, the Scottish Ministers are content to vary the Existing Consent.

4.2 The Scottish Ministers consider that the proposed variation is appropriate, having regard to the variation proposed, the reasons for the variation and the views of the consultees.

4.3 Accordingly, the Scottish Ministers hereby vary the Existing Consent as set out in the table below.

Annex	Variation
<p><b>In Annex 1 of the Pentland Floating Offshore Wind Farms.36 Consent</b></p>	<p><b>For:</b></p> <p><b>DESCRIPTION OF THE DEVELOPMENT</b></p> <p>The Application is for the construction and operation of an offshore energy generating station, with a generating capacity of around 100 megawatts (“MW”). The offshore generating station shall be comprised of up to:</p> <ol style="list-style-type: none"> <li>1. Seven floating offshore wind turbine generators (“WTGs”) with:               <ol style="list-style-type: none"> <li>a. A maximum hub height of 190 metres (“m”) above highest astronomical tide (“HAT”);</li> <li>b. A maximum height to blade tip of 300m above HAT;</li> <li>c. A maximum rotor diameter of 260m;</li> <li>d. A minimum blade tip clearance from mean sea level of 35m;</li> </ol> </li> <li>2. Seven associated floating substructures;</li> <li>3. Nine mooring lines for each floating substructure, 63 in total;</li> <li>4. Nine anchors or piles for each floating substructure, 63 in total;</li> <li>5. Seven inter-array cables (dynamic and static); and</li> <li>6. Associated scour and cable protections.</li> </ol> <p>All as described in the Application.</p> <p>The total area within the Development site boundary is 10km<sup>2</sup>. The location and boundary of the Development site is shown in Figure 1 of Annex 1.</p> <p><b>Substitute:</b></p> <p>The Application is for the construction and operation of an offshore energy generating station, with a generating capacity of around 100</p>

	<p>megawatts (“MW”). The offshore generating station shall be comprised of up to:</p> <ol style="list-style-type: none"> <li>1. Five floating offshore wind turbine generators (“WTGs”) with: <ol style="list-style-type: none"> <li>a. A maximum hub height of 190 metres (“m”) above highest astronomical tide (“HAT”),</li> <li>b. A maximum height to blade tip of 300m above HAT,</li> <li>c. A maximum rotor diameter of 250m, and,</li> <li>d. A minimum blade tip clearance from mean sea level of 35m;</li> </ol> </li> <li>2. One floating offshore WTG with: <ol style="list-style-type: none"> <li>a. A maximum hub height of 190m above HAT,</li> <li>b. A maximum height to blade tip of 300m above HAT,</li> <li>c. A maximum rotor diameter of 220m, and,</li> <li>d. A minimum blade tip clearance from mean sea level of 35m;</li> </ol> </li> <li>3. Six associated floating substructures;</li> <li>4. Nine mooring lines for each floating substructure, 54 in total;</li> <li>5. Nine anchors or piles for each floating substructure, 54 in total;</li> <li>6. Seven inter-array cables (dynamic and static);</li> <li>7. Associated scour and cable protections;</li> </ol> <p>and, except to the extent modified by the foregoing, all as described in the Application and the Variation Application and by the conditions imposed by the Scottish Ministers. References to “the Development” in this consent shall be construed accordingly.</p> <p>The total area within the Development site boundary is 10 square kilometres (km<sup>2</sup>) of which up to 5.85km<sup>2</sup> will comprise the WTG Footprint Area. The location and boundary of the Development site is shown in Figure 1 of Annex 1.</p>
<p><b>In Annex 2 of the Pentland Floating Offshore Wind Farm s.36 Consent</b></p>	<p><b>For:</b></p> <p><b>1. Duration of the Consent</b></p> <p>The consent is valid from the date of this consent until 10 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.</p> <p><i>Reason: To define the duration of the consent.</i></p> <p><b>7. Implementation in accordance with approved plans and requirements of this consent</b></p> <p>Except as otherwise required by the terms of this consent, the Development must be constructed and operated in accordance with this consent, the Application, the Environmental Impact Assessment</p>

Report (“the EIA Report”) submitted by the Company, and any other documentation and information lodged in support of the Application.

**Reason: To ensure that the Development is carried out in accordance with the approved details.**

## **18. Cable Plan**

The Company must, no later than six months prior to the Commencement of the Development, submit an updated CaP, in writing, to the Scottish Ministers for their written approval. Commencement of the Development cannot take place until such approval is granted. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot, MCA, SFF, and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The CaP must be in accordance with the Application.

The CaP must include, but not be limited to, the following:

- a) The location, duration and cable laying techniques for cables;
- b) The results of monitoring or data collection work (including geophysical, geotechnical, and benthic surveys) which will help inform cable routing;
- c) Technical specification of the cables, including a desk based assessment of attenuation of electro-magnetic field strengths and shielding;
- d) A Cable Burial Risk Assessment (“CBRA”) to ascertain burial depths and where necessary alternative protection measures;
- e) Methodologies for post construction and operational surveys (e.g. over trawl) of the cables where mechanical protection of cables laid on the sea bed is deployed; and
- f) Methodologies for cable inspection with measures to address and report to the Scottish Ministers any exposure of cables.

Any consented cable protection works must ensure existing and future safe navigation is not compromised. The Licensing Authority will accept a maximum of 5% reduction in surrounding depth referenced to Chart Datum. Any greater reduction in depth must be agreed in writing by the Licensing Authority.

## **21. Particle Management Plan**

Not later than six months prior to the commencement of the works, a Particles Management Plan (“PMP”) shall be submitted to the Scottish Ministers for their written approval in consultation with the Scottish Environment Protection Agency (“SEPA”);

The PMP shall be consistent with the Application and supporting documents and shall include, but not be limited to, the following:

- a) A programme of scheduled monitoring for radioactive particles;

- b) The measures to be taken to reduce the likelihood of irradiated fuel particles in sediment being suspended or disturbed; and
- c) A waste management plan for the construction phase of the development.

There shall be no Commencement of the Development unless and until the PMP is approved in writing by the Scottish Ministers, in consultation with SEPA;

Any proposed amendment to the approved PMP shall be submitted, in writing, to the Scottish Ministers for its written approval, in consultation with SEPA. The proposed amendment shall be submitted to the Scottish Ministers no later than 6 months prior to the anticipated implementation of the proposed amendment (or such shorter period as may be agreed with the Scottish Ministers in writing). No amendment to the PMP shall take effect unless and until approved in writing by the Scottish Ministers in consultation with SEPA;

The PMP and any amended PMP shall thereafter be implemented in full.

## **22. Television and Radio Reception Mitigation Plan**

The Company must, no later than six months prior to the Commencement of the Development, submit a Radio and Television Reception Mitigation Plan to the Scottish Ministers for approval, in consultation with the Highland Council. The Radio and Television Reception Mitigation Plan shall provide for a baseline radio and television reception survey to be carried out prior to the installation of any turbine forming part of the Development. The results of the baseline radio and television reception survey shall be submitted to the Highland Council prior to the installation of any turbine forming part of the Development.

The approved Radio and Television Reception Mitigation Plan shall be implemented in full.

Any claim by any person regarding radio or television interference at their house, business premises or other building, made during the period from installation of any turbine forming part of the Development to the date falling twelve months after the Date of Final Commissioning shall be investigated by a qualified engineer and the results of the investigation shall be considered against the approved plan and submitted to the Highland Council.

Should any impairment to the radio or television signal be attributable to the Development, the impairment shall be remedied so that the standard of reception at the affected property is equivalent to the baseline radio or television reception.

***Reason:*** To mitigate any potential impacts on radio and television reception.

## **27. Environmental Clerk of Works**

Prior to the Commencement of the Development, the Company must at its own expense, and with the approval of the Scottish Ministers in consultation with NatureScot, appoint an independent Environmental Clerk of Works (“ECoW”). The ECoW must be appointed in time to review and approve the draft version of the first plan or programme submitted under this consent to the Scottish Ministers, in sufficient time for any pre-construction monitoring requirements, and remain in post until a date agreed by the Scottish Ministers. The terms of appointment must also be approved by the Scottish Ministers in consultation with NatureScot.

The terms of the appointment must include, but not be limited to:

- a) Quality assurance of final draft versions of all plans and programmes required under this marine licence;
- b) Responsible for the monitoring and reporting of compliance with the marine licence conditions and the environmental mitigation measures for all wind farm infrastructure;
- c) Provision of on-going advice and guidance to the Company in relation to achieving compliance with conditions, including but not limited to the conditions relating to and the implementation of the CMS, the EMP, the PEMP, the CaP and the VMP;
- d) Provision of reports on point b & c above to the Scottish Ministers at timescales to be determined by the Scottish Ministers;
- e) Induction and toolbox talks to onsite construction teams on environmental policy and procedures, including temporary stops and keeping a record of these;
- f) Monitoring that the Development is being constructed in accordance with the plans and this consent, the Application and in compliance with all relevant regulations and legislation;
- g) Reviewing and reporting incidents/near misses and reporting any changes in procedures as a result to the Scottish Ministers; and
- h) Agreement of a communication strategy with the Scottish Ministers.

## **28. Fisheries Liaison Officer**

Prior to the Commencement of the Development, a Fisheries Liaison Officer (“FLO”), must be appointed by the Company and approved, in writing, by the Scottish Ministers, following consultation with SFF. The FLO must be appointed by the Company for the period from Commencement of the Development until the Final Commissioning of the development. The identity and credentials of the FLO must be included in the EMP (referred to in condition 12). The FLO must establish and maintain effective communications between the Company, any contractors or sub-contractors, fishermen and other users of the sea during the construction of the Development and ensure compliance with best practice guidelines whilst doing so.

The responsibilities of the FLO must include:

- a) Establishing and maintaining effective communications between the Company, any contractors or sub-contractors, fishermen and other users of the sea concerning the overall Development and any amendments to the EMP and site environmental procedures;
- b) The provision of information relating to the safe operation of fishing activity on the site of the Development; and
- c) Ensuring that information is made available and circulated in a timely manner to minimise interference with fishing operations and other users of the sea.

**Substitute:**

### **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.

**Reason:** *To define the duration of the consent.*

### **7. Implementation in accordance with approved plans and requirements of this consent**

Except as otherwise required by the terms of this consent, the Development must be constructed and operated in accordance with this consent, the Application, the Environmental Impact Assessment Report (“the EIA Report”) submitted by the Company, any other documentation and information lodged in support of the Application, and the Variation Application.

**Reason:** *To ensure that the Development is carried out in accordance with the approved details.*

### **18. Cable Plan**

The Company must, no later than six months prior to the Commencement of the Development, submit an updated CaP, in writing, to the Scottish Ministers for their written approval. Commencement of the Development cannot take place until such approval is granted. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot, MCA, SFF, and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The CaP must be in accordance with the Application.

The CaP must include, but not be limited to, the following:

- a) The location, duration and cable laying techniques for cables;
- b) The results of monitoring or data collection work (including geophysical, geotechnical, and benthic surveys) which will help inform cable routing;
- c) Technical specification of the cables, including a desk based assessment of attenuation of electro-magnetic field strengths and shielding;
- d) A Cable Burial Risk Assessment (“CBRA”) to ascertain burial depths and where necessary alternative protection measures;
- e) Methodologies for post construction and operational surveys (e.g. over trawl) of the cables where mechanical protection of cables laid on the sea bed is deployed; and
- f) Methodologies for cable inspection with measures to address and report to the Scottish Ministers any exposure of cables.

Any consented cable protection works must ensure existing and future safe navigation is not compromised. The Licensing Authority will accept a maximum of 5% reduction in surrounding depth referenced to Chart Datum. Any greater reduction in depth must be agreed in writing by the Licensing Authority.

**Reason:** *To mitigate any potential impacts on the environmental interests during construction and operation.*

## **21. Particle Management Plan**

Not later than six months prior to the commencement of the works, a Particles Management Plan (“PMP”) shall be submitted to the Scottish Ministers for their written approval in consultation with the Scottish Environment Protection Agency (“SEPA”);

The PMP shall be consistent with the Application and supporting documents and shall include, but not be limited to, the following:

- a) A programme of scheduled monitoring for radioactive particles;
- b) The measures to be taken to reduce the likelihood of irradiated fuel particles in sediment being suspended or disturbed; and
- c) A waste management plan for the construction phase of the development.

There shall be no Commencement of the Development unless and until the PMP is approved in writing by the Scottish Ministers, in consultation with SEPA;

Any proposed amendment to the approved PMP shall be submitted, in writing, to the Scottish Ministers for its written approval, in consultation with SEPA. The proposed amendment shall be submitted to the Scottish Ministers no later than 6 months prior to the anticipated implementation of the proposed amendment (or such shorter period as may be agreed with the Scottish Ministers in writing). No amendment to the PMP shall take effect unless and until approved in writing by the Scottish Ministers in consultation with SEPA;

The PMP and any amended PMP shall thereafter be implemented in full.

**Reason:** *To mitigate any potential impacts on the environmental and human health interests during construction and operation.*

## **22. Radio and Television Reception Mitigation Plan**

The Company must, no later than six months prior to the Commencement of the Development, submit a Radio and Television Reception Mitigation Plan to the Scottish Ministers for approval, in consultation with the Highland Council. The Radio and Television Reception Mitigation Plan shall provide for a baseline radio and television reception survey to be carried out prior to the installation of any turbine forming part of the Development. The results of the baseline radio and television reception survey shall be submitted to the Highland Council prior to the installation of any turbine forming part of the Development.

The approved Radio and Television Reception Mitigation Plan shall be implemented in full.

Any claim by any person regarding radio or television interference at their house, business premises or other building, made during the period from installation of any turbine forming part of the Development to the date falling twelve months after the Date of Final Commissioning shall be investigated by a qualified engineer and the results of the investigation shall be considered against the approved plan and submitted to the Highland Council.

Should any impairment to the radio or television signal be attributable to the Development, the impairment shall be remedied so that the standard of reception at the affected property is equivalent to the baseline radio or television reception.

**Reason:** *To mitigate any potential impacts on radio and television reception.*

## **27. Environmental Clerk of Works**

Prior to the Commencement of the Development, the Company must at its own expense, and with the approval of the Scottish Ministers in consultation with NatureScot, appoint an independent Environmental Clerk of Works (“ECoW”). The ECoW must be appointed in time to review and approve the draft version of the first plan or programme submitted under this consent to the Scottish Ministers, in sufficient time for any pre-construction monitoring requirements, and remain in post until a date agreed by the Scottish Ministers. The terms of appointment must also be approved by the Scottish Ministers in consultation with NatureScot.



The terms of the appointment must include, but not be limited to:

- a) Quality assurance of final draft versions of all plans and programmes required under this marine licence;
- b) Responsible for the monitoring and reporting of compliance with the marine licence conditions and the environmental mitigation measures for all wind farm infrastructure;
- c) Provision of on-going advice and guidance to the Company in relation to achieving compliance with conditions, including but not limited to the conditions relating to and the implementation of the CMS, the EMP, the PEMP, the CaP and the VMP;
- d) Provision of reports on point b & c above to the Scottish Ministers at timescales to be determined by the Scottish Ministers;
- e) Induction and toolbox talks to onsite construction teams on environmental policy and procedures, including temporary stops and keeping a record of these;
- f) Monitoring that the Development is being constructed in accordance with the plans and this consent, the Application and in compliance with all relevant regulations and legislation;
- g) Reviewing and reporting incidents/near misses and reporting any changes in procedures as a result to the Scottish Ministers; and
- h) Agreement of a communication strategy with the Scottish Ministers.

**Reason:** *To ensure effective monitoring of, and compliance with, the environmental mitigation and management measures associated with the Development.*

## **28. Fisheries Liaison Officer**

Prior to the Commencement of the Development, a Fisheries Liaison Officer (“FLO”), must be appointed by the Company and approved, in writing, by the Scottish Ministers, following consultation with SFF. The FLO must be appointed by the Company for the period from Commencement of the Development until the Final Commissioning of the development. The identity and credentials of the FLO must be included in the EMP (referred to in condition 12). The FLO must establish and maintain effective communications between the Company, any contractors or sub-contractors, fishermen and other users of the sea during the construction of the Development and ensure compliance with best practice guidelines whilst doing so.

The responsibilities of the FLO must include:

- a) Establishing and maintaining effective communications between the Company, any contractors or sub-contractors, fishermen and other users of the sea concerning the overall Development and any amendments to the EMP and site environmental procedures;
- b) The provision of information relating to the safe operation of fishing activity on the site of the Development; and

	<p>c) Ensuring that information is made available and circulated in a timely manner to minimise interference with fishing operations and other users of the sea.</p> <p><b>Reason:</b> <i>To mitigate the impact to commercial fishermen</i></p>
<p><b>In Annex 3 of the Pentland Floating Offshore Wind Farm s.36 Consent</b></p>	<p><b>Insert:</b></p> <p>“the Variation Application” means the variation application letter and the Section 36C Consent and Marine Licence Variation Application Report submitted to the Scottish Ministers by Highland Wind Limited on 11 October 2023.</p> <p>“the WTG Footprint Area” means the area of sea surface occupied by the infrastructure at or above sea level (i.e. the WTGs and associated floating substructures);</p>
<p><b>In Annex 3 of the Pentland Floating Offshore Wind Farm s.36 Consent</b></p>	<p><b>For:</b></p> <p>“MSS” means Marine Scotland Science;</p> <p><b>Substitute:</b></p> <p>“MD-SEDD” (formerly known as “MSS”, Marine Scotland Science) means Marine Directorate – Science, Evidence Data, and Digital;</p>
<p><b>In Annex 3 of the Pentland Floating Offshore Wind Farm s.36 Consent</b></p>	<p><b>For:</b></p> <p>“HWL” or “the Company” means Highland Wind Limited, 4th Floor 115 George Street, Edinburgh, Midlothian, Scotland, EH2 4JN, Company Number: SC675148;</p> <p><b>Substitute:</b></p> <p>“the Company” means Highland Wind Limited, 4th Floor 115 George Street, Edinburgh, Midlothian, Scotland, EH2 4JN, Company Number: SC675148, or such other person for the time being entitled to the benefit of the consent under section 36 of the Electricity Act 1989;</p>

- 4.4 Revised copies of Annexes 1, 2 and 3 of the Existing Consent for the Development are issued together with this decision letter.
- 4.5 Copies of this letter have been sent to the Highland Council. This letter has also been published on Marine Scotland Information.
- 4.6 The Scottish Ministers’ decision is final, subject to the right of any aggrieved person to apply to the Court of Session for judicial review. Judicial review is the mechanism by which the Court of Session supervises the exercise of administrative functions, including how the Scottish Ministers exercise their statutory function to determine applications for variation of a s.36 consent.

4.7 Your local Citizens' Advice Bureau or your solicitor will be able to advise you about the applicable procedures.

Yours sincerely,

Rebecca Bamlett  
Marine Directorate - Licensing Operations Team  
A member of the staff of the Scottish Government

**DATE**

## **DEFINITIONS AND GLOSSARY OF TERMS - In the decision letter attached at Annex C**

“AESI” means Adverse Effect on Site Integrity;

“AA” means Appropriate Assessment;

“Berwick Bank” means the Berwick Bank Wind Farm;

“DAERA” means the Department of Agriculture, Environment and Rural Affairs;

“HES” means Historic Environment Scotland;

“HIAL” means Highlands and Islands Airports Limited;

“IFG” means Inshore Fishery Group;

“km” means kilometres;

“MCA” means Maritime and Coastguard Agency;

“MD-LOT” means Marine Directorate - Licensing Operations Team;

“NATS” means the National Air Traffic Services;

“NLB” means Northern Lighthouse Board;

“PVA” means Population Viability Assessment;

“RSPB Scotland” means Royal Society for the Protection of Birds Scotland;

“s.36” means section 36 (Consent required for construction etc. of generating stations) of the Electricity Act 1989;

“RYA” means the Royal Yachting Association;

“SEPA” means Scottish Environment Protection Agency;

“SFF” means Scottish Fishermen’s Federation;

“SLVIA” means Seascape, Landscape and Visual Impact Assessment;

“SPAs” means Special Protection Areas;

“km<sup>2</sup>” means squared kilometres;

“m<sup>2</sup>” means square metres;

“the 1994 Habitats Regulations” means the Conservation (Natural Habitats, &c.) Regulations 1994;

“the 2017 Habitats Regulations” means the Conservation of Habitats and Species Regulations 2017;

“the Company” means Highland Wind Limited, 4th Floor 115 George Street, Edinburgh, Midlothian, Scotland, EH2 4JN, Company Number: SC675148;

“the Development” means the Pentland Floating Offshore Wind Farm, located approximately 7.5 kilometres from the coast of Dounreay, Caithness;

“the Electricity Act” means the Electricity Act 1989;

“the Existing Consent” means the s.36 consent granted by the Scottish Ministers on 28 June 2023 for the construction and operation of the Pentland Floating Offshore Wind Farm;

“the 2023 AA” means the appropriate assessment completed in June 2023 in respect of the Original Application;

“the 2024 AA” means the appropriate assessment completed in March 2024 in respect of the Variation Application;

“the Original Application” means the s.36 consent application submitted to the Scottish Ministers on 11 August 2022 by the Company;

“the Variation Application” means the application to vary the Existing Consent submitted to the Scottish Ministers on 11 October 2023 by the Company;

“the Variation Regulations” means the Electricity Generating Stations (Applications for Variation of Consent) (Scotland) Regulations 2013;

“the 2010 Act” means the Marine (Scotland) Act 2010;

“the 2017 EW Regulations” means the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017;

“the 2017 MW Regulations” means the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017;

“WTGs” means wind turbine generators.

## **ANNEX 1 of the Pentland Floating Offshore Wind Farm Consent**

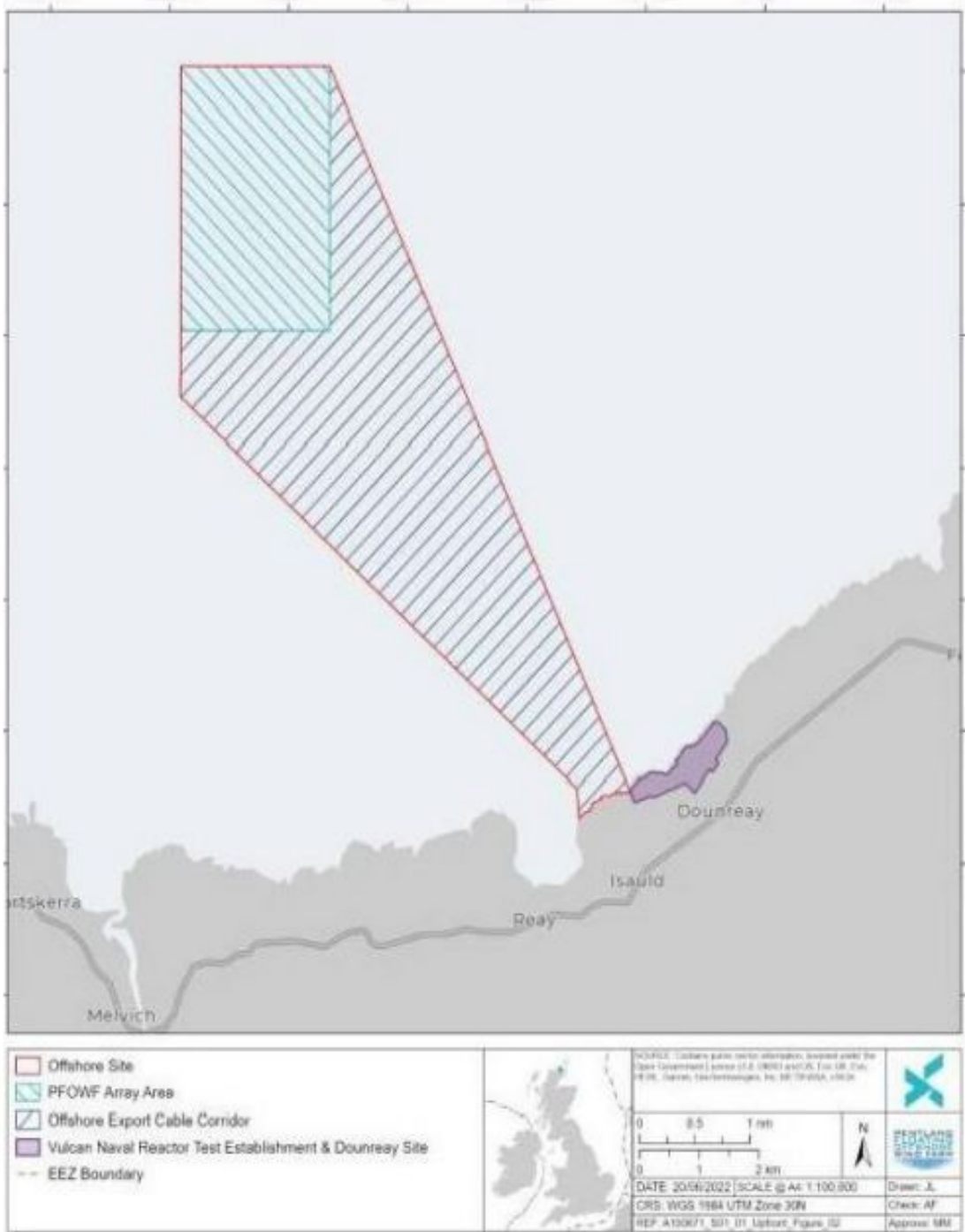
### **DESCRIPTION OF THE DEVELOPMENT**

The Application is for the construction and operation of an offshore energy generating station, with a generating capacity of around 100 megawatts (“MW”). The offshore generating station shall be comprised of up to:

1. Five floating offshore wind turbine generators (“WTGs”) with:
  - a. A maximum hub height of 190 metres (“m”) above highest astronomical tide (“HAT”),
  - b. A maximum height to blade tip of 300m above HAT,
  - c. A maximum rotor diameter of 250m, and,
  - d. A minimum blade tip clearance from mean sea level of 35m;
2. One floating offshore WTG with:
  - a. A maximum hub height of 190 m above HAT,
  - b. A maximum height to blade tip of 300m above HAT,
  - c. A maximum rotor diameter of 220m, and,
  - d. A minimum blade tip clearance from mean sea level of 35m;
3. Six associated floating substructures;
4. Nine mooring lines for each floating substructure, 54 in total;
5. Nine anchors or piles for each floating substructures, 54 in total;
6. Seven inter-array cables (dynamic and static);
7. Associated scour and cable protections;

and, except to the extent modified by the foregoing, all as described in the Application and the Variation Application and by the conditions imposed by the Scottish Ministers. References to “the Development” in this consent shall be construed accordingly.

The total area within the Development site boundary is 10 square kilometres (“km<sup>2</sup>”) of which up to 5.85km<sup>2</sup> will comprise the WTG Footprint Area. The location and boundary of the Development site is shown in Figure 1 of Annex 1.



**Figure 1.** Pentland Floating Offshore Wind Farm Site and Export Cable Corridor.

## **ANNEX 2 of the Pentland Floating Offshore Wind Farm Consent**

### **ANNEX 2 – CONDITIONS**

#### **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.

**Reason: To define the duration of the consent.**

#### **2. Commencement of the Development**

The Commencement of the Development must be no later than five years from the date of this consent, or in substitution such other later period as the Scottish Ministers may hereafter direct in writing. The Company must provide written confirmation of the intended date of Commencement of the Development to the Scottish Ministers and to The Highland Council no later than one calendar month before that date.

**Reason: To ensure that the Commencement of the Development is undertaken within a reasonable timescale after consent is granted.**

#### **3. Decommissioning**

There must be no Commencement of the Development until a Decommissioning Programme, submitted in accordance with a section 105 notice served by the appropriate Minister, has been approved under section 106 of the Energy Act 2004 by the appropriate Minister.

**Reason: To ensure the decommissioning and removal of the Development in an appropriate and environmentally acceptable manner, and in the interests of safety and environmental protection.**

#### **4. Assignment**

This consent must not be assigned without the prior written authorisation of the Scottish Ministers. The Scottish Ministers may authorise the assignment of the consent (with or without conditions) or refuse assignment as they may see fit. The consent cannot be assigned, alienated, or transferred otherwise than in accordance with the assignment procedure as directed by the Scottish Ministers.

**Reason: To safeguard the obligations of the consent if transferred to another company.**

#### **5. Redundant Wind Turbine Generators**

If any Wind Turbine Generator (“WTG”) fails to generate electricity for a continuous period of 12 months then, unless otherwise agreed in writing by the Scottish Ministers, the Company must: (i) by no later than the date of expiration of the 12 month period, submit a scheme to the Scottish Ministers setting out the manner in which that WTG and associated infrastructure will be removed from the site and the sea bed restored; and (ii) implement the approved scheme within six months of the date of its approval, or such other date as agreed in writing by the Scottish Ministers, all to the satisfaction of the Scottish Ministers.

**Reason: To ensure that should a WTG become redundant it is removed from the site, in the interests of safety, amenity and environmental protection.**

## **6. Incident Reporting**

In the event of any breach of health and safety or environmental obligations relating to the Development during the period of this consent and decommissioning, the Company must provide written notification of the nature and timing of the incident to the Scottish Ministers within 24 hours of the incident occurring. Confirmation of remedial measures taken and/or to be taken to rectify the breach must be provided, in writing, to the Scottish Ministers within a period of time to be agreed by the Scottish Ministers.

**Reason: To keep the Scottish Ministers informed of any such incidents which may be in the public interest.**

## **7. Implementation in accordance with approved plans and requirements of this consent**

Except as otherwise required by the terms of this consent, the Development must be constructed and operated in accordance with this consent, the Application, the Environmental Impact Assessment Report (“the EIA Report”) submitted by the Company, any other documentation and information lodged in support of the Application, and the Variation Application.

**Reason: To ensure that the Development is carried out in accordance with the approved details.**

## **8. Submission and approval of plans**

The Company must submit the requested plans as detailed in the conditions, in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with any such advisors or organisations as detailed in these conditions or as may be required at the discretion of the Scottish Ministers.

Any updates or amendments made to the approved plans must be submitted, in writing, to the Scottish Ministers for their written approval. The Development must, at all times, be constructed and operated in accordance with the approved plans.



**Reason: To ensure that the Development is constructed and operated in accordance with the approved details.**

## **9. Compliance with this consent**

The Company must satisfy itself that all contractors or sub-contractors are aware of the extent of the Development for which this consent has been granted, the activity which is consented and the terms of the conditions attached to this consent. All contractors and sub-contractors permitted to engage in the Development must abide by the conditions set out in this consent.

**Reason: To ensure that the Development is constructed and operated in accordance with the approved details.**

## **10. Construction Programme**

The Company must, no later than six months prior to the Commencement of the Development, submit a Construction Programme (“CoP”), in writing, to the Scottish Ministers for their written approval. Commencement of the Development cannot take place until such approval is granted. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot, Civil Aviation Authority (“CAA”), Ministry of Defence (“MOD”), and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The CoP must set out:

- a. The proposed date for Commencement of the Development;
- b. The proposed timings for mobilisation of plant and delivery of materials, including details of onshore lay-down areas;
- c. The proposed timings and sequencing of construction work for all elements of the Development infrastructure;
- d. Contingency planning for poor weather or other unforeseen delays; and
- e. The scheduled date for Final Commissioning of the Development.

The Company must send the approved CoP to The Highland Council, Maritime and Coastguard Agency (“MCA”) and Northern Lighthouse Board (“NLB”) for information only.

**Reason: To confirm the timing and programming of construction.**

## **11. Construction Method Statement**

The Company must, no later than six months prior to the Commencement of the Development submit a Construction Method Statement (“CMS”), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot, MCA, NLB and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The CMS must include, but not be limited to:

- a. Details of the commencement dates, duration, and phasing for the key elements of construction, the working areas, the construction procedures, and good working practices for installing the Development.
- b. Details of the roles and responsibilities, chain of command and contact details of company personnel, any contractors or sub-contractors involved during the construction of the Development.
- c. Details of how the construction related mitigation steps proposed in the Application are to be delivered.

The CMS must adhere to the construction methods assessed in the Application. The CMS also must, so far as is reasonably practicable, be consistent with the Design Statement (“DS”), the Environmental Management Plan (“EMP”), the Vessel Management Plan (“VMP”), the Navigational Safety Plan (“NSP”), the Piling Strategy (“PS”), the Cable Plan (“CaP”) and the Lighting and Marking Plan (“LMP”).

The final CMS must be sent to the Highland Council for information only.

**Reason: To ensure the appropriate construction management of the Development, taking into account mitigation measures to protect the environment and other users of the marine area.**

## **12. Environmental Management Plan**

The Company must, no later than six months prior to the Commencement of the Development, submit an EMP, in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot, Royal Society for the Protection of Birds Scotland (“RSPB Scotland”), and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The EMP must provide the over-arching framework for on-site environmental management during the phases of development as follows:

- a. All construction as required to be undertaken before the Final Commissioning of the Development; and
- b. The operational lifespan of the Development from the Final Commissioning of the Development until the cessation of electricity generation (environmental management during decommissioning is addressed by the Decommissioning Programme provided for by condition 3).

The EMP must be in accordance with the Application insofar as it relates to environmental management measures. The EMP must set out the roles, responsibilities, and chain of command for the Company personnel, any contractors, or sub-contractors in respect of environmental management for the protection of environmental interests during the construction and operation of the Development. It must address, but not be limited to, the following over-arching requirements for environmental management during construction:

- a. Mitigation measures to prevent significant adverse impacts to environmental interests, as identified in the Application and pre-consent and pre-construction monitoring or data collection, and include reference

- to relevant parts of the CMS (refer to condition 11);
- b. A pollution prevention and control method statement, including contingency plans;
  - c. Management measures to prevent the introduction of invasive non-native marine species;
  - d. A site waste management plan (dealing with all aspects of waste produced during the construction period), including details of contingency planning in the event of accidental release of materials which could cause harm to the environment. Wherever possible the waste hierarchy of reduce, reuse, and recycle should be encouraged; and
  - e. The reporting mechanisms that will be used to provide the Scottish Ministers and relevant stakeholders with regular updates on construction activity, including any environmental issues that have been encountered and how these have been addressed.

The EMP must be regularly reviewed by the Company at intervals agreed by the Scottish Ministers. Reviews must include, but not be limited to, the reviews of updated information on construction methods and operations of the Development and updated working practices.

The EMP must be informed, so far as is reasonably practicable, by the baseline monitoring or data collection undertaken as part of the Application and the Project Environmental Monitoring Programme (“PEMP”).

**Reason: To ensure that all construction and operation activities are carried out in a manner that minimises their impact on the environment, and that mitigation measures contained in the Application, or as otherwise agreed are fully implemented.**

### **13. Vessel Management Plan**

The Company must, no later than six months prior to the Commencement of the Development, submit a VMP, in writing, to the Scottish Ministers for their written approval. Commencement of the Development cannot take place until such approval is granted. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot, MCA, Scottish Fishermen’s Federation (“SFF”) and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The VMP must include, but not be limited to, the following details:

- a. The number, types and specification of vessels required;
  - b. How vessel management will be coordinated, particularly during construction, but also during operation;
  - c. Location of working port(s), the routes of passage, the frequency with which vessels will be required to transit between port(s) and the site and indicative vessel transit corridors proposed to be used during construction and operation of the Development.

The confirmed individual vessel details must be notified to the Scottish Ministers in writing no later than 14 days prior to the Commencement of the Development, and thereafter, any changes to the details supplied must be notified to the Scottish Ministers, as soon as practicable, prior to any such change being

implemented in the construction or operation of the Development.

The VMP should refer to the Scottish Marine Wildlife Watching Code and Guide to Best Practice for Watching Marine Wildlife for guidance on how vessels should behave around aggregations of birds on the water.

The VMP must, so far as is reasonably practicable, be consistent with the CMS and EMP, the Fisheries Management and Mitigation Strategy (“FMMS”), the PEMP, the NSP, and the LMP.

**Reason: To mitigate the impact of vessels.**

## **14. Operation and Maintenance Programme**

The Company must, no later than three months prior to the Final Commissioning of the Development, submit an Operation and Maintenance Programme (“OMP”), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot, MCA, NLB, The Highland Council and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The OMP must set out the procedures and good working practices for operations and the maintenance of the WTGs and substructure of the Development. Environmental sensitivities which may affect the timing of the operation and maintenance activities must be considered in the OMP.

The OMP must, so far as is reasonably practicable, be consistent with the CMS, the EMP, the PEMP, the VMP, the NSP and the LMP.

The Company must send the approved OMP to The Highland Council for information only.

**Reason: To safeguard environmental interests during operation and maintenance of the Development.**

## **15. Navigational Safety Plan**

The Company must, no later than six months prior to the Commencement of the Development, submit an NSP, in writing, to the Scottish Ministers for their written approval. Commencement of the Development cannot take place until such approval is granted. Such approval may only be granted following consultation by the Scottish Ministers with MCA, NLB, Royal Yachting Association (“RYA”), SFF and any other navigational advisors or organisations as may be required at the discretion of the Scottish Ministers.

The NSP must include, but not be limited to, the following issues:

- a. Navigational safety measures;
- b. Construction exclusion zones;
- c. Notice(s) to mariners and radio navigation warnings;
- d. Anchoring areas;
- e. Temporary construction lighting and marking;

f. Buoyage.

**Reason: To mitigate the navigational risk to other legitimate users of the sea.**

## 16. Lighting and Marking Plan

The Company must, no later than six months prior to the Commencement of the Development, submit an LMP, in writing, to the Scottish Ministers for their written approval. Commencement of the Development cannot take place until such approval is granted. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot, MCA, NLB, CAA, MOD, RYA, the Highland Council, and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The LMP must provide that the Development be lit and marked in accordance with the current CAA and MOD aviation lighting policy and guidance that is in place as at the date of the Scottish Ministers approval of the LMP, or any such other documents that may supersede this guidance prior to the approval of the LMP. Consideration should be given in the LMP to reducing the luminous intensity of aviation lighting in certain visibility conditions but only where this is in accordance with the current CAA and MOD aviation lighting policy and guidance that is in place. The LMP must define how the Development will be lit throughout its life to maintain civil and military aviation safety requirements as determined necessary for aviation safety by the MOD and, accordingly, must set out:

- a) details of any construction equipment and temporal structures with a total height of 50m or greater (above mean sea level) that will be deployed during the construction of the Development and details of any aviation warning lighting that they will be fitted with; and
- b) the locations and heights of the WTGs featured in the Development identifying those that will be fitted with aviation warning lighting identifying the position of the lights on the WTGs, the type(s) of lights that will be fitted and the performance specification(s) of the lighting type(s) to be used.

The LMP must also detail the navigational lighting requirements detailed in the International Association of Marine Aids to Navigation and Lighthouse Authorities (“IALA”) Guideline G-1162 or any other documents that may supersede this guidance prior to approval of the LMP.

**Reason: To ensure civil and military aviation and navigational safety and the safe marking and lighting of the Development.**

## 17. Project Environmental Monitoring Programme

The Company must, no later than six months prior to the Commencement of the Development, submit a PEMP, in writing, to the Scottish Ministers for their written approval. Commencement of the Development cannot take place until such approval is granted. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot, RSPB Scotland and any

other environmental advisors or organisations as required at the discretion of the Scottish Ministers. The PEMP must be in accordance with the Application as it relates to environmental monitoring.

The PEMP must set out measures by which the Company must monitor the environmental impacts of the Development. Monitoring is required throughout the lifespan of the Development where this is deemed necessary by the Scottish Ministers. Lifespan in this context includes pre-construction, construction, operational and decommissioning phases.

The Scottish Ministers must approve all initial methodologies for the above monitoring, in writing and, where appropriate, in consultation with NatureScot and any other environmental advisors or organisations as required at the discretion of the Scottish Ministers.

Monitoring must be done in such a way so as to ensure that the data which is collected allows useful and valid comparisons between different phases of the Development. Monitoring may also serve the purpose of verifying key predictions in the Application. In the event that further potential adverse environmental effects are identified, for which no predictions were made in the Application, the Scottish Ministers may require the Company to undertake additional monitoring.

The PEMP must cover the following matters:

- a) monitoring or data collection for impact on seabirds
- b) monitoring for impacts on marine mammals
- c) monitoring for impacts on benthic ecology
- d) Post-construction monitoring on Electromagnetic Fields (“EMF”) produced by the constructed cables.
- e) The Company’s contribution to data collection or monitoring of wider strategic relevance, including in relation to diadromous fish, as identified and agreed by the Scottish Ministers.

In relation to EMF, the Company must monitor and provide a report on the EMF produced by the works to the Scottish Ministers. The Company must agree the methodologies and timescales for monitoring with the Scottish Ministers prior to the Commencement of the Development as part of wider strategic monitoring on EMF. Any agreement must be adhered to unless otherwise agreed and approved by the Scottish Ministers.

The requirement for monitoring pre-construction, during construction and post-construction in relation to the above receptors must be agreed by the Scottish Ministers.

Due consideration must be given to the Scottish Marine Energy Research (“ScotMER”) programme, or any successor programme formed to facilitate these research interests.

Any pre-consent monitoring or data collection carried out by the Company to address any of the above issues may be used in part to discharge this condition subject to the written approval of the Scottish Ministers.

The PEMP is a live document which will be regularly reviewed by the Scottish

Ministers, at timescales to be determined by them to identify the appropriateness of on-going monitoring. Following such reviews, the Scottish Ministers may require the Company to amend the PEMP and submit such an amended PEMP, in writing, to the Scottish Ministers, for their written approval. Such approval may only be granted following consultation with NatureScot and any other environmental, or such other advisors as may be required at the discretion of the Scottish Ministers.

The Company must submit written reports and associated raw and processed data of such monitoring or data collection to the Scottish Ministers at timescales to be determined by them. Consideration should be given to data storage, analysis and reporting and be to Marine Environmental Data and Information Network standards.

Subject to any legal restrictions regarding the treatment of the information, the Scottish Ministers, or any such other party appointed at the Scottish Ministers' discretion, may make the results publicly available.

The Scottish Ministers may agree, in writing, that monitoring may be reduced or ceased before the end of the lifespan of the Development.

**Reason: To ensure that appropriate and effective monitoring of the impacts of the Development is undertaken**

## 18. Cable Plan

The Company must, no later than six months prior to the Commencement of the Development, submit an updated CaP, in writing, to the Scottish Ministers for their written approval. Commencement of the Development cannot take place until such approval is granted. Such approval may only be granted following consultation by the Scottish Ministers with NatureScot, MCA, SFF, and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The CaP must be in accordance with the Application.

The CaP must include, but not be limited to, the following:

- a) The location, duration and cable laying techniques for cables;
- b) The results of monitoring or data collection work (including geophysical, geotechnical, and benthic surveys) which will help inform cable routing;
- c) Technical specification of the cables, including a desk based assessment of attenuation of electro-magnetic field strengths and shielding;
- d) A Cable Burial Risk Assessment ("CBRA") to ascertain burial depths and where necessary alternative protection measures;
- e) Methodologies for post construction and operational surveys (e.g. over trawl) of the cables where mechanical protection of cables laid on the sea bed is deployed; and
- f) Methodologies for cable inspection with measures to address and report to the Scottish Ministers any exposure of cables.

Any consented cable protection works must ensure existing and future safe

navigation is not compromised. The Licensing Authority will accept a maximum of 5% reduction in surrounding depth referenced to Chart Datum. Any greater reduction in depth must be agreed in writing by the Licensing Authority.

**Reason: To mitigate any potential impacts on the environmental interests during construction and operation.**

## **19. Fisheries Management and Mitigation Strategy**

The Company must no later than six months prior to the Commencement of the Development, submit an FMMS, in writing, to the Scottish Ministers for their written approval, in consultation with SFF. Commencement of the Development cannot take place until such approval is granted.

In order to inform the production of the FMMS, the Company must monitor or collect data as relevant and agreed with the Scottish Ministers.

As part of any finalised FMMS, the Company must produce and implement a mitigation strategy for each commercial fishery that can prove to the Scottish Ministers that they would be adversely affected by the Development. The Company and any contractors or sub-contractors working for the Company must implement the mitigation measures committed to be carried out by the Company within the FMMS.

**Reason: To mitigate the impact on commercial fisheries.**

## **20. Protocol for Archaeological Discoveries**

The Company must, no later than six months prior to the Commencement of the Development, submit an updated Protocol for Archaeological Discoveries ("PAD") and Written Scheme of Investigation ("WSI") which sets out what the Company must do on discovering any marine archaeology during the construction, operation, maintenance, and monitoring of the Development, in writing, to the Scottish Ministers for their written approval. Commencement of the Development cannot take place until such approval is granted. Such approval may be given only following consultation by the Scottish Ministers with Historic Environment Scotland ("HES") and any such advisors as may be required at the discretion of the Scottish Ministers. The Reporting Protocol must be implemented in full, at all times, by the Company.

The Company must send the approved PAD and WSI to the Highland Council for information only.

**Reason: To ensure any discovery of archaeological interest is properly and correctly reported.**

## **21. Particle Management Plan**

Not later than six months prior to the commencement of the works, a Particles Management Plan ("PMP") shall be submitted to the Scottish Ministers for their



written approval in consultation with the Scottish Environment Protection Agency (“SEPA”);

The PMP shall be consistent with the Application and supporting documents and shall include, but not be limited to, the following:

- a. A programme of scheduled monitoring for radioactive particles;
- b. The measures to be taken to reduce the likelihood of irradiated fuel particles in sediment being suspended or disturbed; and
- c. A waste management plan for the construction phase of the development.

There shall be no Commencement of the Development unless and until the PMP is approved in writing by the Scottish Ministers, in consultation with SEPA;

Any proposed amendment to the approved PMP shall be submitted, in writing, to the Scottish Ministers for its written approval, in consultation with SEPA. The proposed amendment shall be submitted to the Scottish Ministers no later than 6 months prior to the anticipated implementation of the proposed amendment (or such shorter period as may be agreed with the Scottish Ministers in writing). No amendment to the PMP shall take effect unless and until approved in writing by the Scottish Ministers in consultation with SEPA;

The PMP and any amended PMP shall thereafter be implemented in full.

***Reason:*** *To mitigate any potential impacts on the environmental and human health interests during construction and operation.*

## **22. Radio and Television Reception Mitigation Plan**

The Company must, no later than six months prior to the Commencement of the Development, submit a Radio and Television Reception Mitigation Plan to the Scottish Ministers for approval, in consultation with the Highland Council. The Radio and Television Reception Mitigation Plan shall provide for a baseline radio and television reception survey to be carried out prior to the installation of any turbine forming part of the Development. The results of the baseline radio and television reception survey shall be submitted to the Highland Council prior to the installation of any turbine forming part of the Development.

The approved Radio and Television Reception Mitigation Plan shall be implemented in full.

Any claim by any person regarding radio or television interference at their house, business premises or other building, made during the period from installation of any turbine forming part of the Development to the date falling twelve months after the Date of Final Commissioning shall be investigated by a qualified engineer and the results of the investigation shall be considered against the approved plan and submitted to the Highland Council.

Should any impairment to the radio or television signal be attributable to the Development, the impairment shall be remedied so that the standard of reception at the affected property is equivalent to the baseline radio or television reception.

*Reason: To mitigate any potential impacts on radio and television reception.*

### **23. Noise Measurement and Mitigation Scheme**

1. The rating level of noise immissions from the combined effects of the wind turbines forming part of the Development (including the application of any tonal penalty) when determined in accordance with the Highland Council guidance notes for this condition shall not exceed a value of 34 dBLA90,10 minute at any dwelling which is lawfully existing or has planning permission at the date of this consent.
2. The Company shall continuously log power production, wind speed and wind direction. These data shall be retained for a period of not less than 24 months. The Company shall provide this information to the Scottish Ministers within 14 days of receipt in writing of a request to do so.
3. Prior to the Date of First Commissioning, the Company shall have submitted to, and received written approval of the Scottish Ministers, in consultation with the Highland Council, to an updated predictive noise assessment based on the final turbine model(s) to be installed, based on noise emission data from the turbine manufacturer.
4. Within 21 days from receipt of a written request from the Scottish Ministers following a complaint sent to them from the Highland Council, informing of an occupant of a dwelling alleging noise disturbance at that dwelling, the Company shall, at its expense, employ a consultant to assess the level of noise immissions from the wind farm at the complainant's property. The written request from the Scottish Ministers shall set out at least the date, time, and location to which the complaint relates and any identified atmospheric conditions, including wind direction, and include a statement as to whether, in the opinion of the Scottish Ministers, in consultation with the Highland Council, the noise giving rise to the complaint contains or is likely to contain a tonal component.
5. The assessment of the rating level of noise immissions in terms of paragraph (4) above shall be undertaken in accordance with an assessment protocol that shall previously have been submitted to and approved in writing by the Scottish Ministers, in consultation with the Highland Council. The protocol shall include at least the proposed measurement location(s) where measurements for compliance checking purposes shall be undertaken, whether noise giving rise to the complaint contains or is likely to contain a tonal component, and also the range of meteorological and operational conditions (which shall include the range of wind speeds, wind directions, power generation and times of day) to determine the assessment of rating level of noise immissions. The proposed range of conditions shall be those which prevailed during times when the complainant alleges there was disturbance due to noise, having regard to the written request of the Scottish Ministers under paragraph (4) above.
6. The Company shall provide to the Scottish Ministers the independent consultant's assessment of the rating level of noise immissions within two

months of the date of the written request of the Scottish Ministers for compliance measurements to be made under paragraph (4) unless the time limit is extended in writing by the Scottish Ministers. Certificates of calibration of the instrumentation used to undertake the measurements shall be submitted to the Scottish Ministers with the independent consultant's assessment of the rating level of noise immissions.

7. Where a further assessment of the rating level of noise immissions from the wind farm is required, the Company shall submit a copy of the further assessment within 21 days of submission of the independent consultant's assessment pursuant to paragraph (4) above unless the time limit has been extended in writing by the Scottish Ministers.

**Reason: In the interests of safeguarding residential amenity, to protect nearby residents from undue noise and disturbance, to enable prompt investigation of complaints and to ensure that noise levels can be measured to assess whether or not agreed noise limits have been breached and where such noise limits have been breached, suitable mitigation is undertaken.**

## **24. Development Specification and Layout Plan**

The Company must, no later than six months prior to the Commencement of the Development, submit a Development Specification and Layout Plan ("DSLIP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the MCA, NLB, NatureScot, MOD, CAA, SFF, the UK Hydrographic Office ("UKHO"), the Highland Council, and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The DSLIP must include, but not be limited to the following:

- a. A plan showing the location of each individual WTG (subject to any required micro-siting), including information on WTG spacing, WTG identification/numbering, seabed conditions, bathymetry, confirmed foundation type for each WTG and any key constraints recorded on the site;
- b. A list of latitude and longitude co-ordinates accurate to three decimal places of minutes of arc for each WTG. This should also be provided as a Geographic Information System ("GIS") shape file using WGS84 format;
- c. The grid coordinates of the centre point of the proposed location for each WTG;
- d. A table or diagram of each WTG dimensions including - height to blade tip (measured above Lowest Astronomical Tide ("LAT")) to the highest point, height to hub (measured above LAT to the centreline of the generator shaft), rotor diameter and maximum rotation speed;
- e. The generating output of each WTG used on the site (Figure 1) and a confirmed generating output for the site overall;
- f. The finishes for each WTG (see condition 16 on WTG lighting and marking); and
- g. The length and proposed arrangements on the seabed of all inter-array cables.

**Reason: To confirm the final Development specification and layout.**

## **25. Design Statement**

The Company must, no later than six months prior to the Commencement of the Development, submit a DS, in writing, to the Scottish Ministers. The DS, which must be signed off by at least one qualified landscape architect, as instructed by the Company prior to submission to the Scottish Ministers, must include representative wind farm visualisations from key viewpoints as agreed with the Scottish Ministers, based upon the final DSLP as approved by the Scottish Ministers as updated or amended. The Company must provide the DS, for information only, to the Highland Council, NatureScot, MCA and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

**Reason: To ensure that the Development is carried out in accordance with the approved details, and to inform interested parties of the final wind farm scheme proposed to be built.**

## **26. 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 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 EMP, the PEMP, and the CMS.

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

## **27. Environmental Clerk of Works**

Prior to the Commencement of the Development, the Company must at its own expense, and with the approval of the Scottish Ministers in consultation with NatureScot, appoint an independent Environmental Clerk of Works (“ECoW”). The ECoW must be appointed in time to review and approve the draft version of the first plan or programme submitted under this consent to the Scottish Ministers, in sufficient time for any pre-construction monitoring requirements, and remain in post until a date agreed by the Scottish Ministers. The terms of appointment must also be approved by the Scottish Ministers in consultation with NatureScot.

The terms of the appointment must include, but not be limited to:

- a. Quality assurance of final draft versions of all plans and programmes required under this marine licence;
- b. Responsible for the monitoring and reporting of compliance with the marine licence conditions and the environmental mitigation measures for all wind farm infrastructure;
- c. Provision of on-going advice and guidance to the Company in relation to achieving compliance with conditions, including but not limited to the conditions relating to and the implementation of the CMS, the EMP, the PEMP, the CaP and the VMP;
- d. Provision of reports on point b & c above to the Scottish Ministers at timescales to be determined by the Scottish Ministers;
- e. Induction and toolbox talks to onsite construction teams on environmental policy and procedures, including temporary stops and keeping a record of these;
- f. Monitoring that the Development is being constructed in accordance with the plans and this consent, the Application and in compliance with all relevant regulations and legislation;
- g. Reviewing and reporting incidents/near misses and reporting any changes in procedures as a result to the Scottish Ministers; and
- h. Agreement of a communication strategy with the Scottish Ministers.

**Reason: *To ensure effective monitoring of, and compliance with, the environmental mitigation and management measures associated with the Development.***

## **28. Fisheries Liaison Officer**

Prior to the Commencement of the Development, a Fisheries Liaison Officer (“FLO”), must be appointed by the Company and approved, in writing, by the Scottish Ministers, following consultation with SFF. The FLO must be appointed by the Company for the period from Commencement of the Development until the Final Commissioning of the development. The identity and credentials of the FLO must be included in the EMP (referred to in condition 12). The FLO must establish and maintain effective communications between the Company, any contractors or sub-contractors, fishermen and other users of the sea during the construction of the Development and ensure compliance with best practice guidelines whilst doing so.

The responsibilities of the FLO must include:

- a. Establishing and maintaining effective communications between the Company, any contractors or sub-contractors, fishermen and other users

of the sea concerning the overall Development and any amendments to the EMP and site environmental procedures;

- b. The provision of information relating to the safe operation of fishing activity on the site of the Development; and
- c. Ensuring that information is made available and circulated in a timely manner to minimise interference with fishing operations and other users of the sea.

**Reason:** *To mitigate the impact on commercial fishermen.*

## **ANNEX 3 of the Pentland Floating Offshore Wind Farm Consent**

### **DEFINITION AND GLOSSARY OF TERMS**

In this decision letter and in Annex 1 and 2:

“the Application” means the Application letter, marine licence applications and EIA Report including appendices submitted to the Scottish Ministers by Highland Wind Limited on 11 August 2022;

“AA” means Appropriate Assessment;

“Commencement of the Development” means the date on which the first construction activity occurs in accordance with the EIA Report submitted by the Company on 11 August;

“the Company” means Highland Wind Limited, 4th Floor 115 George Street, Edinburgh, Midlothian, Scotland, EH2 4JN, Company Number: SC675148, or such other person for the time being entitled to the benefit of the consent under section 36 of the Electricity Act 1989;

“the Development” means the Highland Wind Floating Offshore Wind Farm, approximately 7.5 kilometres (“km”) off the coast of Dounreay, Caithness as described in Annex 1;

“the WTG Footprint Area” means the area of sea surface occupied by the infrastructure at or above sea level (i.e. the WTGs and associated floating substructures);

“ADD” means Acoustic Deterrent Devices;

“BWM” means Ballast Water Management;

“CaSPlan” means The Caithness and Sutherland Local Development Plan 2018; “CLO” means Community Liaison Officer;

“CREW” means Centre of Expertise for Waters;

“ECoW” means Environmental Clerk of Works;

“EIA” means Environmental Impact Assessment;

“EIA Report” means Environmental Impact Assessment Report;

“EMF” means Electromagnetic Field;

“FIR” means Fisheries Industry Representative;

“FLO” means Fisheries Liaison Officer;

“FTE” means Full Time Equivalent;

“GVA” means Gross Added Value;

“HRA” means Habitats Regulations Appraisal;

“HAT” means Highest Astronomical Tide;

“HPAI” means Highly Pathogenic Avian Influenza;

“km” means kilometres;

“km<sup>2</sup>” means squared kilometres;

“LSE” means Likely Significant Effect;

“m” means metres;

“MGN 654” means Marine Guidance Note 654;

“MMO” means Marine Mammals Observers;

“mINNS” means Marine Invasive Non-Native Species;

“MPA” means Marine Protected Area;

“MW” means megawatt;

“NSA” means National Scenic Areas;

“NRTE” means Naval Reactor Test Establishment;

“PAC” means Pre-Application Consultation;

“PAM” means Passive Acoustic Monitoring;

“PI” means Public Inquiry;

“PTS” means Permanent Threshold Shift;

“PVA” means Population Viability Assessment;

“s.36” means Section 36 of the Electricity Act 1989;

“s.36A” means Section 36A of the Electricity Act 1989;

“SAC” means Special Area of Conservation;

“SAR” means Search and Rescue;

“ScotMER” means Scottish Marine Energy Research;



“SLA” means Special Landscape Areas;

“SLVIA” means Seascape, Landscape and Visual Impact Assessment;

“SPA” means Special Protected Area;

“SSSI” means Site of Special Scientific Interest;

“the Variation Application” means the variation application letter and the Section 36C Consent and Marine Licence Variation Application Report submitted to the Scottish Ministers by Highland Wind Limited on 11 October 2023.

“UXO” means Unexploded Ordnance;

“WLA” means Wild Land Areas;

“WTG” means Wind Turbine Generator.

## **Organisations and Companies**

“BT” means British Telecommunications;

“CAA” means Civil Aviation Authority;

“DAERA” means Department of Agriculture, Environment and Rural Affairs; “DSFB” means District Salmon Fishery Board;

“HIAL” means Highlands and Islands Airports Limited;

“HES” means Historic Environment Scotland;

“EU” means European Union;

“MAU” means Marine Analytical Unit;

“MCA” means Maritime and Coastguard Agency;

“MOD” means Ministry of Defence;

“MD-LOT” means Marine Directorate – Licensing Operations Team (previously known as “MS-LOT”, Marine Scotland – Licensing Operations Team);

“MD-SEDD” (formerly known as “MSS”, Marine Scotland Science) means Marine Directorate – Science, Evidence Data, and Digital;

“NDA” means Nuclear Decommissioning Authority;

“NLB” means Northern Lighthouse Board;

“RSPB” means Royal Society for the Protection of Birds;

“RYA” means Royal Yachting Association;

“SEPA” means Scottish Environmental Protection Agency;

“SFF” means Scottish Fishermen’s Federation;

“UKCoS” means United Kingdom Chamber of Shipping;

### **Plans, Programmes and Statements**

“CaP” means Cable Plan;

“CBRA” means Cable Burial Risk Assessment;

“CMS” means Construction Method Statement;

“CoP” means Construction Programme;

“DS” means Design Statement;

“DSL P” means Development Specification and Layout Plan;

“EMP” means Environmental Management Plan;

“FMMS” means Fisheries Management and Mitigation Strategy;

“LMP” means Lighting and Marking Plan;

“NMP” means National Marine Plan;

“NPF3” means Scotland’s National Planning Framework 3;

“NPF4” means Scotland’s National Planning Framework 4;

“NSP” means Navigational Safety Plan;

“OMP” means Operation and Maintenance Programme;

“PAD” means Protocol for Archaeological Discoveries;

“PEMP” means Project Environmental Management Plan;

“PMP” means Particles Management Plan;

“PS” means Piling Strategy;

“VMP” means Vessel Management Plan;

“WSI” means Written Scheme of Investigation.

### **Legislation**

“the Electricity Act” means the Electricity Act 1989;

“the Habitats Regulations” means the Conservation (Natural Habitats, & c.) Regulations 1994 and the Conservation of Habitats and Species Regulations 2017;

“the 2017 EW Regulations” means the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017;

“the 2017 MW Regulations” means the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

## ANNEX D APPROPRIATE ASSESSMENT

### 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

<b>Name</b>	<b>Assessor or Approver</b>	<b>Date</b>
Marc MacFarlane	Assessor	29 February 2024
Toni-Marie McGinn	Assessor	25 March 2024
Julie Miller	Assessor	25 March 2024
Jared Wilson	Assessor	25 March 2024
Louise Msika	Approver	26 March 2024
Kerry Bell	Approver	26 March 2024

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# **SECTION 1: BACKGROUND**

## **1 Appropriate assessment conclusion**

- 1.1 This Appropriate Assessment (“AA”) concludes that there will be no adverse effect on the site integrity 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”), 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 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 <sup>1</sup>	Up to 10 square kilometres (“km <sup>2</sup> ”)	Up to 5.85 km <sup>2</sup>

- 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.

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



- 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 RIAAAddendum 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><b><u>North Caithness Cliffs SPA</u></b>  <a href="https://sitelink.nature.scot/site/8554">https://sitelink.nature.scot/site/8554</a></p>
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**Table 3: Qualifying interests**

<p><b><u>North Caithness Cliffs SPA</u></b></p> <ul style="list-style-type: none"> <li>• Fulmar (<i>Fulmarus glacialis</i>) (breeding) *</li> <li>• Guillemot (<i>Uria aalge</i>) (breeding)</li> <li>• Kittiwake (<i>Rissa tridactyla</i>) (breeding) *</li> <li>• Peregrine (<i>Falco peregrinus</i>) (breeding)</li> <li>• Puffin (<i>Fratercula arctica</i>) (breeding) *</li> <li>• Razorbill (<i>Alca torda</i>) (breeding) *</li> <li>• Seabird assemblage</li> </ul> <p>* indicates assemblage qualifier only</p>
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**Table 4: Conservation objectives**

<p><b><u>North Caithness Cliffs SPA</u></b></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> <p>To ensure for the qualifying species that the following are maintained in the long term:</p> <ul style="list-style-type: none"> <li>• Population of the species as a viable component of the site</li> </ul>
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- 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)?*

7.1.1 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
<b>CPS (95% CIs)</b>		0.988 (0.869-1.120)
<b>CGR (95% CIs)</b>		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**

<b>Project Name</b>	<b>Description</b>
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. <a href="https://marine.gov.scot/ml/beatrice-offshore-windfarm">https://marine.gov.scot/ml/beatrice-offshore-windfarm</a>
Moray East Offshore Wind Farm	Operational wind farm 22km from Caithness consisting of 100 turbines. <a href="https://marine.gov.scot/ml/moray-east-offshore-windfarm">https://marine.gov.scot/ml/moray-east-offshore-windfarm</a>
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. <a href="https://marine.gov.scot/ml/moray-west-offshore-windfarm">https://marine.gov.scot/ml/moray-west-offshore-windfarm</a>

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

<b>Project Name</b>	<b>Description</b>
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. <a href="https://marine.gov.scot/ml/european-offshore-wind-deployment-centre">https://marine.gov.scot/ml/european-offshore-wind-deployment-centre</a>
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. <a href="https://marine.gov.scot/ml/forthwind-demonstration-project">https://marine.gov.scot/ml/forthwind-demonstration-project</a>
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. <a href="https://marine.gov.scot/ml/hywind-scotland-pilot-park">https://marine.gov.scot/ml/hywind-scotland-pilot-park</a>
Inch Cape	Consented wind farm consisting of up to 72 WTG 15-22km from the Angus coastline. <a href="https://marine.gov.scot/ml/inch-cape-offshore-windfarm-revised-design">https://marine.gov.scot/ml/inch-cape-offshore-windfarm-revised-design</a>
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. <a href="https://marine.gov.scot/ml/kincardine-offshore-windfarm-0">https://marine.gov.scot/ml/kincardine-offshore-windfarm-0</a>
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. <a href="https://marine.gov.scot/ml/levenmouth-demonstration-turbine">https://marine.gov.scot/ml/levenmouth-demonstration-turbine</a>
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. <a href="https://marine.gov.scot/ml/neart-na-gaoithe-offshore-wind-farm-revised-design">https://marine.gov.scot/ml/neart-na-gaoithe-offshore-wind-farm-revised-design</a>
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. <a href="https://marine.gov.scot/ml/seagreen-alpha-and-bravo-offshore-wind-farms">https://marine.gov.scot/ml/seagreen-alpha-and-bravo-offshore-wind-farms</a>
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 <sup>2</sup> . Surveys are expected to occur over a 280 day period and be complete by 31 July 2028. <a href="https://marine.gov.scot/node/24368">https://marine.gov.scot/node/24368</a>
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 <sup>2</sup> . Surveys are expected to occur over a 360 day period and be completed by 30 September 2028. <a href="https://marine.gov.scot/node/24821">https://marine.gov.scot/node/24821</a>
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 <sup>2</sup> . Surveys are expected to occur over a 173 day period and be completed by the end of September 2028. <a href="https://marine.gov.scot/node/23735">https://marine.gov.scot/node/23735</a>
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 <sup>2</sup> . Surveys are expected to occur over a 411 day period and be completed by 15 June 2028. <a href="https://marine.gov.scot/node/24817">https://marine.gov.scot/node/24817</a>
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. <a href="https://marine.gov.scot/ml/marine-licence-hvac-cable-orkney-mainland-scotland-06889">https://marine.gov.scot/ml/marine-licence-hvac-cable-orkney-mainland-scotland-06889</a>
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. <a href="https://marine.gov.scot/node/23287">https://marine.gov.scot/node/23287</a>
Fair Isle Harbour Improvements	Upgrading a harbour to accommodate a new, larger ferry. This will involve 3000m <sup>3</sup> 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

	<p>the existing pier. Additionally, capital dredging and sea deposit of 5,340 wet tonnes of sediment will be required.</p> <p><a href="https://marine.gov.scot/ml/fair-isle-harbour-improvement-works">https://marine.gov.scot/ml/fair-isle-harbour-improvement-works</a></p>
Grutness Harbour Improvements	<p>Piled extension to the existing pier, protected by rock armour. Additional rock armour being added to increase the height of the existing defences.</p> <p><a href="https://marine.gov.scot/node/24591">https://marine.gov.scot/node/24591</a></p>
Magallanes ATIR Tidal Turbine	<p>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.</p> <p><a href="https://marine.gov.scot/node/24248">https://marine.gov.scot/node/24248</a></p>
MeyGen Tidal Turbines	<p>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.</p> <p><a href="https://marine.gov.scot/ml/meygen-tidal-energy-project">https://marine.gov.scot/ml/meygen-tidal-energy-project</a></p>
Nova Shetland Tidal Array, Bluemull Sound	<p>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.</p> <p><a href="https://marine.gov.scot/ml/shetland-tidal-array">https://marine.gov.scot/ml/shetland-tidal-array</a></p>
OpenHydro	<p>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.</p> <p><a href="https://marine.gov.scot/node/24328">https://marine.gov.scot/node/24328</a></p>

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](#)).**

<b>Impact type</b>	<b>Age class</b>	<b>Estimated annual mortality (individuals)</b>
<b>Displacement</b>	Adults	5.00
	Chicks	21.60
<b>Collision</b>	Adults	22.65
	Immatures	13.28
<b>Total no. mortalities</b>	Adults	27.65
	Immatures	13.28
	Chicks	21.60
<b>CPS (95% CIs)</b>	-	0.909 (0.863-0.955)
<b>CGR (95% CIs)</b>	-	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 Minister 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 RIAA Addendum. 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.**