

From: Nicola Bain
Marine Scotland Licensing Operations Team
Marine Scotland
31 May 2019

Minister for Energy, Connectivity and the Islands

APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 FOR THE CONSTRUCTION AND OPERATION OF AN OFFSHORE GENERATING STATION, THE MORAY OFFSHORE WINDFARM (WEST), APPROXIMATELY 22.5KM FROM THE CAITHNESS COASTLINE

1.1. Purpose

- 1.1.1. To seek your determination on an application submitted by Moray Offshore Windfarm (West) Ltd (Company Number 10515140) ("Moray West" or "the Company") for consent under section 36 ("s.36") of the Electricity Act 1989 (as amended) ("the Electricity Act 1989") to construct and operate an offshore generating station, comprising up to 85 wind turbine generators ("WTGs"), with a combined maximum generating output of around 850 Megawatts ("MW") ("the Application").

1.2. Priority

- 1.2.1. High. The Company wishes to bid in to the 2019 Contracts for Difference ("CfD") allocation round three which opened on 29 May 2019.

1.3. Description of the Application and Site

- 1.3.1. On 5 July 2018, the Company submitted the Application to construct and operate the Moray West Offshore Wind Farm ("the Development"), approximately 22.5km southeast off the Caithness coastline. The Application was supported by an Environmental Impact Assessment Report ("EIA Report") and Habitat Regulations Appraisal Report ("HRA Report"). An addendum of additional information ("EIA Addendum Report") proposing changes to the original design envelope and an alternative site area ("the Alternative Moray West Site") was submitted by the Company on 23 November 2018 to address comments on landscape and visual and ornithological impacts.
- 1.3.2. On 31 August 2018, the Company submitted a Population Viability Analysis ("PVA") Report amending some of the results in the Report to Inform an Appropriate Assessment ("RIAA"). On 18 March 2019, the Company

submitted an “Information to Inform HRA¹ – Great Black-Backed Gull” Report (“GBBG Report”) in addition to the RIAA Report to address ornithological concerns.

- 1.3.3. The Application is for the construction and operation of an offshore energy generating station, with a maximum generating output of around 850MW and comprising up to 85 wind-powered electricity generating stations and associated offshore transmission infrastructure. A full description of the Development is set out in Annex C.
- 1.3.4. The location and boundary of the Development site is shown in Annex C, Figure 1. This location was selected based upon: wind resource and energy yield, environmental receptors (incorporating ornithology and marine mammals and landscape/seascape and visual impact), grid connectivity, suitable port availability, geotechnical conditions and foundation design options.
- 1.3.5. It is proposed that an offshore electricity export cable corridor approximately 3km wide will contain up to two cables that will transmit the electricity generated by the turbines to the onshore transformer location, to be located at the site of Blackhillock substation. The proposed cables will each measure not more than 65km in length. The cable burial method and/or scour protection requirements will be finalised when the layout is confirmed. The export cable is not included in the description of the Development and will be subject to a marine licence, in accordance with Part 4 of the Marine (Scotland) Act 2010 and Part 4 of the Marine and Coastal Access Act 2009.

1.4. Key considerations

- 1.4.1. In light of the legislative and regulatory background, the results of the consultation exercise and the supporting information submitted as part of the Application, including the EIA Report, RIAA, the EIA Addendum Report, the PVA Report and the GBBG Report, the key considerations in relation to the determination of this proposal are set out in Annex C, section 9.
- 1.4.2. The Appropriate Assessment (“AA”), as set out in Annex B, concluded that the Development will not adversely affect the integrity of any European offshore marine site or European protected site, either alone or in combination with other plans or projects.
- 1.4.3. Marine Scotland - Licensing Operations Team (“MS-LOT”) considers that the key issues have been resolved, mitigated and/or successfully addressed through the use of conditions. All legislative requirements have been complied with throughout the determination process and policy documents identified are considered to be broadly supportive of the Development.

¹ HRA means Habitats Regulations Appraisal.

1.5. Key issues raised by consultees

1.5.1. A full summary of the consultation exercise is set out in Annex C, at sections 4,5 and 6. The key issues raised by consultees were as follows:

- Potential impacts on seabirds, and in particular the qualifying interests of the East and North Caithness Cliffs Special Protected Areas (“SPAs”), as a result of the Development in-combination with the Moray East Offshore Wind Farm and the Beatrice Offshore Wind Farm (“the Moray Firth Developments”);
- Potential impacts on marine mammals;
- Potential impacts on commercial fisheries;
- Seascape, landscape and visual potential impacts arising as a result of the Development, particularly in-combination with the other Moray Firth Developments;
- Potential impacts on cultural heritage receptors; and
- Potential impacts on Air Traffic Control (“ATC”).

1.6. Maintained objections

- 1.6.1. Scottish Natural Heritage (“SNH”) maintains its objection relating to the impacts on the qualifying interests of the East Caithness SPA arising from the Development in-combination with the Moray Firth Developments.
- 1.6.2. The Royal Society for the Protection of Birds Scotland (“RSPB Scotland”) maintains its objection due to its concerns regarding the predicted impacts on the protected seabirds populations arising from the Development in-combination with the Moray Firth Developments.
- 1.6.3. The Ministry of Defence (“MOD”) maintains its objections regarding the unacceptable interference to the primary surveillance ATC radar used at RAF Lossiemouth and the Development’s interference with military low flying operations. However, MOD accepts that conditions attached to the s.36 consent will address its objection.
- 1.6.4. The Scottish Fishermen’s Federation (“SFF”) maintains its objections to the Development. SFF objects on the basis of potential loss of fishing grounds and landings over the 25 year life span of the Development. However, SFF welcomes conditions related to the monitoring of the Development’s impacts on commercial fisheries. SFF requested personal contact to 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 to participate in the Moray Firth Commercial Fisheries

Working Group (“MFCFWG”) and the Scottish Marine Energy programme (“ScotMER”).

1.6.5. National Air Traffic Service Safeguarding (“NATS”) maintains its objection concerning the unacceptable technical impacts of the Development on the Aberdeen En-Route ATC and Prestwick Centre ATC. NATS accepts that a condition attached to the s.36 consent will address its objection.

1.6.6. Further detail on the means by which the concerns and objections have been considered and addressed are set out in Annex C.

1.7. Advice on whether to cause a Public Local Inquiry (“PLI”) to be held

1.7.1. The circumstances of the case are such that there is no statutory requirement under paragraph 2(2) of Schedule 8 to the Electricity Act 1989 for the Scottish Ministers to cause a PLI to be held. The decision to hold a PLI in this case is entirely at the discretion of the Scottish Ministers. Such discretion must always be exercised in accordance with the general principles of public law.

1.7.2. Before you can make a decision on the Application, you must determine whether it is appropriate to cause a PLI to be held. You may have regard to whether:

1. You have been provided with sufficient information to enable you to weigh up all of the conflicting issues and, without a public inquiry, whether you can properly weigh any such issues;
2. Those parties with a right to make representations have been afforded the opportunity to do so; and
3. You have sufficient information on which to take your decision such that a public inquiry would not provide any further factual evidence which would cause you to change your view on the Application.

1.7.3. The Highland Council, Moray Council and Aberdeenshire Council did not raise any objections to the Development.

1.7.4. If, having considered the Application, the EIA Report, RIAA, the EIA Addendum Report, the PVA Report and GBBG Report and the objections received, as summarised above, together with other material considerations set out in Annex C, you determine that it would not be appropriate for a PLI to be held, then it remains for you to grant or refuse consent under s.36, having regard to the considerations set out in this documentation.

1.7.5. MS-LOT is satisfied that sufficient information to weigh up the various competing considerations is available and has been properly taken into account, and that all interested parties have had sufficient opportunity to make representations on the Application. MS-LOT is further satisfied that any inquiry would not be likely to provide any factual information to assist the Scottish Ministers to resolve the issues of risk and planning judgment raised

by the Application or to take a different view on the substantive issues on the Application. Accordingly you may conclude that it is not appropriate to cause a PLI to be held into these matters.

- 1.7.6. MS-LOT has fully considered matters raised in representations from statutory and non-statutory consultees and from members of the public, as well as the EIA Report, RIAA, EIA Addendum Report, PVA Report and GBBG Report. In addition, officials have completed an AA and concluded that the Development will not adversely affect the integrity of any European offshore marine site or European protected site, either alone or in-combination with other plans or projects.
- 1.7.7. Officials have weighed the impacts of the Development, and the degree to which these can be mitigated, against the economic and renewable energy benefits which would be realised. Officials have undertaken this exercise in the context of national and local policies.
- 1.7.8. MS-LOT considers that where any adverse environmental impacts cannot be prevented, adequate mitigation can be put in place. An obligation has been placed on the Company to give effect to all the mitigation through the attachment of conditions to the s.36 consent.
- 1.7.9. MS-LOT is of the view that in considering the characteristics and location of the Development and the potential impacts, you may be satisfied that the Application has had regard to the preservation of the environment and ecology and that you will have discharged your responsibilities in terms of Schedule 9 to the Electricity Act 1989 in this respect, if you decide to grant consent.

1.8. Recommendation

MS-LOT recommends that you determine that it is appropriate not to cause a public inquiry to be held, and to grant consent under section 36 of the Electricity Act 1989 for the Moray West Offshore Wind Farm, subject to the imposition of conditions.

Please note that two marine licence applications under the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009 for the Moray West Offshore Wind Farm and the offshore transmission works and export cable to shore are being considered alongside the Application. These will be determined by MS-LOT and, if granted these licences will be forwarded to you for information.

1.9. Publicity

- 1.9.1. Officials will liaise with Communications once a determination has been made on this Application to agree the appropriate means of announcing the decision.

- 1.9.2. In order for the determination process to be fully open and transparent, MS-LOT recommend that this submission is published on the Marine Scotland Information website, alongside the key documentation relating to the Application.

1.10. List of Annexes

ANNEX A Legislative Requirements

ANNEX B Appropriate Assessment

ANNEX C Decision Notice and Conditions

Copy List:	For Action	For Comment	For Information		
			Portfolio Interest	Constit Interest	General Awareness
Minister for Energy, Connectivity and the Islands	x	x			
Cabinet Secretary for Transport, Infrastructure and Connectivity			x		
Cabinet Secretary for the Rural Economy			X		
Cabinet Secretary for Environment, Climate Change and Land Reform			X		
Minister for Rural Affairs and the Natural Environment			X		
DG Economy Director of Marine Scotland, Marine Scotland Helena Gray, Marine Scotland Tim McDonnell, Marine Scotland Ian Davies, Marine Scotland Zoe Crutchfield, Marine Scotland Gayle Holland, Marine Scotland Mark Christie, Marine Scotland Michael Bland, Marine Scotland Nicola Bain, Marine Scotland Phil Gilmour, Marine Scotland David Pratt, Marine Scotland Jared Wilson, Marine Scotland Andronikos Kafas, Marine Scotland Mike Palmer, Marine Scotland Allan Gibb, Marine Scotland Kersti Bergi, Energy Directorate Andrew Hogg, Energy Directorate Neal Rafferty, Energy Directorate David Stevenson, Energy Directorate Debbi Ramsay, Energy Directorate Joanna Dingwall, Legal Directorate Kenneth Hannaway, Legal Directorate Fiona McClean, Legal Directorate Callum McCaig, Special Advisor Leanne Dobson, Special Advisor Communications - Economy Paul O'Brien – Communications Aileen Macarthur - Communications					

ANNEX A REGULATORY REQUIREMENTS: LEGISLATION AND POLICY

APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT 1989 FOR THE CONSTRUCTION AND OPERATION OF AN OFFSHORE GENERATING STATION, THE MORAY OFFSHORE WINDFARM (WEST), APPROXIMATELY 22.5KM FROM THE CAITHNESS COASTLINE

1 LEGISLATION

1.1 The Scotland Act 1998, The Scotland Act 1998 (Transfer of Functions to the Scottish Ministers etc.) Order 1999 and The Scotland Act 1998 (Transfer of Functions to the Scottish Ministers etc.) (No. 2) Order 2006

1.1.1 The generation, transmission, distribution and supply of electricity are reserved matters under Schedule 5, Part II, section D1 of the Scotland Act 1998. The Scotland Act 1998 (Transfer of Functions to the Scottish Ministers etc.) Order 1999 (“the 1999 Order”) executively devolved section 36 (“s.36”) consent functions under the Electricity Act 1989 (as amended) (“the Electricity Act 1989”) (with related Schedules) to the Scottish Ministers. The Scotland Act 1998 (Transfer of Functions to the Scottish Ministers etc.) (No. 2) Order 2006 (“the 2006 Order”) revoked the transfer of s.36 consent functions as provided under the 1999 Order and then, one day later, re-transferred those functions, as amended by the Energy Act 2004, to the Scottish Ministers in respect of Scotland and the territorial waters adjacent to Scotland and extended those consent functions to a defined part of the Renewable Energy Zone beyond the Scottish territorial sea, as set out in the Renewable Energy Zone (Designation of Area) (Scottish Ministers) Order 2005.

1.2 The Electricity Act 1989

1.2.1 Any proposal to construct, extend or operate a generating station situated in internal waters or the territorial sea (out to 12 nautical miles (“nm”) from the shore) with a generation capacity in excess of 1 megawatt (“MW”) requires consent under s.36 of the Electricity Act 1989.² A consent under s.36 may include such conditions (including conditions as to the ownership or operation of the station) as appear to the Scottish Ministers to be appropriate. The s.36 consent shall continue in force for such period as may be specified in, or determined by or under, the s.36 consent.

1.2.2 Paragraph 3 of Schedule 9 to the Electricity Act 1989 requires that regard be given to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest. Reasonable steps must be taken to mitigate any

² S.36(2) modified by The Electricity Act 1989 (Requirement of Consent for Offshore Generating Stations) (Scotland) Order 2002

Annex A – Legislative Requirements

effect which the proposals would have on these features. Scottish Ministers must have regard to the extent to which the person, by whom the proposals were formulated, has complied with their duty to mitigate the effects of the proposals. When exercising any relevant functions, a licence holder, a person authorised by an exemption to generate or supply electricity, and the Scottish Ministers must also avoid, so far as possible, causing injury to fisheries or to the stock of fish in any waters.

- 1.2.3 Under s.36B of the Electricity Act 1989, Scottish Ministers may not grant a consent in relation to any particular offshore generating station activities if they consider that interference with the use of recognised sea lanes essential to international navigation is likely to be caused by the carrying on of those activities or is likely to result from their having been carried on. The Scottish Ministers, when determining whether to give consent for any particular offshore generating activities, and considering the conditions to be included in such consent, must have regard to the extent and nature of any obstruction of, or danger to, navigation which, without amounting to interference with the use of such sea lanes, is likely to be caused by the carrying on of the activities, or is likely to result from their having been carried on. In determining this issue, the Scottish Ministers must have regard to the likely overall effect (both while being carried on and subsequently) of the activities in question and such other offshore generating activities which are either already subject to s.36 consent or are activities for which it appears likely that such consents will be granted.
- 1.2.4 Under Schedule 8 to the Electricity Act 1989 and the Electricity (Applications for Consent) Regulations 1990 (as amended) (“the 1990 Regulations”) and the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) (“the 2017 EW Regulations”), an applicant must publish notice of its application for s.36 consent in one or more local newspapers, in one or more national newspapers, in the Edinburgh Gazette and on an application website to allow representations to be made concerning the Application. The Scottish Ministers must serve notice of any application for s.36 consent upon any relevant planning authority or planning authorities.
- 1.2.5 Paragraph 2(2) of Schedule 8 to the Electricity Act 1989 provides that where a relevant planning authority notifies the Scottish Ministers that they object to an application for s.36 consent and where they do not withdraw their objection, then the Scottish Ministers must cause a PLI to be held in respect of the application. In such circumstances, before determining whether to give their consent, the Scottish Ministers must consider the objections and the report of the person who held the PLI.
- 1.2.6 The location and extent of the Moray West Offshore Wind Farm (“the Development”) to which the Application relates (being wholly offshore) means that the Development is not within the area of any local Planning Authority. MS-LOT, on behalf of the Scottish Ministers, consulted with the

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planning authorities most local to the Development: the Highland Council, Moray Council and Aberdeenshire Council.

- 1.2.7 The Scottish Ministers are not obliged to require a PLI to be held in this case, but are required, under paragraph 3(2) of Schedule 8 to the Electricity Act 1989 to consider all objections received, together with all other material considerations, with a view to determining whether a PLI should be held. Paragraph 3(2) of Schedule 8 provides that if the Scottish Ministers think it appropriate to do so, they shall cause a PLI to be held, either in addition to or instead of any other hearing or opportunity of stating objections to the Application.
- 1.2.8 You can be satisfied that all the necessary tests set out within the Electricity Act 1989 have been met through the assessment of the Application and all procedural requirements have been complied with. The Company holds a generation licence. Your officials have approached matters on the basis that Schedule 9, paragraph 3(1) obligations as apply to licence holders and the specified exemption holders should also be applied to the Company.
- 1.3 The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended), the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) and the Marine Works (Environmental Impact Assessment) Regulations 2017 (as amended)**
- 1.3.1 The Environmental Impact Assessment Directive 2011/92/EU (as codified and amended) is targeted at projects which are likely to have significant effects on the environment and identifies projects which require an environmental impact assessment (“EIA”) to be undertaken. The Company identified the proposed Development as one requiring an EIA Report in terms of the 2017 EW Regulations, the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (“the 2007 MW Regulations”) and the Marine Works (Environmental Impact Assessment) Regulations 2017 (as amended) (“the 2017 MW Regulations”). For the purposes of the 2007 MW Regulations, the EIA Report means the Environmental Statement (“ES”).
- 1.3.2 In compliance with the 2017 EW Regulations, the 2007 MW Regulations and the 2017 MW Regulations, consultation has taken place with Scottish Natural Heritage (“SNH”), the Scottish Environment Protection Agency (“SEPA”), Historic Environment Scotland (“HES”), the relevant planning authorities, and such other persons likely to be concerned by the proposed Development by reason of their specific environmental responsibilities on the terms of the EIA Report.
- 1.3.3 The decision notice required under the 2017 EW Regulations is attached at Annex C regarding the s.36 consent. Separate decision notices granted under the 2007 MW Regulations and the 2017 MW Regulations will be issued

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regarding any marine licences granted in respect of the generating station and offshore transmission infrastructure.

- 1.3.4 You can be satisfied that the EIA regulatory requirements have been met and your officials have taken into consideration the environmental information, including the EIA Report, the responses received from the consultative bodies and the representations received.

1.4 The Habitats Directive and the Birds Directive

- 1.4.1 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and wild fauna and flora (as amended) (“the Habitats Directive”), provides for the conservation of natural habitats and of wild flora and fauna in the Member States’ European territory, including offshore areas such as the proposed site of the Development. It promotes the maintenance of biodiversity by requiring Member States to take measures which include those which maintain or restore natural habitats and wild species listed in the Annexes to the Habitats Directive at a favourable conservation status and contributes to a coherent European ecological network of protected sites by designating Special Areas of Conservation (“SAC”) for those habitats listed in Annex I and for the species listed in Annex II, both Annexes to that Directive.
- 1.4.2 Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (as amended and codified) (“the Birds Directive”), applies to the conservation of all species of naturally occurring wild birds in the Member States’ European territory, including offshore areas such as the proposed site of the Development and it applies to birds, their eggs, nests and habitats. Under Article 2, Member States are obliged to “take the requisite measures to maintain the population of the species referred to in Article 1 at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of these species to that level.” Article 3 further provides that “[i]n the light of the requirements referred to in Article 2, Member States shall take the requisite measures to preserve maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Article 1”. Such measures are to include the creation of protected areas (Article 3.2).
- 1.4.3 The Habitats Directive and the Birds Directive have, in relation to the marine environment, been transposed into Scots law by the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended) (“the 1994 Habitats Regulations”), the Conservation of Habitats and Species Regulations 2017 (“the 2017 Habitats Regulations”) for reserved matters and s.36 consents, and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (“the 2017 Offshore Habitats Regulations”) for developments outwith 12nm. These regulations are collectively referred to as “the Habitats Regulations”.

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1.4.4 Developments in, or adjacent to, European protected sites, or in locations which have the potential to affect such sites, must undergo what is commonly referred to as a Habitats Regulations Appraisal (“HRA”). In line with advice from SNH, and to ensure compliance with European Union (“EU”) obligations under the Habitats Directive and the Birds Directive, MS-LOT, on behalf of the Scottish Ministers, undertook an AA as part of this HRA.

1.4.5 You can be satisfied that the Habitats Regulations requirements have been met. The AA completed has concluded that the Development, alone and in combination with other plans or projects, will not adversely affect the integrity of any SAC or Special Area of Protection (“SPA”). Reasons for diverging from the SNH advice have been provided in the AA and decision notice.

1.5 Marine and Coastal Access Act 2009

1.5.1 The Marine and Coastal Access Act 2009 (“the 2009 Act”) executively devolved marine planning, marine licensing and nature conservation powers in the offshore marine region (12-200nm) to the Scottish Ministers. The 2009 Act transferred certain functions in issuing consent under s.36 of the Electricity Act 1989 from the Secretary of State to the Marine Management Organisation (“MMO”). The MMO does not exercise such functions in Scottish waters or in the Scottish part of the renewable energy zone, as that is where the Scottish Ministers perform such functions.

1.5.2 The Marine and Coastal Access Act 2009 states that, where applications are made for both a marine licence and consent under s.36 of the Electricity Act 1989, in those cases where the Scottish Ministers are the determining authority, notice is given to the applicant that the two applications are to be considered together. Scottish Ministers have fulfilled the requirements stated under section 79(3) of the Act.

1.5.3 Although the Development is to be located in the offshore region it will also have an impact upon, although to a much lesser extent, the territorial sea in connection with the construction of the transmission infrastructure and cable to shore.

1.6 Marine (Scotland) Act 2010

1.6.1 The Marine (Scotland) Act 2010 (“the 2010 Act”) regulates activities in the territorial sea adjacent to Scotland in terms of marine environment issues. Subject to exemptions specified in subordinate legislation, under Part 4 of the 2010 Act, licensable marine activities may only be carried out in accordance with a marine licence granted by the Scottish Ministers.

1.6.2 Where an application for a marine licence and consent under s.36 of the Electricity Act 1989 is to be made, the Scottish Ministers decide and give notice that both applications are to be considered together. The requirements stated under section 35(3) of the Act have been fulfilled by Scottish Ministers.

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- 1.6.3 Under Part 2 of the 2010 Act, the Scottish Ministers have general duties to carry out their functions in a way best calculated to achieve sustainable development, including the protection and, where appropriate, the enhancement of the health of the area.

1.7 Climate Change (Scotland) Act 2009

- 1.7.1 Under Part 2 of the 2010 Act the Scottish Ministers must, when exercising any function that affects the Scottish marine area under the Climate Change (Scotland) Act 2009 (as amended), act in the way best calculated to mitigate, and adapt to, climate change so far as is consistent with the purpose of the function concerned. Under the Climate Change (Scotland) Act 2009 (as amended), annual targets have been agreed with relevant advisory bodies for the reduction in carbon emissions.

2 MARINE AND TERRESTRIAL POLICY

2.1 Scotland's National Marine Plan

- 2.1.1 The National Marine Plan ("NMP"), formally adopted in 2015, provides a comprehensive statutory planning framework for all activities out to 200nm. Scottish Ministers must take authorisation and enforcement decisions, which affect the marine environment, in accordance with the NMP.
- 2.1.2 The NMP sets an objective to promote the sustainable development of offshore wind, wave and tidal renewable energy in the most suitable locations. In doing so, it sets a presumption in favour of sustainable development and use of the marine environment when consistent with the policies and objectives of the NMP. The NMP also contains specific policies relating to the mitigation of impacts on habitats and species, and in relation to the treatment of cables.
- 2.1.3 Of particular relevance to this proposal are:
- Chapter 4 policies 'GEN 1-21', which guide all development proposals;
 - Chapter 6 Sea Fisheries, policies 'FISHERIES 1-3';
 - Chapter 8 Wild Salmon and Diadromous Fish, policies 'WILD FISH 1 and 3';
 - Chapter 11 Offshore Wind and Marine Renewable Energy, policies 'RENEWABLES 1, 3-10';
 - Chapter 12 Recreation and Tourism, policies 'REC & TOURISM 2 and 6';
 - Chapter 13 Shipping, Ports, Harbours and Ferries, policies 'TRANSPORT 1 and 6';
 - Chapter 14 Submarine Cables, policies 'CABLES 1, 2 and 5'; and

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- Chapter 15 Defence, policy ‘DEFENCE 1’.

2.1.4 MS-LOT has had full regard to the NMP when assessing the Application. It considers that the Development accords with the NMP.

2.2 Other Marine Policy

2.2.1 The Development will contribute to Scotland’s renewable energy targets and will provide wider benefits to the offshore wind industry which are reflected within Scotland’s Offshore Wind Route Map and the National Renewables Infrastructure Plan. Offshore wind is seen as an integral element in Scotland’s contribution towards action on climate change. The development of offshore wind also represents one of the biggest opportunities for sustainable economic growth in Scotland for a generation. Scotland’s ports and harbours present viable locations to service the associated construction and maintenance activities for offshore renewable energy. In addition, Scottish research institutions provide a base of academic excellence for delivering technological advancements and technology transfer and are also well placed to benefit from the creation of this new industry around Scotland.

2.3 Scottish Planning Policy

2.3.1 Scottish Planning Policy 2014 (“SPP”) sets out Scottish Government’s planning policy on renewable energy development. Efficient supply of low carbon and low cost heat and generation of heat and electricity from renewable energy sources are vital to reducing greenhouse gas emissions and can create significant opportunities for communities. Renewable energy also presents a significant opportunity for associated development, investment and growth of the supply chain, particularly for ports and harbours identified in the National Renewables Infrastructure Plan (“NRIP”). Communities can also gain new opportunities from increased local ownership and associated benefits.

2.3.2 Whilst SPP makes clear that the criteria against which applications should be assessed will vary depending upon the scale of the development and its relationship to the characteristics of the surrounding area, the SPP states that these are likely to include impacts on landscapes and the historic environment, ecology (including birds, mammals and fish), biodiversity and nature conservation; the water environment; communities; aviation; telecommunications; noise; shadow flicker and any cumulative impacts that are likely to arise. SPP also makes clear that the scope for the development to contribute to national or local economic development should be a material consideration when considering an application.

2.3.3 MS-LOT has had full regard to the SPP when assessing the Application. MS-LOT considers that the Development accords with the SPP.

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2.4 National Planning Framework 3

- 2.4.1 Scotland's National Planning Framework 3 ("NPF3"), adopted in June 2014, sets out the ambition for Scotland to move towards becoming a low carbon country, placing emphasis on the development of onshore and offshore renewable energy. It recognises the significant wind resource available in Scotland, and reflects targets to meet at least 30% of overall energy demand from renewable sources by 2020 including generating the equivalent of at least 100% of gross electricity consumption from renewables. It also identifies targets to source 11% of heat demand and 10% of transport fuels from renewable sources by 2020.
- 2.4.2 NPF3 aims for Scotland to be a world leader in offshore renewable energy and expects that, in time, the pace of onshore wind development will be overtaken by the development of marine energy including wind, wave and tidal power.
- 2.4.3 MS-LOT has had full regard to the NPF3 when assessing the Application. MS-LOT considers that the Development accords with the NPF3.

2.5 Terrestrial Policy

- 2.5.1 MS-LOT has had full regard to the terms of relevant terrestrial planning policy documents and plans. In addition to the high level policy documents regarding the Scottish Government's policy on renewables outlined above, MS-LOT has had full regard to a number of national and local level planning documents and plans, including strategic and local development plans.
- 2.5.2 The Local Development Plans ("LDP") and supporting policies for the relevant planning authorities are considered within the Planning and Policy Statement within the EIA Report. The LDP for each of the planning authorities support the development of renewable energy projects and sustainable development.

2.6 Summary

- 2.6.1 MS-LOT considers that the policy documents outlined above are broadly supportive of the Development.



T: +44 (0)300 244 5046
E: ms.marinerenewables@gov.scot

**SCOTTISH MINISTERS ASSESSMENT OF THE PROJECT'S
IMPLICATIONS FOR DESIGNATED SPECIAL AREAS OF
CONSERVATION (“SAC”), SPECIAL PROTECTION AREAS (“SPA”)
AND PROPOSED SPECIAL PROTECTION AREAS (“pSPA”) IN VIEW
OF THE SITES’ CONSERVATION OBJECTIVES**

APPLICATION FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY ACT
1989 (AS AMENDED) AND FOR MARINE LICENCES UNDER THE MARINE
(SCOTLAND) ACT 2010 AND MARINE AND COASTAL ACCESS ACT 2009 FOR
THE CONSTRUCTION AND OPERATION OF THE MORAY WEST OFFSHORE
WIND FARM AND ASSOCIATED OFFSHORE TRANSMISSION
INFRASTRUCTURE

SITE DETAILS: MORAY WEST OFFSHORE WIND FARM AND EXPORT CABLE
CORRIDOR BOUNDARY – APPROXIMATELY 22.5KM EAST OF THE CAITHNESS
COASTLINE IN THE OUTER MORAY FIRTH

Name	Assessor or Approver	Date
Fiona Mackintosh	Assessor	15 April 2019
Ross Culloch	Assessor	15 April 2019
Tom Evans	Assessor	15 April 2019
Gayle Holland	Approver	26 April 2019

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SECTION 1: BACKGROUND

1 Introduction

- 1.1.1 This appropriate assessment (“AA”) relates to the application (“the Application”) submitted by Moray Offshore Windfarm (West) Limited (“the Company”) for consent under section 36 (“s.36”) of the Electricity Act 1989 (as amended) (“the Electricity Act 1989”) and marine licences under the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009 to construct and operate an offshore generating station 22.5 kilometres (“km”) to the east of the Caithness coastline in the Moray Firth (“the Development”), comprising up to 85 wind turbine generators (“WTGs”), with a combined maximum generating capacity of around 850 Megawatt (“MW”).
- 1.1.2 The assessment has been undertaken by Scottish Ministers and is required under regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), and regulation 28 of the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) (collectively referred to as “the Habitats Regulations”). This AA is in accordance with Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (“the Habitats Directive”) and Council Directive 2009/147/EC on the conservation of wild birds (“the Birds Directive”). Scottish Ministers, as the ‘competent authority’ under the Habitats Regulations, must be satisfied that the Development will not adversely affect the integrity of any European site or European offshore marine site (special areas of conservation (“SAC”) and special protection areas (“SPA”)) either in isolation or in-combination with other plans or projects before they can grant consent for the Development.
- 1.1.3 A detailed AA has been undertaken and Scottish Natural Heritage (“SNH”) has been consulted.

2 Appropriate assessment (“AA”) conclusion

- 2.1.1 This AA concludes that there will be no adverse effects on the site integrity of the Buchan Ness to Collieston Coast SPA, East Caithness Cliffs SPA, North Caithness Cliffs SPA, Troup, Pennan and Lion’s Head SPA, Moray Firth proposed SPA (“pSPA”), Moray Firth SAC or Dornoch Firth and Morrich More SAC, (where each SAC, SPA or pSPA is taken as a whole) from the Development either in isolation or in-combination with other plans or projects, providing that the conditions set out in Section 4 are complied with.

- 2.1.2 Scottish Ministers consider that the most up to date and best scientific evidence available has been used in reaching the conclusion that the Development will not adversely affect the integrity of these sites and are satisfied that no reasonable scientific doubt remains.

3 Background to including assessment of proposed SPAs

- 3.1.1 The Scottish Ministers are currently in the process of identifying a suite of new marine SPAs in Scotland. In 2014, advice was received from the statutory nature conservation bodies (“SNCBs”) on the sites most suitable for designation and at this stage they became draft SPAs (“dSPA”). Once the Scottish Ministers have agreed the case for a dSPA to be the subject of a public consultation, the proposal is given the status of pSPA and receives policy protection, which effectively offers the sites the same level of protection as designated sites, from that point forward until a decision on classification of the site is made. This policy protection for pSPAs is provided by the [Scottish Planning Policy](#) (at paragraph 210), the [UK Marine Policy Statement](#) (at paragraph 3.1.3) and [Scotland’s National Marine Plan](#) at paragraph 4.45.
- 3.1.2 It is not a legal requirement under the Habitats Directive or the Habitats Regulations for this assessment to assess the implications of the Development on any pSPAs. Nevertheless, this AA includes an assessment of implications upon these sites in accordance with domestic policy. The Scottish Ministers are required to consider article 4(4) of the Birds Directive in respect of pSPAs. The considerations under article 4(4) of the Birds Directive are separate and distinct to the considerations which must be assessed under this Habitats Directive assessment but they are, nevertheless, set out within this AA (see paragraphs 21.3.1 to 21.3.2).
- 3.1.3 In accordance with the Habitats Regulations the Scottish Ministers, acting as soon as reasonably practicable following the formal designation of the pSPA, will review their decisions if the Development is authorised. If required this will include a supplementary AA being undertaken concerning the implications of the Development on the site as designated (as the site is currently a pSPA, at present, the conservation objectives are in draft form and will be finalised at the point that the site is designated).

4 Details of proposed operation

- 4.1.1 The Company has submitted two separate marine licence applications in respect of the generating station and the transmission works under part 4 of the Marine and Coastal Access Act 2009 and part 4 of the Marine (Scotland) Act 2010. In addition, the Company has submitted an application for s.36 consent under the Electricity Act 1989 in respect of the Development. A full

description of the Development can be found in Chapter 4 of the Environmental Impact Assessment Report (“EIA Report”) (as submitted in July 2018). The s.36 consent and marine licences applied for are for an operational period of 25 years.

- 4.1.2 The Company proposes to construct and operate a large-scale offshore wind farm and associated offshore transmission infrastructure, located 22.5km to the east of the Caithness Coast in the outer Moray Firth. This Development will consist of a maximum of 85 WTGs. The turbine foundation type will be decided post consent. In addition to the WTGs, up to two offshore substation platforms (“OSPs”) and one meteorological mast is proposed. Should two OSPs be installed, an inter-connector cable may be required to connect the OSPs. Two 65km offshore export cables are proposed, which will run from the OSPs to a landfall point between Sandend Beach and Redhythe Point in Aberdeenshire.
- 4.1.3 The Company submitted a scoping report and a request for a scoping opinion in relation to the generating station aspect of the Development to Scottish Ministers in May 2016. Following consultation with statutory consultees and other stakeholders, the Scottish Ministers issued a scoping opinion in respect of the generating station aspect of Development on 15 August 2016 (“Generating Station Scoping Opinion”), advising on the scope of assessment required in respect of the Application. The Generating Station Scoping Opinion included advice on the Habitats Regulations Appraisal (“HRA”) requirements and advised that information to inform the HRA must be submitted in conjunction with the EIA Report.
- 4.1.4 The Company submitted a scoping report and a request for a scoping opinion in relation to the offshore transmission aspect of the Development to Scottish Ministers in May 2017. Following consultation with statutory consultees and other stakeholders, the Scottish Ministers issued a scoping opinion in respect of the offshore transmission aspect of the Development on 30 August 2018 (“Transmission Infrastructure Scoping Opinion”), advising on the scope of assessment required in respect of the Application. The Generating Station Scoping Opinion and the Transmission Infrastructure Scoping Opinion are referred to collectively in this AA as the “Scoping Opinion”. Due to the extended period of time between the Scoping Opinion being issued and the Application, several meetings were held with the Company to discuss assessment methodologies prior to the submission of the Application.
- 4.1.5 The Company submitted a HRA screening report to the Scottish Ministers and SNH in September 2017. The Scottish Ministers provided a HRA screening opinion in October 2017 identifying that there was potential for

likely significant effect (“LSE”) on ornithology, marine mammal and habitat features.

- 4.1.6 The Application for the Development considered four different sizes of WTG ranging from Model 1 (smallest) to Model 4 (largest), although Model 4 was later removed from the design options through the submission of a report providing additional information on the Application (“EIA Addendum Report”) (see paragraph 4.1.11). Table 1 below provides an overview of the different model parameters.

Table 1 Comparison of WTG parameters

Parameter	Model 1	Model 2	Model 3	Model 4
Maximum number of WTGs	85	85	72	62
Minimum height of lowest blade tip above highest astronomical tide (HAT) (m)	35	35	35	35
Maximum blade tip height above HAT (m)	199	230	265	285
Maximum rotor blade diameter (m)	164	195	230	250

- 4.1.7 A range of substructure and foundation types were considered within the Application as follows:

- Piled monopile foundations (‘monopiles’) - these comprise a single hollow steel tube (or pile), which penetrates the seabed. Monopiles are usually installed using a technique called percussive piling which involves knocking the pile into the seabed using a large hammer. In areas where the seabed is very hard (e.g. rock) the monopiles may need to be drilled into the seabed;
- Pin-pile jacket foundations - these comprise a steel lattice structure, anchored to the seabed with small pin-piles. Jackets are likely to be four-legged, although three-legged jackets are also being considered. The pin-piles are installed the same way as the monopiles;
- Suction caisson foundations - a suction caisson is a bucket shaped structure that is attached to the seabed by ‘suction’ created when the caisson penetrates the seabed and water is then pumped out of the space between the caisson and the seabed. Suction caissons can be attached to either the legs of the steel lattice jacket substructures or the bottom of a monopile substructure; and

- Gravity base foundations - these comprise concrete structures, sometimes including additional ballast (typically sand, gravel, rock or dredged material) that sit on the seabed to support the turbine tower. Gravity bases vary in shape, but are significantly wider at the base (at seabed level) to provide support and stability to the structure. Conical or upside down T-shaped bases are being considered for the Development.

4.1.8 OSPs will be located on substructures as outlined above or alternatively on jack-up platform substructures.

4.1.9 The Development will require inter array cabling to connect the WTGs to the OSPs, interconnector cabling to connect the OSPs (if required) and up to two export cable circuits. The cables will be buried where possible and protected (e.g. rock placement or concrete mattresses) where burial is not feasible. Cables will be buried using one or a combination of methods including ploughing, jetting and cutting.

4.1.10 It is currently planned that the construction of the Development would commence in 2022 and end in 2024 – a period of approximately 36 months. Table 2 below provides an overview of the timescales.

Table 2 Indicative Construction Timescales

Activity	Indicative Timescale
Offshore construction commencement	Q1 2022
Piling (only applicable to piled foundation solution)	Q2 2022 – Q1 2023
Substructure Installation	Q2 – Q3 2023
Inter array cable installation	Q2 – Q4 2023
OSP Installation	Q3 2023
Export cable installation	Q3 2023 – Q1 2024
WTG Installation	Q2 2024 – Q4 2024
First Generation	Q4 2024

4.1.11 The Company subsequently submitted the [EIA Addendum Report](#). The EIA Addendum Report related to a variation to the Development site boundary, removal of the Model 4 WTG parameter option and a reduction in the operational life of the Development from 50 to 25 years.

4.1.12 The Company subsequently requested that only the site boundary as submitted in the original Application be considered in the determination for consent.

- 4.1.13 Figure 1 provides a chart detailing the Development area, including the offshore export cable corridor.

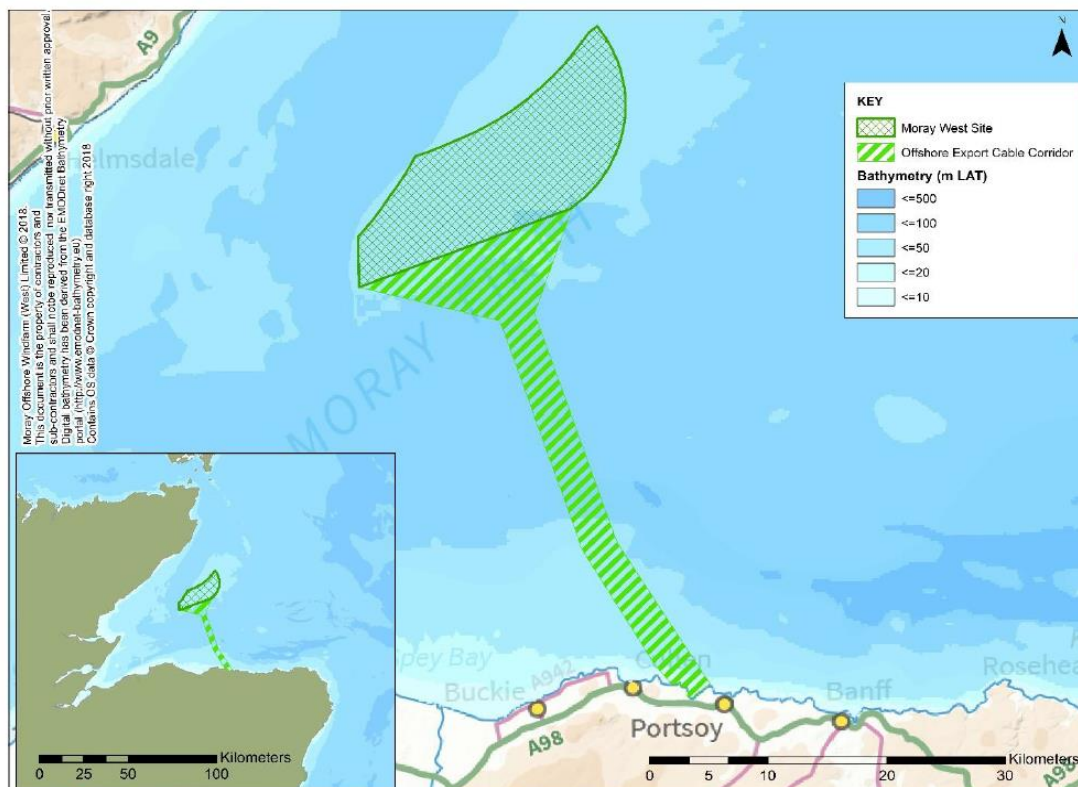


Figure 1 Chart of Generating Station and Cable Corridor

Source: [The EIA Report – Non Technical Summary](#)

5 Consultation

- 5.1.1 The Company submitted the Application, including the EIA Report and a Report to Inform an Appropriate Assessment (“RIAA”), on 5 July 2018. Scottish Ministers accepted the Application and sent copies of it to SNH and other relevant consultees on 8 July 2018 for a 42 day consultation period.
- 5.1.2 A Population Viability Analysis (“[PVA Report](#)”) amending results in the RIAA was submitted on 31 August 2018 and SNH and the Royal Society for the Protection of Birds Scotland (“RSPB Scotland”) were. On 7 September 2018, RSPB Scotland and SNH provided detailed comments and Marine Scotland Science (“MSS”) provided scientific advice.
- 5.1.3 The Company submitted the EIA Addendum Report on 23 November 2018, and SNH, RSPB Scotland and other relevant consultees were consulted for a further 42 day period. Detailed comments were received from SNH and RSPB Scotland, and MSS provided scientific advice.

- 5.1.4 Due to the request by SNH for further information, to inform the AA, on the assessment of great black-backed gull (“GBBG”), a report was submitted by the Company (“[GBBG Report](#)”) on 18 March 2019 and SNH and RSPB Scotland were consulted.

6 Main points raised during consultation

- 6.1.1 The main points by each of the respondents that included HRA specific comments are summarised below. Copies of consultation responses received by Scottish Ministers relating to the Application can be accessed [here](#). Copies of consultation responses to the EIA Addendum Report can be accessed [here](#). Copies of consultation responses to the GBBG Report can be accessed [here](#).

6.2 SNH

- 6.2.1 In its response dated 7 September 2018 (“SNH Consultation Response”), SNH objected to the Development.
- 6.2.2 SNH advised that the Development would have an adverse effect on site integrity for kittiwake as a qualifying interest of the East and North Caithness Cliffs SPAs in-combination with the Moray East Offshore Wind Farm and Beatrice Offshore Wind Farm (when considered these are referred to as the “Moray Firth Developments”). SNH identified collision risk as the key impact.
- 6.2.3 SNH advised that for the Development in isolation there was insufficient evidence to conclude that there would be no adverse effect on site integrity for kittiwake as a qualifying interest of the East Caithness Cliffs SPA. This was due to uncertainty with the impact assessment methodology, in particular the manner in which the PVA was undertaken.
- 6.2.4 For the Development in-combination with the Moray Firth Developments, SNH advised that it was unable to conclude that there would be no adverse effect on site integrity for common guillemot and razorbill as qualifying interests of the East Caithness Cliffs SPA. This was due to potential issues with the impact assessment methodology, in particular as regards the manner in which displacement had been calculated.
- 6.2.5 Due to the GBBG not being included in the RIAA, SNH advised that it had insufficient information to reach a conclusion for this species as a qualifying interest of East Caithness Cliffs SPA.

- 6.2.6 SNH advised that for the Development in isolation and in-combination with the other Moray Firth Developments there would be no adverse effect on site integrity of any SPAs with respect to the following qualifying interests:
- East Caithness Cliffs SPA – fulmar and herring gull;
 - North Caithness Cliffs SPA – common guillemot, razorbill, puffin, fulmar;
 - Buchan Ness to Collieston Coast SPA – herring gull, common guillemot, fulmar and kittiwake; and
 - Troup, Pennan and Lion's Head SPA – herring gull, kittiwake, common guillemot, razorbill, fulmar.
- 6.2.7 SNH also advised that for the Development in isolation and in-combination with the Moray Firth Developments there would be no adverse effect on site integrity for all of the qualifying interests of the Moray Firth pSPA.
- 6.2.8 SNH provided a further response in relation to the EIA Addendum Report dated 4 January 2019 ("SNH Response to EIA Addendum Report"). SNH maintained its objection as it considered the Development would have an adverse effect on site integrity for kittiwake as a qualifying interest of the East Caithness Cliffs SPA and the North Caithness Cliffs SPA in-combination with the Moray Firth Developments. SNH noted that the Company had proposed a number of refinements to the impact assessment for kittiwake, but that only those that had been independently validated could be accepted. Based on SNH's assessment of the accepted refinements, it concluded that the predicted impacts had not changed significantly from the original assessment detailed in the RIAA.
- 6.2.9 SNH advised that it still had insufficient information to reach a conclusion for GBBG as a qualifying feature of East Caithness Cliffs SPA. From the information provided SNH advised that the Development could have an adverse effect on site integrity for GBBG as a qualifying interest of East Caithness Cliffs SPA. The key impact would be from collision risk when the Development is considered in-combination with the Moray Firth Developments. SNH added that further information on in-combination impact assessment and population modelling was required for this species.
- 6.2.10 SNH advised that as a result of the EIA Addendum Report submitted for displacement and the changes to the project, in particular the reduction of the operational life of the Development from 50 to 25 years, it could conclude that there would be no adverse effect on the site integrity of the East Caithness Cliffs SPA with respect to common guillemot and razorbill.

- 6.2.11 Following the consultation on the GBBG Report, on 2 April 2019 SNH advised that the Development in-combination with the Moray Firth Developments would have an adverse effect on the integrity of East Caithness Cliffs SPA with respect to GBBG. SNH advised that if s.36 consent was granted then pre-construction monitoring should be undertaken to understand the movements of adult GBBG recorded in the Development site during the breeding season.

Marine Mammals

- 6.2.12 SNH advised that there would be no adverse effect on the site integrity of the Moray Firth SAC with respect to the bottlenose dolphin qualifying interest, provided appropriate mitigation is implemented through s.36 consent and/or marine licence conditions.
- 6.2.13 SNH advised that there would be no adverse effect on site integrity of the Dornoch Firth and Morrich More SAC with respect to the harbour seal qualifying interest, provided appropriate mitigation is implemented through s.36 consent and/or marine licence conditions. SNH advised that for the Development both in isolation and in-combination with the Moray Firth Developments there would be no significant long term effect on the population trajectory of harbour seals.

Habitat

- 6.2.14 SNH identified no LSE on any habitat features and this was confirmed in its correspondence dated 18 April 2019.

6.3 RSPB Scotland

- 6.3.1 RSPB Scotland objected to the Application on 7 September 2018.
- 6.3.2 RSPB Scotland noted that the Company had used more up to date assessment methods than the Moray Firth Developments, but that it considered that the assessment confirms that the impacts of the already consented Moray Firth Developments exceeds the environmental capacity of regional seabird populations to cope with new threats.
- 6.3.3 RSPB Scotland advised that the Development in-combination with the Moray Firth Developments would lead to an adverse effect on the site integrity of East Caithness Cliffs and North Caithness Cliffs SPAs with respect to kittiwake. RSPB Scotland advised that the effects would likely lead to an adverse effect on the site integrity of Troup, Pennan and Lion's Heads SPA with respect to kittiwake.

- 6.3.4 RSPB Scotland raised concerns regarding the assessment of impacts on GBBG, herring gull, guillemot, razorbill and puffin. In addition RSPB Scotland advised that gannet should be included in the assessment. The inclusion of gannet in the RIAA was, however, not advised by SNH through the scoping exercise or HRA screening exercise.
- 6.3.5 RSPB Scotland provided a response to the EIA Addendum Report on 11 January 2019 (“RSPB Response to EIA Addendum Report”). It advised that its objection was maintained, highlighting particular concern in regard to predicted impacts on kittiwake.
- 6.3.6 Following the consultation on the GBBG Report, on 2 April 2019 RSPB Scotland advised that the Development in-combination with the Moray Firth Developments would have an adverse effect on the integrity of East Caithness Cliffs SPA with respect to GBBG.
- 6.3.7 Issues raised by the RSPB Scotland are fully addressed in Appendix 3.

SECTION 2: INFORMATION ON NATURA SITES

7 Background information and qualifying interests for the relevant Natura sites

- 7.1.1 This section provides links to the SNH interactive website in Table 3 below, where background information on the sites being considered in this assessment is available. The qualifying interests for the sites are listed below at Table 4 and the conservation objectives at Table 5 Figure 2 provides chart of the SPAs, pSPA and SACs considered within this AA.

Table 3 Name of Natura sites affected and current status

SPA:
East Caithness Cliffs SPA
https://sitelink.nature.scot/site/8492
North Caithness Cliffs SPA
https://sitelink.nature.scot/site/8554

Buchan Ness to Collieston Coast SPA

<https://sitelink.nature.scot/site/8473>

Troup, Pennan and Lion's Head SPA

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

SAC:

Moray Firth SAC

<https://sitelink.nature.scot/site/8327>

Dornoch Firth and Morrich More SAC

<https://sitelink.nature.scot/site/8242>

pSPA:

Moray Firth pSPA

<https://sitelink.nature.scot/site/10490>

Table 4 European qualifying interests

East Caithness Cliffs SPA

- Cormorant (*Phalacrocorax carbo*)*, breeding
- Fulmar (*Fulmarus glacialis*)*, breeding
- Great black-backed gull (*Larus marinus*)*, breeding
- Guillemot (*Uria aalge*), breeding
- Herring gull (*Larus argentatus*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Peregrine (*Falco peregrinus*), breeding
- Razorbill (*Alca torda*), breeding
- Shag (*Phalacrocorax aristotelis*), breeding
- Seabird assemblage, breeding

* indicates assemblage qualifier only

North Caithness Cliffs SPA

- Fulmar (*Fulmarus glacialis*)*, breeding
- Guillemot (*Uria aalge*), breeding
- Kittiwake (*Rissa tridactyla*)*, breeding
- Peregrine (*Falco peregrinus*), breeding
- Puffin (*Fratercula arctica*)*, breeding
- Razorbill (*Alca torda*)*, breeding
- Seabird assemblage, breeding

Buchan Ness to Collieston Coast SPA

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

Troup, Pennan and Lion's Head SPA

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

Moray Firth SAC

- Bottlenose dolphin (*Tursiops truncatus*)
- Subtidal sandbanks

Dornoch Firth and Morrich More SAC

- Harbour (common) seal (*Phoca vitulina*)
- Otter (*Lutra lutra*)
- Atlantic salt meadows
- Coastal dune heathland*
- Dune grassland*
- Dunes with juniper thickets*

- Estuaries
- Glasswort and other annuals colonising mud and sand
- Humid dune slacks
- Intertidal mudflats and sandflats
- Lime-deficient dune heathland with crowberry*
- Reefs
- Shifting dunes
- Shifting dunes with marram
- Subtidal sandbanks

* indicates priority habitat

Moray Firth pSPA

- Common scoter (*Melanitta nigra*), non-breeding
- Eider (*Somateria mollissima*), non-breeding
- Goldeneye (*Bucephala clangula*), non-breeding
- Great northern diver (*Gavia immer*), non-breeding
- Long-tailed duck (*Clangula hyemalis*), non-breeding
- Red-breasted merganser (*Mergus serrator*), non-breeding
- Red-throated diver (*Gavia stellata*), non-breeding
- Scaup (*Aythya marila*), non-breeding
- Shag (*Phalacrocorax aristotelis*), breeding
- Shag (*Phalacrocorax aristotelis*), non-breeding
- Slavonian grebe (*Podiceps auritus*), non-breeding
- Velvet scoter (*Melanitta fusca*), non-breeding

Table 5 Conservation objectives

SPA:

East Caithness Cliffs SPA, North Caithness Cliffs SPA,
Buchan Ness to Collieston Coast SPA, Troup, Pennan and Lion's Head SPA

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

To ensure for the qualifying species that the following are maintained in

the long term:

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

SAC:

Conservation Objectives for the following Qualifying Habitats:

SAC	Qualifying Habitats
Moray Firth	Subtidal sandbanks
Dornoch Firth and Morrich More	Atlantic salt meadows Coastal dune heathland Dune grassland Dunes with juniper thickets Estuaries Glasswort and other annuals colonising mud and sand Humid dune slacks Intertidal mudflats and sandflats Lime-deficient dune heathland crowberry Reefs Shifting dunes Shifting dunes with marram Subtidal sandbanks

To avoid deterioration of the qualifying habitat thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

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

- Extent of the habitat on site
- Distribution of the habitat within site
- Structure and function of the habitat
- Processes supporting the habitat
- Distribution of typical species of the habitat
- Viability of typical species as components of the habitat

- No significant disturbance of typical species of the habitat

Conservation Objectives for the following Qualifying Interests:

SAC	Qualifying Interest(s)
Moray Firth	Bottlenose dolphin

To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

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

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

SAC	Qualifying Interest(s)
Dornoch Firth and Morrich More	Harbour (Common) Seal Otter

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

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

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

pSPA:

Moray Firth pSPA (Draft Conservation Objectives)

To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, subject to natural change, thus ensuring that the integrity of the site is maintained in the long-term and it continues to make an appropriate contribution to achieving the aims of the Birds Directive for each of the qualifying species.

This contribution will be achieved through delivering the following objectives for each of the site's qualifying features:

- a) Avoid significant mortality, injury and disturbance of the qualifying features, so that the distribution of the species and ability to use the site are maintained in the long-term;
- b) To maintain the habitats and food resources of the qualifying features in favourable condition.

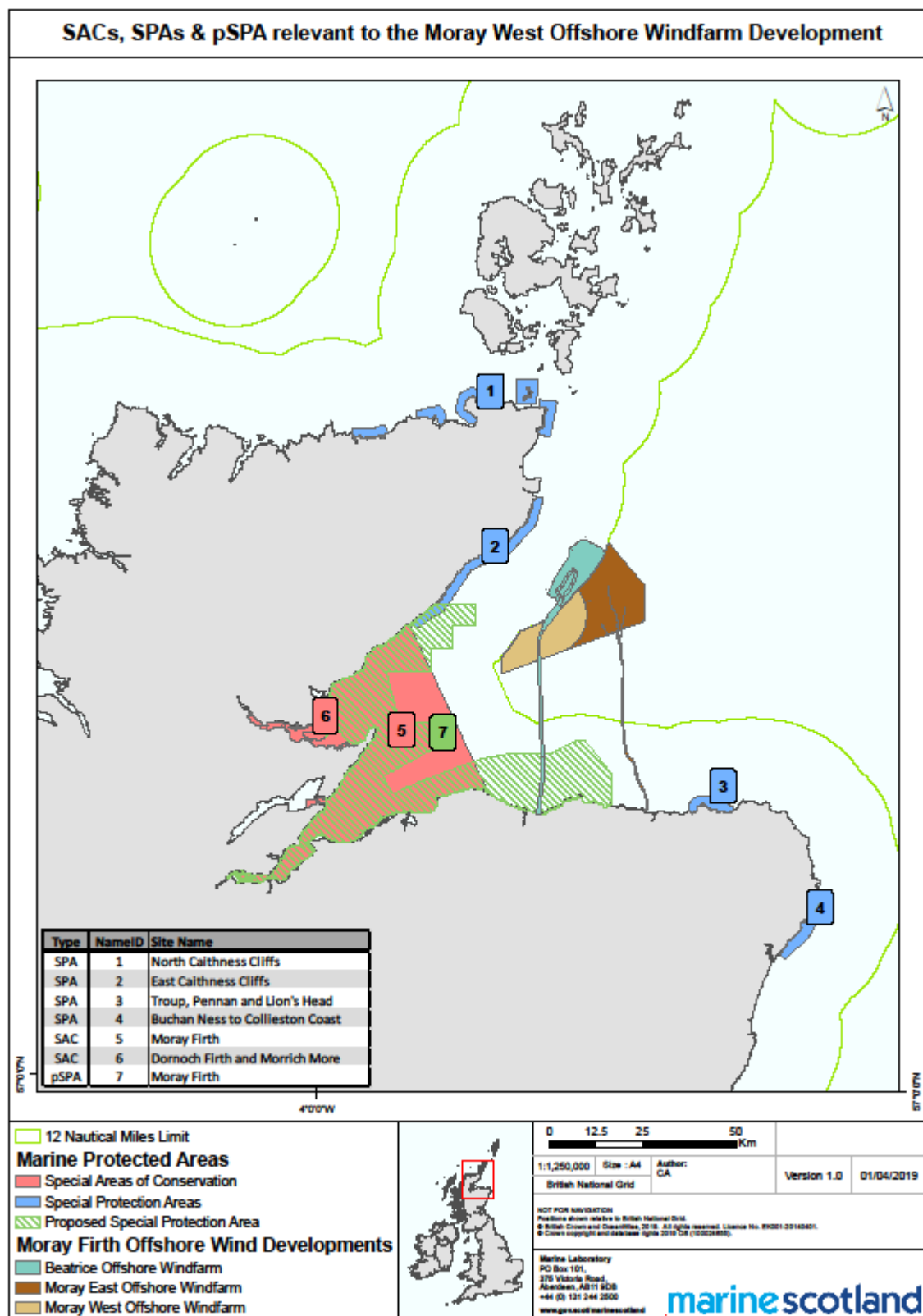


Figure 2 SPAs, pSPA and SACs considered within this AA

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

8 Requirement for appropriate assessment

8.1 Is the operation directly connected with or necessary to conservation management of the site?

- 8.1.1 The operation is not directly connected with or necessary to conservation management of the site.

8.2 Is the operation likely to have a significant effect on the qualifying interests?

- 8.2.1 LSE has been identified on the following qualifying interests of the SACs, SPAs and pSPA:

MARINE MAMMALS

Moray Firth SAC

- Bottlenose dolphin

Dornoch Firth and Morrich More SAC

- Harbour seal

- 8.2.2 The RIAA identified that there could be LSE on the qualifying interests of the above SACs during the construction, operational and maintenance phase of the Development arising from:

- Collision with vessels during construction and operation / maintenance
- Underwater noise – piling
- Underwater noise from construction / decommissioning activities (excluding piling)

ORNITHOLOGY

East Caithness Cliffs SPA

- Kittiwake
- GBBG

Annex B - Appropriate Assessment – Moray West Offshore Wind Farm

- Guillemot
- Razorbill
- Herring gull
- Fulmar

North Caithness Cliffs SPA

- Kittiwake
- Guillemot
- Razorbill
- Puffin
- Fulmar

Buchan Ness to Collieston Coast SPA

- Kittiwake
- Herring gull
- Guillemot
- Fulmar

Troup, Pennan and Lion's Head SPA

- Herring gull
- Kittiwake
- Guillemot
- Razorbill
- Fulmar

Moray Firth pSPA

- All species

8.2.3 Section 4.6 of the RIAA identified that there could be LSE on the qualifying interests of the pSPA and SPAs listed above during the operational and maintenance phase of the Development arising from:

- Mortality as a result of direct collision with turbines during the operational phase of the Development;
- Displacement and disturbance resulting in effective habitat loss from an area around turbines and other offshore activities during the construction(e.g. by vessels), operational and decommissioning phases of the Development;
- Barrier effects caused by the physical presence of turbines; and
- Direct habitat loss during construction, operation and decommissioning.

8.2.4 In the SNH Consultation Response, SNH confirmed that the Development is likely to have LSE on a number of qualifying interests of the Moray Firth SAC, Dornoch Firth and Morrich More SAC, East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA, Troup, Pennan and Lion's Head SPA and the Moray Firth pSPA.

8.2.5 Scottish Ministers agree with the advice provided by SNH and have undertaken an AA for the qualifying interests and sites listed above.

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

9.1.1 The following assessment is based upon the information contained in the EIA Report, RIAA, EIA Addendum Report and GBBG Report, and the advice received from SNH and MSS. Consideration has also been given to other consultation responses detailed above. Consideration of the effect on site integrity for each European site or European offshore marine site and qualifying interest(s) follows below.

9.1.2 For each of the qualifying interests the worst case scenario ("WCS") has been considered and details of the WCS has been provided in the RIAA and EIA Addendum Report. For the ornithology in-combination assessment, the WCS is considered to be the Development in-combination with the Moray Firth Developments. When considering non-breeding season effects for kittiwake the 2014 consents granted for the Neart na Gaoithe Offshore Wind Farm ("NnG Wind Farm"), the Inch Cape Offshore Wind Farm, and the Seagreen Alpha and Bravo Offshore Wind Farms (referred to collectively as "the Forth and Tay Developments") are considered to represent the WCS. These and other smaller scale projects included in the in-combination assessment are as described at Appendix 1 of this AA. Again in relation to the kittiwake assessment the offshore wind farms in UK North Sea waters are considered ("the North Sea Developments"). These are detailed in Appendix 2.

10 Marine Mammal SACs - Moray Firth SAC, Dornoch Firth and Morrich More SAC

10.1.1 Section 7 of the RIAA provides a full explanation of the assessment methods for bottlenose dolphin and harbour seal. Section 7.5 of the RIAA provides a summary of the assessment of adverse effects from pile driving noise on harbour seals and bottlenose dolphins. For both species, the predicted number of individuals disturbed, and the predicted number of individuals that experience a permanent threshold shift ("PTS") in hearing (i.e. physiological injury) (which was calculated using the National Marine Fisheries

Service (“NMFS”) (2016)¹ thresholds (also referred to as the National Oceanic and Atmospheric Administration (“NOAA”) (2016) thresholds)) are presented. The number of individuals impacted are used to inform the population level consequences of disturbance, using the interim Population Consequences of Disturbance (“iPCoD”) framework. For bottlenose dolphins, the assessment results are provided for the Development in isolation and in-combination with the Moray Firth Developments, the Forth and Tay Developments and the Aberdeen Harbour Expansion Project (“AHEP”) which uses explosive charges. For harbour seals, the assessment results are provided for the Development in isolation and in-combination with the Moray Firth Developments.

- 10.1.2 Advice provided by SNH and MSS highlights a number of issues that provide relevant context for this AA. The noise modelling used a 0.5% conversion factor to convert hammer energy into acoustic noise, whereas SNH and MSS advised that a 1% conversion factor, would be considered to be more precautionary. Due to concerns raised regarding the conversion factor, the EIA Addendum Report reassessed the majority of the more pertinent noise modelling scenarios using the more precautionary 1% conversion factor. Despite an increase in the number of animals disturbed, the percentage of the reference population for each species remained small. Consequently, SNH and MSS, concluded that the impact of disturbance for all species remained minor. There were aspects of the modelling presented by the Company that were precautionary. For example, the inclusion of PTS in the population-level consequences of disturbance for bottlenose dolphins for the in-combination assessment resulted in a large difference between the impacted and un-impacted population sizes after the simulated 24 years. However, only one development predicted any PTS, and this was later revised to zero dolphins in an updated assessment. This highlighted that these results are sensitive to assumptions relating to WCS, particularly with respect to information presented on the other developments detailed in paragraph 10.1.1 above, when considered in-combination.

¹ National Marine Fisheries Service (2016) Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing: Underwater Acoustic Thresholds for Onset of Permanent and Temporary Threshold Shifts. (U.S. Dept. of Commer., NOAA. NOAA Technical Memorandum NMFS-OPR-55, 178 p. National Marine Fisheries Service).

11 BOTTLENOSE DOLPHIN – Moray Firth SAC

- 11.1.1 The RIAA references the bottlenose dolphin population estimate to be 195 individuals (95% Highest Posterior Density Interval 164 – 224). Section 7.5 of the RIAA provides a summary of the bottlenose dolphin assessment, which includes the noise modelling and population consequences of disturbance for the project in isolation. It was concluded that, with the adoption of a Marine Mammal Mitigation Plan (“MMMP”), the risk of PTS as a result of pile driving noise is negligible. For the WCS, 14.6 bottlenose dolphins representing 7.5 % of the population were predicted to be disturbed. The results providing the WCS from iPCoD reported the ratio of forecast impacted to un-impacted population size after 24 years as 0.982. Consequently, the assessment concluded that the predicted level of disturbance occurring over a maximum period of two breeding seasons would not result in a significant long term change in the population growth rate and no long term change in the population trajectory. Therefore, there is no indication of an adverse effect on the integrity of the Moray Firth SAC with respect to the bottlenose dolphin feature as a result of pile driving noise. The in-combination assessment (with the projects named in paragraph 10.1.1), presented in section 7.6 of the RIAA, concluded that disturbance may cause a small and temporary change in the trajectory of the bottlenose dolphin population, but that there would be no adverse effect on the Moray Firth SAC as a result of displacement effects associated with the Development in-combination with the Moray Firth Developments, the Forth and Tay Developments and AHEP. In terms of the iPCoD model outputs, this conclusion was based on the ratio of impacted to un-impacted population size after 24 years of being 0.941. The iPCoD analysis was also presented with the inclusion of PTS, but it was considered by MSS to be overly precautionary (see paragraphs 11.1.2 and 11.1.3 below).
- 11.1.2 The assessment carried out by the Company was completed using version 3 of iPCoD which predates the latest expert elicitations covering PTS (“Version 4”) and subsequently, disturbance (“Version 5”). From Version 4 onwards the manner in which PTS is assessed has radically changed, in that the effect of PTS is not as large as was previously assumed. Therefore, even if there were individuals predicted to suffer PTS, the effect on the population would not be as marked as is suggested in the in-combination assessment summarised in the RIAA. SNH concluded that there would be no adverse effect on site integrity of the Moray Firth SAC with respect to bottlenose dolphin as a qualifying interest provided that appropriate mitigation is implemented through s.36 consent and/or marine licence conditions
- 11.1.3 To provide further reassurance regarding its conclusions, SNH re-ran the iPCoD framework based on a realistic WCS for the in-combination impact, providing advice to Scottish Ministers on 26 September 2018. Its results,

using the median ratio of the impacted to un-impacted population size, concluded that, after 24 years, the in-combination assessment was 0.94. Therefore, the results from the disturbance only assessment detailed in the RIAA were comparable to the results obtained by SNH (see paragraph 11.1.1; whilst the results in the RIAA which included PTS were shown to be overly precautionary).

- 11.1.4 In reaching their conclusion, Scottish Ministers have considered the conservation objectives, the population using the Moray Firth SAC, the predicted levels of effect and population consequences, the precaution in the assessment methods, and the advice from SNH. Scottish Ministers conclude that subject to the appliance of conditions, the Development will not adversely affect the site integrity of the Moray Firth SAC with respect to bottlenose dolphin, either alone or in-combination with the Moray Firth Developments, the Forth and Tay Developments and AHEP.

12 HARBOUR SEAL - Dornoch Firth and Morrich More

- 12.1.1 The RIAA references the harbour seal population estimate within the Moray Firth Management Unit area as being 1,306 individuals (95% Confidence Interval ("CI"): 1,068 – 1,741); the general trend taken from moult counts suggests that the population is relatively stable. The annual moult count within the Dornoch Firth and Morrich More SAC has fluctuated year-on-year from a maximum of 290 in 2003 to a minimum of 85 in 2016. Over the period between 2002 and 2016 the counts show an average per annum 0.48% decline in numbers. If the 2016 count of 85 is scaled to include the proportion of seals in the water at the time of the count, the abundance of harbour seals in the Dornoch Firth and Morrich More SAC during the 2016 August moult is estimated to be 118 animals (95%CI 97 to 157).
- 12.1.2 Section 7.5 of the RIAA provides a summary of the harbour seal assessment, which includes the noise modelling and population consequences of disturbance for the Development in isolation. It was concluded that, with the adoption of a MMMP, the risk of PTS as a result of pile driving noise is negligible. For the WCS, 19.6 harbour seals (0.4% of the population) are predicted to be disturbed. The iPCoD assessment concluded that there is no risk of a population level effect, as the simulated impacted and un-impacted populations were virtually identical. Therefore, it was concluded that there would be no adverse effect on the integrity of the Dornoch Firth and Morrich More SAC with respect to harbour seal as a result of pile driving noise. The in-combination assessment with the Moray Firth Developments, presented in section 7.6 of the RIAA, found that disturbance represented a small and temporary change in the trajectory of the harbour seal population. The iPCoD results showed that after 24 years, the median ratio of the impacted to un-

impacted population size was 0.979. Therefore, it was concluded that there would be no adverse effect on the harbour seal population as a result of displacement effects associated with the Development in-combination with the Moray Firth Developments. The iPCoD analysis did not consider PTS in the in-combination assessment as the Company estimated zero individuals experiencing PTS for the Development and the Moray Firth Developments.

12.1.3 SNH advised that there would be no adverse effect on site integrity of the Dornoch Firth and Morrich More SAC with respect to harbour seal as a qualifying interest, provided that appropriate mitigation is implemented through s.36 consent and/or marine licence conditions. SNH further concluded that both in isolation and in-combination with the Moray Firth Developments there would be no significant long term effect on the population trajectory for harbour seals.

12.1.4 In reaching their conclusion, Scottish Ministers have considered the conservation objectives, the population at the site, the predicted levels of effect and population consequences, the precaution in the assessment methods and the advice from SNH. Scottish Ministers conclude that subject to the appliance of conditions, the Development will not adversely affect the site integrity of the Dornoch Firth and Morrich More SAC with respect to harbour seals, either alone or in-combination with the Moray Firth Developments.

13 Seabird SPAs – East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA, Troup, Pennan and Lion’s Head SPA, and Moray Firth pSPA

13.1.1 The Scottish Ministers consider that the primary focus of the AA should be the conservation objectives relating to the maintenance of the relevant qualifying species as a viable component of the sites.

13.1.2 The RIAA provides a full explanation of the assessment methods starting from page 49. The ornithology assessments firstly estimated the predicted levels of effect (collision and/or displacement, depending on the species). Secondly, the numbers of individuals that are affected for each species were assigned to age classes (e.g. breeding and non-breeding juveniles). These individuals were then apportioned to SPA and non-SPA breeding colonies. Lastly, where advised through the Scoping Opinion and subsequent consultation responses and discussion, the population level consequences of these effects were estimated using PVA. PVA was originally undertaken assuming 35 year and 50 year operational life. However, in the EIA Addendum Report, the Company committed to a 25 year operational life, with PVA outputs presented for this time period for species included in the EIA

Addendum Report. The assessment results were provided for the Development in isolation and in-combination with the Moray Firth Developments and other offshore wind farm projects and proposals identified in Appendix 4.3 of the RIAA. Further detail on the projects considered in-combination by Scottish Ministers is provided at Appendices 1 and 2 of this assessment.

14 KITTIWAKE – East Caithness Cliffs SPA, North Caithness Cliffs SPA, Troup, Pennan and Lion’s Heads SPA, and Buchan Ness to Collieston Coast SPA

- 14.1.1 Scottish kittiwake populations have experienced significant declines over the last 30 years and this decline was highlighted in advice received from both SNH and RSPB Scotland. The reason for the decline is uncertain, although factors such as climate change and changes to prey distribution are very likely to be key drivers. The results of the modelling for collision and displacement impacts were presented in the EIA Report, RIAA and EIA Addendum Report.
- 14.1.2 Following consultation responses to the Application (including the RIAA), the Company submitted the EIA Addendum Report, which included SPA apportioned impacts following displacement and collision risk modelling. Displacement effects were assessed using the matrix approach (assuming a 30% displacement rate and 2% mortality rate, a 2km buffer was also included) and collision effects using option 2 of the Band 2012 collision risk model and a 98.9% avoidance rate. The Company proposed a number of refinements to the assessment methodology. The SNH Response to EIA Addendum Report advised as to which of these refinements that SNH found to be acceptable, and these have been taken forward in the AA. The RIAA and EIA Addendum Report considered the maximum design envelope of 85 turbines.
- 14.1.3 For the kittiwake assessment, the SNH Response to EIA Addendum Report advised on the refinements that it accepted. The Company’s refinements and SNH’s views on these are as follows:
- 14.1.4 *Apportioning* - The Company recalculated the apportioning for the Moray Firth Developments, as the method has developed since these applications were submitted. This included consideration of immature and sabbatical birds. The Company used boat-based data from Moray East Offshore Wind Farm to calculate the proportion of immature kittiwake for the Moray Firth Developments. The Company also undertook a further analysis using

survival rates to estimate the proportion of older immatures present. SNH accepted these refinements.

- 14.1.5 *Nocturnal activity factors* - The Company proposed a correction to account for updated nocturnal activity factors at all North Sea Developments considered in-combination, dependent on latitude. SNH advised that whilst this suggestion has merit, the approach has not been validated and SNH did not accept this refinement.
- 14.1.6 *Updated project designs / design refinements* – In the EIA Addendum Report, the Company committed to reducing kittiwake collisions to 53 per annum and to reduce turbine numbers from 85 to 79 if this cannot be achieved through other changes. In section 1.2 of the EIA Addendum Report, the Company recalculated the collision estimates from the Moray East Offshore Wind Farm to incorporate revisions to that project through the “[Development Specification and Layout Plan](#)”. The number of turbines reduced from 159 to 100. The use of the final turbine scenario for Moray East Offshore Wind Farm reduces the annual collision estimate from Moray East Offshore Wind Farm by 64%. SNH accepted this refinement.
- 14.1.7 *Collision estimates* - The Company also recalculated the collision estimates from the NnG Wind Farm based on the variation to the s.36 consent granted for that project in 2015 (the number of turbines reduced in the assessment from 127 to 75). This resulted in a 57% reduction in collision risk estimates for the NnG Wind Farm. SNH accepted this refinement.
- 14.1.8 *Correction factor* - The Company proposed revising collision estimates using a correction factor based on the MacArthur Green (2017)² Crown Estate headroom report which calculates a 15% reduction in kittiwake collision estimates for cumulative impacts assessments in the North Sea comparing as-built to consented scenarios. SNH accepted the refinements in relation to the Moray East Offshore Wind Farm and NnG Wind Farm but did not accept the use of the correction factor refinement for the other North Sea Developments as the approach had not been independently verified.
- 14.1.9 *Flight speeds* - The Company recalculated the collision estimates for the Moray Firth Developments based on new flight speeds detailed by Skov et al (2018).³ This reduced the collision estimates at Beatrice Offshore Wind Farm

² MacArthur Green (2017). Estimates of Ornithological Headroom in Offshore Wind Farm Collision Mortality. The Crown Estate. Available from: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010080/EN010080-001095-DI_HOW03_Appendix%2043.pdf .

³ Skov, H., Heinänen, S., Norman, T., Ward, R.M., Méndez-Roldán, S. & Ellis, I. 2018. ORJIP Bird Collision and Avoidance Study. Final report – April 2018. The Carbon Trust. United Kingdom. 247 pp. Available at: <https://www.carbontrust.com/resources/reports/technology/bird-collision-avoidance/> .

and Moray East Offshore Wind Farm by 24% and 23% respectively. The Company proposed using a correction factor for other North Sea Developments based on the change to collision estimates as a result of these new flight speeds detailed by Skov et al (2018).⁴ SNH accepted the refinements in relation to the Moray Firth Developments; however, SNH advised that whilst the correction factor approach for the North Sea Developments had merit, the correction factor suggested had not been validated or tested. SNH did not, therefore, accept the refinement in relation to the North Sea Developments.

14.1.10 *Avoidance rates and Band model* - The Company presented a range of collision estimates calculated using the avoidance rates advised by SNH together with other SNCBs,⁵ and the Cook et al (2014)⁶ avoidance rate for kittiwake (i.e. 98.9 – 99.2%). The Cook et al (2014) avoidance rate of 99.2% reduces the collision estimate for kittiwakes by 27% when compared to the collision estimate using the SNH recommended avoidance rate of 98.9%. SNH did not accept this refinement.

14.1.11 *Biologically Defined Minimum Population Size (“BDMPS”)* - The Company proposed to adjust the proportion of birds in the BDMPS region based on a tiered dispersal of kittiwakes during the non-breeding season between three regions (local winter population to Moray Firth Developments, Scottish Developments, and all Scottish and English offshore wind farms presented in EIA Addendum Report, section 3.6.2.6). SNH did not accept this refinement.

14.2 East Caithness Cliffs SPA - Kittiwake - Development in Isolation

14.2.1 The citation population for kittiwake at East Caithness Cliffs SPA is 32,500 pairs (classified 1996, with counts from 1985-87). The most recent published whole SPA count is from 2015 when 24,460 pairs were counted,⁷ a decline

⁴ Skov, H., Heinänen, S., Norman, T., Ward, R.M., Méndez-Roldán, S. & Ellis, I. 2018. ORJIP Bird Collision and Avoidance Study. Final report – April 2018. The Carbon Trust. United Kingdom. 247 pp. Available at: <https://www.carbontrust.com/resources/reports/technology/bird-collision-avoidance/> .

⁵ Joint Response from the Statutory Nature Conservation Bodies to the Marine Scotland Science Avoidance Rate Review. 25th November 2014. <https://www.nature.scot/sites/default/files/2018-02/SNCB%20Position%20Note%20on%20avoidance%20rates%20for%20use%20in%20collision%20risk%20modelling.pdf> .

⁶ Cook, A.S.C.P., Burton, N.H.K., Humphreys, E.M., Masden, E.A. (2014) The Avoidance Rates of Collision Between Birds and Offshore Turbines. Scottish Marine and Freshwater Science Vol 5 No 16. Edinburgh: Scottish Government, 247p. DOI: 10.7489/1553-1.

⁷ Swann, B. 2016. Seabird counts at East Caithness Cliffs SPA for marine renewable casework. Scottish Natural Heritage Commissioned Report No. 902. Available at: <https://www.nature.scot/sites/default/files/Publication%202016%20-%20SNH%20Commissioned%20Report%20902%20->

of 39.5% since 1999 (40,450 pairs). The most recent status for the SPA is of favourable maintained;⁸ however, that assessment was issued prior to the availability of the 2015 count.

- 14.2.2 The Development area (including 2km buffer) does not overlap with the East Caithness Cliffs SPA. Published information on kittiwake foraging ranges (Thaxter et al, 2012)⁹ suggests it is very likely that breeding period kittiwakes from the East Caithness Cliffs SPA would occur in the Development area (including 2km buffer), as well as the other Moray Firth Development areas.
- 14.2.3 For the Development in isolation, assuming the SNH agreed displacement and collision effect estimation and apportioning methods (i.e. using the SNH apportioning approach, refinements to the Collision Risk Model (“CRM”) agreed in the SNH Response to EIA Addendum Report and the SNH seasonal definitions), mortality by displacement is estimated as 30 adult kittiwake during the breeding season and 1 kittiwake (all age classes) during the non-breeding season, giving a total annual mortality from displacement of 31 individuals (EIA Addendum Report, table 3.15). Mortality from collision is estimated as 51 adult kittiwake during the breeding season and a further 1 adult during the non-breeding season, a total of 52 (EIA Addendum Report, table 3.47, including refinements 1-4 which were accepted by SNH). The total annual mortality from displacement and collision is 83 individuals for the Development in isolation.
- 14.2.4 PVA was undertaken by the Company for East Caithness Cliffs SPA and presented in the EIA Addendum Report. Assuming 25 years of operation and mortality of 84 individuals for displacement and collision mortality combined (the closest figure for which PVA outputs were presented), for the Development in isolation the median of the ratio of impacted to un-impacted population size is 0.950 and the ratio of impacted to un-impacted growth rate is 0.998 (EIA Addendum Report, table 3.49).
- 14.2.5 PVA was not undertaken for the collision only mortality of 52 individuals for the Development in isolation; however, this can be estimated from the information available. Assuming 25 years of operation and a mortality of 57 individuals, for the Development in isolation, the median of the ratio of impacted to un-impacted population size is 0.965 and the ratio of impacted

[%20Seabird%20counts%20at%20East%20Caithness%20Cliffs%20SPA%20for%20marine%20renewable%20casework.pdf](#) .

⁸ SNH (2019). Sitelinks. Scottish Natural Heritage <https://gateway.snh.gov.uk/sitelink/index.js> .

⁹ Thaxter, C.B., Lascelles, B., Sugar, K., Cook, A.S.C.P., Roos, S., Bolton, M., Langston, R.H.W., Burton, N.H.K. (2012) Seabird foraging ranges as a preliminary tool for identifying candidate Marine Protected Areas. Biological Conservation Vol 156: 53–61.

to un-impacted growth rate is 0.999 (EIA Addendum Report, table 3.35). For a mortality of 52 individuals these metrics would be expected to increase slightly (a reduced impact).

- 14.2.6 On 18 April 2019, SNH advised that the Development in isolation would not adversely affect the integrity of the East Caithness Cliffs SPA with respect to kittiwake.

14.3 East Caithness Cliffs SPA - Kittiwake - Development In-combination

- 14.3.1 The RIAA and EIA Addendum Report record that in the breeding season it has been assumed that the Development may act in-combination with both the Moray East Offshore Wind Farm (as detailed in the Design Specification and Layout Plan) and Beatrice Offshore Wind Farm (as built), based on the foraging range of kittiwake from the SPA. In the non-breeding season, the Company is assumed to act in-combination with all wind farms located in the post and pre-breeding BDMPS for kittiwake as described by Furness (2015).¹⁰ Details of projects included in the in-combination assessment are included at Appendices 1 and 2.
- 14.3.2 The cumulative total number of individuals of all ages experiencing annual mortality is assessed to be 66 from displacement (EIA Addendum Report, table 3.22) and 250 from collision (EIA Addendum Report, table 3.47 - including refinements 1-4 which were accepted by SNH), a total annual mortality of 316 for the Development in-combination.
- 14.3.3 PVA was undertaken by the Company for East Caithness Cliffs SPA. Assuming 25 years of operation, for the Development in-combination, a mortality figure of 321 (the closest figure to the combined displacement and collision mortality of 316) resulted in a median of the ratio of impacted to un-impacted population size of 0.823 and a ratio of impacted to un-impacted growth rate of 0.992 (EIA Addendum Report table 3.49).
- 14.3.4 For collision mortality alone, for the Development in-combination, the median of the ratio of impacted to un-impacted population size is 0.859, and the ratio of un-impacted to impacted growth rate is 0.994 (EIA Addendum Report table 3.49). These figures include the refinements (1-4) to the assessment undertaken by the Company which have been accepted by SNH (see paragraphs 14.1.2 to 14.1.11 above).

¹⁰ Furness, R.W. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Reports, Number 164.

- 14.3.5 Based on the ratio of impacted to un-impacted population size of 0.859 for collision only, the SNH Response to EIA Addendum Report advised that the Development in-combination with the Moray Firth Developments would have an adverse effect on the site integrity of East Caithness Cliffs SPA with respect to kittiwake.

14.4 North Caithness Cliffs SPA – Kittiwake - Development in Isolation

- 14.4.1 The citation population for kittiwake at North Caithness Cliffs SPA is 13,100 pairs (classified 1996, with counts from 1985-87).¹¹ The most recent published whole SPA count was from 2015 and 2016 when 5,568 pairs were counted,¹² a decline of 55% since 1999 and 2000 (10,147 pairs) and 64% since 1986. The most recent status for the SPA is of unfavourable declining.¹³
- 14.4.2 The Development area (including 2km buffer) does not overlap with the North Caithness Cliffs SPA. Published information on kittiwake foraging ranges (Thaxter et al, 2012)¹⁴ suggests it is very likely that breeding period kittiwake from the North Caithness Cliffs SPA would occur in the Development area (including 2km buffer), as well as the other Moray Firth Development areas.
- 14.4.3 Following SNH agreed displacement and collision effect estimation and apportioning methods (i.e. using the SNH apportioning approach, refinements to the CRM agreed in the SNH Response to EIA Addendum Report, and the SNH seasonal definitions), annual mortality of all age classes for the Development in isolation from displacement is estimated as 1 individual (EIA Addendum Report, table 3.19) and for collision mortality 2 individuals (EIA Addendum Report, table 3.51 – including refinements 1-4, which were accepted by SNH), a total of 3 individuals.
- 14.4.4 PVA was undertaken by the Company for North Caithness Cliffs SPA for 25 years of operation. For the Development in isolation for combined collision and displacement mortality the median of the ratio of impacted to un-impacted population size is 0.992 and the ratio of impacted to un-impacted

¹¹ SNH (2019). Sitelinks. Scottish Natural Heritage <https://gateway.snh.gov.uk/sitelink/index.js> .

¹²Swann, B. 2018. Seabird counts at North Caithness Cliffs SPA in 2015 and 2016 for Marine Renewables Casework. Scottish Natural Heritage Research Report No. 965. Available at: <https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20SNH%20Research%20Report%20965%20-%20Seabird%20counts%20at%20North%20Caithness%20Cliffs%20SPA%20in%202015%20and%202016%20for%20Marine%20Renewable%20Casework.pdf>

¹³ SNH (2019). Sitelinks. Scottish Natural Heritage <https://gateway.snh.gov.uk/sitelink/index.js> .

¹⁴ Thaxter, C.B., Lascelles, B., Sugar, K., Cook, A.S.C.P., Roos, S., Bolton, M., Langston, R.H.W., Burton, N.H.K. (2012) Seabird foraging ranges as a preliminary tool for identifying candidate Marine Protected Areas. Biological Conservation Vol 156: 53–61.

growth rate is 1.00 (EIA Addendum Report, table 3.40). PVA was not undertaken for collision mortality alone for the Development in isolation, metrics would be similar to for 3 birds with a slightly reduced impact.

- 14.4.5 On 18 April 2019, SNH advised that the Development in isolation would not adversely affect the integrity of the North Caithness Cliffs SPA with respect to kittiwake.

14.5 North Caithness Cliffs SPA – Kittiwake - Development In-combination

- 14.5.1 The RIAA and EIA Addendum Report record that in the breeding season it has been assumed that the Development may act in-combination with both the Moray East Offshore Wind Farm (as detailed in the Design Specification and Layout Plan) and Beatrice Offshore Wind Farm (as built), based on the foraging range of kittiwake from the SPA. In the non-breeding seasons, the Development is assumed to act in-combination with all wind farms located in the post and pre-breeding BDMPS for kittiwake as described by Furness (2015).¹⁵ Details of projects included in the in-combination assessment are included at Appendices 1 and 2.
- 14.5.2 The cumulative total number of individuals of all ages experiencing annual mortality is assessed to be 3 from displacement (EIA Addendum Report, table 3.23) and 45 from collision (EIA Addendum Report, table 3.51 – including refinements 1-4 which were accepted by SNH), a total annual mortality of 48 for the Development in-combination.
- 14.5.3 PVA was undertaken by the Company for the North Caithness Cliffs SPA and assuming 25 years of operation for the Development in-combination. For an annual mortality of 49 individuals (the closest PVA output provided by the Company) the median of the ratio of impacted to un-impacted population size is 0.878 and the ratio of impacted to un-impacted growth rate is 0.995 (EIA Addendum Report, table 3.51). These figures include the refinements 1-4 to the assessment undertaken by the Company which have been accepted by SNH (see paragraphs 14.1.2 to 14.1.11 above),
- 14.5.4 For collision mortality alone, for the Development in-combination, the median of the ratio of impacted to un-impacted population size is 0.887 and the ratio of impacted to un-impacted growth rate is 0.995 (EIA Addendum Report, table 3.51).

¹⁵ Furness, R.W. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Reports, Number 164.

- 14.5.5 Based on the ratio of impacted to un-impacted population size of 0.887 for collision only, the SNH Response to EIA Addendum Report advised that the Development in-combination with the Moray Firth Developments would have an adverse effect on site integrity of the North Caithness Cliffs SPA with respect to kittiwake.

14.6 Troup, Pennan and Lion's Heads SPA – Kittiwake - Development in Isolation

- 14.6.1 The citation population for kittiwake at Troup, Pennan and Lion's Heads SPA is 31,600 pairs (classified 1997, with counts from 1995). The RIAA reports that this population decreased to 7,180 pairs in 2015 but has since shown signs of a slight recovery with 10,503 pairs estimated in 2017. The most recent status for the SPA is of unfavourable.¹⁶
- 14.6.2 For the Development in isolation, the annual mortality of all age classes from displacement is estimated as 3-5 individuals (RIAA, table 6.8.12) and from collision mortality is 6 individuals (RIAA, table 6.8.13), a total of 9-11 individuals.
- 14.6.3 PVA modelling was not required for this SPA.
- 14.6.4 In the SNH Consultation Response, SNH advised that there would be no adverse effect on the site integrity of the Troup, Pennan and Lion's Heads SPA in respect of kittiwake as a result of the Development in isolation.

14.7 Troup, Pennan and Lion's Heads SPA – Kittiwake - Development In-combination

- 14.7.1 The RIAA records that in the breeding season it has been assumed that the Development may act in-combination with both the Moray East Offshore Wind Farm (as consented), Beatrice Offshore Wind Farm (as built), Kincardine Offshore Wind Farm and Hywind Offshore Wind Farm based on the foraging range of kittiwake from the SPA. In the non-breeding seasons, the Development is assumed to act in-combination with all wind farms located in the post and pre-breeding BDMPS for kittiwake as described by Furness (2015).¹⁷ Details of projects included in the in-combination assessment are included at Appendices 1 and 2.

¹⁶ SNH (2019). Sitelinks. Scottish Natural Heritage <https://gateway.snh.gov.uk/sitelink/index.js> .

¹⁷ Furness, R.W. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Reports, Number 164.

- 14.7.2 For the Development in-combination, the cumulative total number of kittiwake individuals experiencing annual mortality is assessed to be 4 from displacement (RIAA, table 6.9.45) and 80 from collision (RIAA, table 6.9.47), a total annual mortality of 84.
- 14.7.3 In the SNH Consultation Response, SNH advised that there would be no adverse effect on the site integrity of the Troup, Pennan and Lion's Heads SPA in respect of kittiwake as a result of the Development in-combination with the Moray Firth Developments and other North Sea Developments.
- 14.8 Buchan Ness to Collieston Coast SPA - Kittiwake Development in Isolation and In-combination**
- 14.8.1 The citation population for kittiwake at Buchan Ness to Collieston Coast SPA is 13,452 pairs (at time of classification in 1998).¹⁸ The most recent status for the SPA is of unfavourable no change.
- 14.8.2 Kittiwake from Buchan Ness to Collieston Coast SPA were outwith the foraging range of the Development area but were assessed in the RIAA for potential of disturbance and changes in prey availability during construction as the offshore export cable corridor is within foraging range. The Company concluded (paragraph 6.8.3.27 in RIAA) that there was no indication of an adverse effect as impact would be localised and at a low level. On 18 April 2019, SNH advised that given the temporary and localised nature of the cable corridor construction activities, and the relatively large foraging area of kittiwake, the Development would not adverse effect integrity of the Buchan Ness to Collieston Coast SPA with respect to kittiwake.
- 14.9 Kittiwake – Precaution in the Assessment**
- 14.9.1 There are a number of precautionary assumptions made in this assessment which mean that the estimated cumulative total number of individuals impacted and the population consequences are likely to be over-estimates.
- 14.9.2 In the SNH Consultation Response, SNH advised that collision is the key impact for kittiwake. The inclusion of displacement in this assessment is likely to be precautionary, as is the assumption that collision and displacement effects are additive. In addition, the assessment of displacement does not take into account the potential for habituation. The assumption that a uniform proportion of birds are displaced from a 2km buffer around every project site and within project sites is likely to be very precautionary.

¹⁸ SNH (2019). Sitelinks. Scottish Natural Heritage <https://gateway.snh.gov.uk/sitelink/index.js> .

14.9.3 Another example comes from the seabird collision avoidance study undertaken at Thanet Offshore Wind Farm which lends support to the view that the avoidance rates used in this assessment are likely to be highly precautionary (Skov et al, 2018).¹⁹ This was proposed as a refinement to the assessment by the Company in the EIA Addendum Report but not accepted by SNH due to ongoing work commissioned by Joint Nature Conservation Committee (“JNCC”)²⁰ to assess the avoidance rates proposed by Skov et al (2018).²¹ Therefore this refinement was not considered in this AA.

14.9.4 Although SNH did not accept all the refinements proposed by the Company, it advised that it saw merit in some of the refinements, as detailed in paragraphs 14.1.2 to 14.1.11 above. As this AA is based only on the refinements which were accepted by SNH, the AA can be considered precautionary.

14.10 Kittiwake - Conclusion

14.10.1 In the SNH Consultation Response, SNH advised that the Development would not have an adverse effect on the site integrity for kittiwake as a qualifying interest of Troup, Pennan and Lion’s Heads SPA in-combination with the Moray Firth Developments, the Forth and Tay Developments and the other North Sea Developments.

14.10.2 In the SNH Response to EIA Addendum Report, SNH advised that the Development would have an adverse effect on the site integrity for kittiwake as a qualifying interest of East Caithness Cliffs SPA and North Caithness Cliffs SPA in-combination with the Moray Firth Developments, the Forth and Tay Developments and the other North Sea Developments.

14.10.3 In reaching their conclusion, Scottish Ministers have considered the conservation objectives, the populations at the sites, the predicted levels of effect and population consequences, the precaution in the assessment methods and the advice from SNH. Scottish Ministers conclude that, subject to the appliance of conditions, there will be no adverse effect on the site integrity of the East Caithness Cliffs SPA, North Caithness Cliffs SPA, Troup, Pennan and Lion’s Heads SPA and Buchan Ness to Collieston Coast SPA in

¹⁹ Skov, H., Heinanen, S., Norman, T., Ward, R.M., Mendez-Roldan, S. & Ellis, I. 2018. ORJIP Bird Collision and Avoidance Study. Final report – April 2018. The Carbon Trust. United Kingdom. . 247 pp. Available at: <https://www.carbontrust.com/resources/reports/technology/bird-collision-avoidance/>

²⁰ <http://jncc.defra.gov.uk/page-7680> .

²¹ Skov, H., Heinanen, S., Norman, T., Ward, R.M., Mendez-Roldan, S. & Ellis, I. 2018. ORJIP Bird Collision and Avoidance Study. Final report – April 2018. The Carbon Trust. United Kingdom. . 247 pp. Available at: <https://www.carbontrust.com/resources/reports/technology/bird-collision-avoidance/> .

respect of the kittiwake qualifying interest as a result of the Development in isolation or in-combination with the other Moray Firth Developments and projects detailed in Appendices 1 and 2.

15 HERRING GULL – East Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion’s Heads SPA

- 15.1.1 The Company was required to consider collision impacts for herring gull.
- 15.1.2 The closest SPA colonies to the Development are East Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion’s Heads SPA. Herring gull from these three SPAs were identified as being at possible risk from collision impacts. All three SPAs have unfavourable status with significant declines since designation.

Table 6 Details of SPA sites assessed for herring gull.

Site	Citation population (pairs)	Count year	Counts used in assessment (pairs)	Status
East Caithness Cliffs SPA	9,400	1985-87	3,411	Unfavourable No change
Buchan Ness to Collieston Coast SPA	4,292	1998*	3,317	Unfavourable No change
Troup, Pennan and Lion’s Heads SPA	4,200	1995	2,001	Unfavourable Declining

Data from: ^{22, 23}

*Citation year, count year not known

- 15.1.3 This assessment uses collision risk modelled by the Company using the Band (2012) CRM with option 2 and an avoidance rate of 99.5%, flight speeds are from Skov et al (2018).²⁴ Development in isolation and in-

²² SNH (2017b). Sitelinks. Scottish Natural Heritage. <https://gateway.snh.gov.uk/sitelink/index.jsp> .

²³ Moray West, Report to Inform Appropriate Assessment (table 7.2 in Appendix 4.4). <http://marine.gov.scot/data/moray-west-offshore-windfarm-report-inform-appropriate-assessment> .

²⁴ Skov, H., Heinänen, S., Norman, T., Ward, R.M., Méndez-Roldán, S. & Ellis, I. 2018. ORJIP Bird Collision and Avoidance Study. Final report – April 2018. The Carbon Trust. United Kingdom. 247 pp. Available at: <https://www.carbontrust.com/resources/reports/technology/bird-collision-avoidance/> .

combination assessments were undertaken by the Company for East Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA.

- 15.1.4 The RIAA assumed that in the breeding season the Development may act in-combination with the Moray Firth Developments for East Caithness Cliffs SPA, plus Kincardine Offshore Wind Farm and Hywind Offshore Wind Farm for Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA based on the foraging range of herring gull from the SPAs. In the non-breeding season, the Development is assumed to act in-combination with all wind farms located in the non-breeding BDMPS for herring gull as described by Furness (2015).²⁵
- 15.1.5 The RIAA estimated that the total collision mortality for the Development in isolation would be 12 herring gull during the breeding season and 1 bird during the non-breeding season (EIA Report, chapter 10, table 10.7.9), an annual total of 13 birds. Following apportioning, this additional mortality only affected East Caithness Cliffs SPA, with mortality of 4 herring gull during breeding season and 0 herring gull during the non-breeding season apportioned to the SPA. For the Development in-combination with other Moray Firth Developments, collision mortality during breeding for East Caithness Cliffs SPA is 14 herring gulls, with 5 further birds during the non-breeding in-combination with the North Sea Developments (RIAA, table 6.9.17), an annual total of 19 birds.
- 15.1.6 PVA modelling was not undertaken for herring gull for Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA. PVA was undertaken for herring gull for East Caithness Cliffs SPA; however, this was performed in 50 bird increments, so is not useful for the estimated level of impact. Due to the low predicted collision effects on herring gull, revised PVA was not required to be undertaken as part of the EIA Addendum Report.

15.2 Herring gull – Precaution in the Assessment

- 15.2.1 There are a number of precautionary assumptions made in this AA which mean that the estimated cumulative collision total and their population consequences are highly likely to be over-estimates.

²⁵ Furness, R.W. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Reports, Number 164.

- 15.2.2 For example, the seabird collision avoidance study undertaken at Thanet Offshore Wind Farm lends support to the view that the avoidance rates used in this assessment are likely to be highly precautionary (Skov et al, 2018).²⁶

15.3 Herring gull – Conclusion

- 15.3.1 In the SNH Consultation Response, SNH advised that the Development would not have an adverse effect on the site integrity of East Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA in isolation or in-combination with the Moray Firth Developments, and other proposed or consented wind farms with respect to herring gull as a qualifying interest.
- 15.3.2 In reaching their conclusion, Scottish Ministers have considered the conservation objectives, the populations at the sites, the predicted levels of effect and population consequences, the precaution in the assessment methods and the advice from SNH. Scottish Ministers conclude that, subject to the appliance of conditions, there will be no adverse effect on the site integrity of East Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA in respect of the herring gull as a qualifying interest as a result of the Development in isolation or in-combination with the other Moray Firth Developments and projects detailed in Appendices 1 and 2.

16 GREAT BLACK-BACKED GULL – East Caithness Cliffs SPA – Development in Isolation and In-combination

- 16.1.1 The Company was required to consider collision impacts for GBBG.
- 16.1.2 The closest SPA colony to the Development is East Caithness Cliffs SPA. Other SPAs are outwith foraging range for GBBG. GBBG from East Caithness Cliffs SPA were identified as being at possible risk from collision impacts.
- 16.1.3 The results of the modelling for collision impacts were initially presented in the EIA Report, RIAA, and EIA Addendum Report. Following consultation responses on the RIAA and EIA Addendum Report from SNH and MSS, a further note was provided by the Company - the GBBG Report. This AA follows the results presented in the GBBG Report. This AA uses collision risk modelled by the Company using the Band (2012) CRM with option 2 and an

²⁶ Skov, H., Heinänen, S., Norman, T., Ward, R.M., Méndez-Roldán, S. & Ellis, I. 2018. ORJIP Bird Collision and Avoidance Study. Final report – April 2018. The Carbon Trust. United Kingdom. 247 pp. Available at: <https://www.carbontrust.com/resources/reports/technology/bird-collision-avoidance/> .

avoidance rate of 99.5%. For the assessment of the impact of the Development in-combination the Moray Firth Developments were included for both the breeding and non-breeding periods. For the Moray Firth Developments, collision estimates were presented using the Band (2012) CRM for both options 1 and 3, with avoidance rates 99.5% and 98.9% respectively. The assessment here follows the results for option 3 as advised by MSS in its advice on the GBBG Report dated 10 April 2019 (“MSS Advice on GBBG Report”). The Company proposed seven refinements to the assessment methodology, which were presented in the GBBG Report. The refinements were accepted in the MSS Advice on GBBG Report and by SNH. The refinements are as follows (numbering follows that used in the GBBG Report):

- 16.1.4 *Updated project design for Moray East.* The CRM project design parameters were presented in the GBBG Report (Annex A). The Development was for 85 x 12MW turbines. Beatrice Offshore Wind Farm used the as-built scenario (development under construction) for 84 x 7MW turbines. For Moray East Offshore Wind Farm, CRM was initially run for the worst case consented design (159 x 7 MW turbines) presented in the EIA Report, RIAA, and EIA Addendum Report. In the GBBG Report, the as-built scenario (as specified in the Moray East Design Specification and Layout Plan) was used for CRM modelling, this is for 100 x 9.525MW turbines.
- 16.1.5 *Updated flight speed.* The Company recalculated the collision estimates for the Moray Firth Developments based on new flight speeds detailed by Skov et al(2018).²⁷ This reduces collision estimates for the Moray Firth Developments.
- 16.1.6 *Boat-based bias correction.* The ornithology baseline survey data for the Moray Firth Developments was derived from boat based observations. A correction factor was applied to this data to account for the abundance of gulls likely being overestimated in such surveys when gulls are attracted to or follow survey vessels.
- 16.1.7 *Proportion of adults.* Before apportioning collisions, sub-adults were excluded; this proportion of adults was based on the proportion of adults observed on the at-sea surveys for each of the Moray Firth Developments.
- 16.1.8 *Proportion from SPA (breeding).* Apportioning during the breeding period followed SNH guidance using a two-stage approach, whereby collisions were

²⁷ Skov, H., Heinänen, S., Norman, T., Ward, R.M., Méndez-Roldán, S. & Ellis, I. 2018. ORJIP Bird Collision and Avoidance Study. Final report – April 2018. The Carbon Trust. United Kingdom. 247 pp. Available at: <https://www.carbontrust.com/resources/reports/technology/bird-collision-avoidance/> .

first apportioned to all colonies within foraging range, both SPA and non-SPA, using Seabird 2000 colony counts. Thereafter, SPA collisions were apportioned amongst SPAs using the latest available SPA colony counts.

- 16.1.9 *Exclude sabbaticals.* A proportion of adults are expected to skip breeding in a given year (sabbatical), a correction factor was applied during the breeding season to exclude these birds.
- 16.1.10 *Apportioning (non-breeding) and winter influx.* For the non-breeding season collisions were apportioned to the Moray Firth regional population of GBBG in proportion to colony size. Additionally the influx during the non-breeding season of non-UK GBBG is accounted for.
- 16.1.11 The citation population for GBBG at East Caithness Cliffs SPA is 800 pairs (classified 1996, with counts from 1985-87). The most recent published whole SPA count is from 2015 when 266 pairs (apparently occupied territories) were counted,²⁸ an increase of 47.8%% since 1999 though a decrease from the citation population. The most recent status for the SPA is of unfavourable no change.²⁹
- 16.1.12 Following apportioning to East Caithness Cliffs SPA, for the Development in isolation collision mortality for GBBG was 1.5 adults during the breeding season and 0.4 during the non-breeding season, an annual total of 2.0 for the Development in isolation. For the Development in-combination with the Moray Firth Developments collision mortality during breeding season for birds from East Caithness Cliffs SPA is 2.4 GBBG, with 0.9 further birds during the non-breeding season in-combination with the Moray Firth Developments, an annual total of 3.4 birds for the Development in-combination with the Moray Firth Developments (GBBG Report, table 1.2). As GBBG from the East Caithness Cliffs SPA are expected to remain within the confines of the Moray Firth region during the non-breeding season, offshore wind farms from other regions of the North Sea are not included in the in-combination assessment.
- 16.1.13 PVA was undertaken by the Company for East Caithness Cliffs SPA. Assuming 25 years of operation, for the Development in-isolation for collision mortality the ratio of impacted to un-impacted population size is 0.898 and

²⁸ Swann, B. 2016. Seabird counts at East Caithness Cliffs SPA for marine renewable casework. Scottish Natural Heritage Commissioned Report No. 902. Available at: <https://www.nature.scot/sites/default/files/Publication%202016%20-%20SNH%20Commissioned%20Report%20902%20-%20Seabird%20counts%20at%20East%20Caithness%20Cliffs%20SPA%20for%20marine%20renewable%20casework.pdf> .

²⁹ SNH (2019). Sitelinks. Scottish Natural Heritage <https://gateway.snh.gov.uk/sitelink/index.js> .

the ratio of impacted to un-impacted growth rate is 0.996. For the Development in-combination with the other Moray Firth Developments for collision mortality the median of the ratio of impacted to un-impacted population size is 0.851 and the ratio of impacted to un-impacted growth rate is 0.994 (GBBG Report, table 1.4).

16.1.14 On 2 April 2019, in its consultation response to the GBBG Report, SNH advised that the Development in-combination with the Moray Firth Developments would have an adverse effect on site integrity of the East Caithness Cliffs SPA with respect to GBBG. SNH cited the ratio of impacted to un-impacted population size (range of 0.76-0.85 following CRM option 1 or 3 for the Moray Firth Developments) and noted that the ratio of impacted to un-impacted growth rate also indicates adverse changes.

16.1.15 SNH advised that if s.36 consent was to be granted, then pre-construction monitoring to understand the movements of adult GBBG recorded in the Development site during the breeding season should be undertaken. Monitoring should involve tagging and ringing GBBG within the Development site at sea to establish colony origin, and to help inform any requirements for monitoring during the operational phase. In the MSS Advice on GBBG Report, MSS advised that this approach to monitoring would provide useful data on the origin of the birds observed at sea; however, it is unclear how practicable it would be to perform such a study as it is likely to be challenging to catch the gulls at sea. Such a study could be complemented by a further Global Positioning System ("GPS") tagging study of gulls at East Caithness Cliffs SPA and potentially other Moray Firth colonies. GPS devices and attachment methods have advanced since the original study,³⁰ so it is likely that gulls could be tracked for longer time periods than previously.

16.2 GBBG – Precaution in the Assessment

16.2.1 There are precautionary assumptions made in this AA which mean that the estimated cumulative collision total and the population consequences are likely to be over-estimates. The Company highlighted in the EIA Addendum Report and the GBBG Report the limited evidence of GBBG from East Caithness Cliffs utilising the offshore marine environment including the Development site.³¹ The AA assuming use of the Development site can therefore be considered to be precautionary.

³⁰ Archibald., K., Evans, D. and Votier, S. (2014). East Caithness Cliffs SPA gull Tracking Report 2014. Environment & Sustainability Institute, University of Exeter.

³¹ Archibald., K., Evans, D. and Votier, S. (2014). East Caithness Cliffs SPA gull Tracking Report 2014. Environment & Sustainability Institute, University of Exeter.

16.3 GBBG – Conclusion

- 16.3.1 In reaching their conclusion, Scottish Ministers have considered the conservation objectives, the populations at the sites, the predicted levels of effect and population consequences, and the advice from SNH. The in-combination predicted effects in this AA (3.4 breeding GBBG from East Caithness Cliffs SPA) are less than those predicted in the AAs completed for the [Moray East Offshore Wind Farm](#) and [Beatrice Offshore Wind Farm](#) in March 2014. In these AAs, the in-combination effect from these two projects was 3.95 breeding GBBG from East Caithness Cliffs SPA. The Scottish Ministers conclude that, subject to the appliance of conditions, there will be no adverse effect on the site integrity of East Caithness Cliffs SPA in respect of GBBG as a result of the Development in isolation or in-combination with the other Moray Firth Developments and projects detailed in Appendix 1.

17 RAZORBILL – East Caithness Cliffs SPA, North Caithness Cliffs SPA, and Troup, Pennan and Lion’s Heads SPA

- 17.1.1 The Scoping Opinion advised that the Company was only required to consider displacement effects as razorbill fly lower than the height of the turbine blades so are not at risk from collision.
- 17.1.2 The closest large razorbill colonies to the Development are at the East Caithness Cliffs SPA, North Caithness Cliffs SPA, and Troup, Pennan and Lion’s Heads SPA. These three SPAs were identified as being at possible risk from the impacts of displacement.
- 17.1.3 This assessment follows the advice on displacement of razorbill provided in the Scoping Opinion and subsequent discussions and assesses the Development area plus 2km buffer. A 60% displacement rate and 1% mortality rate are assumed during the breeding and non-breeding seasons.
- 17.1.4 The razorbill assessment provided in the RIAA was updated in the EIA Addendum Report to include revised PVA.

17.2 East Caithness Cliffs SPA – Razorbill – Development in Isolation

- 17.2.1 The razorbill population at East Caithness Cliffs SPA is in a favourable maintained condition with an increase in population from 15,800 individuals³² at the time of site designation (classified 1996, with counts from 1985-87) to 30,042 birds in 2015.³³

³² SNH (2017b). Sitelinks. Scottish Natural Heritage. <https://gateway.snh.gov.uk/sitelink/index.jsp> .

³³ Swann, B. 2016. Seabird counts at East Caithness Cliffs SPA for Marine

- 17.2.2 It is estimated that 8 razorbill from the East Caithness Cliffs SPA may be impacted by displacement mortality during the breeding season and a further 2 razorbill of all ages may be impacted during the non-breeding season (EIA Addendum Report, table 3.11). The potential loss is assessed as 10 razorbill across the year.
- 17.2.3 PVAs were undertaken by the Company for East Caithness Cliffs SPA over a period of 25 years in increments of 10 birds. Thus, the assessed loss of 10 razorbill is one of the scenarios for which PVA outputs were provided. Assuming an effect of 10 mortalities, for East Caithness Cliffs SPA after 25 years, the median of the ratio of impacted to un-impacted population size for the Development in isolation is 0.993 and the ratio of impacted to un-impacted growth rate is 1.000 (EIA Addendum Report, table 3.26).
- 17.2.4 SNH advised that the Development in isolation would not result in an adverse effect on site integrity to the East Caithness Cliffs SPA with respect to razorbill.

17.3 East Caithness Cliffs SPA – Razorbill – Development In-combination

- 17.3.1 The RIAA records that in the breeding season it has been assumed that the Development may act in-combination with the Moray Firth Developments based on the foraging range of razorbill from the SPA. In the non-breeding seasons, the Development is assumed to act in-combination with all wind farms located in the post, non and pre-breeding BDMPS for razorbill as described by Furness (2015).³⁴
- 17.3.2 It is estimated that 28 razorbill from the East Caithness Cliffs SPA may be impacted by displacement mortality during the breeding season for Moray West in-combination with Moray Firth Developments and a further 12 birds of all ages may be impacted during the non-breeding season for Moray West in-combination with North Sea Developments (EIA Addendum Report, table 3.21). The potential loss is assessed as 40 razorbill across the year.

Renewables Casework. Scottish Natural Heritage Research Report No. 902. Online: <https://www.nature.scot/sites/default/files/Publication%202016%20-%20SNH%20Commissioned%20Report%20902%20-%20Seabird%20counts%20at%20East%20Caithness%20Cliffs%20SPA%20for%20marine%20renewable%20casework.pdf>.

³⁴ Furness, R.W. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Reports, Number 164.

- 17.3.3 PVAs were undertaken by the Company for East Caithness Cliffs SPA over a period of 25 years in increments of 10 birds. Thus, the assessed loss of 40 razorbills is one of the scenarios for which PVA outputs were provided. Assuming an effect of 40 mortalities, for East Caithness Cliffs SPA after 25 years, the median of the ratio of impacted to un-impacted population size for the Development in-combination is 0.972 and the ratio of impacted to un-impacted growth rate is 0.999 (EIA Addendum Report, table 3.26).
- 17.3.4 In the SNH Response to EIA Addendum Report, SNH advised that the Development in-combination would not result in an adverse effect on site integrity of the East Caithness Cliffs SPA with respect to razorbill.
- 17.4 North Caithness Cliffs SPA – Razorbill – Development in Isolation and In-combination**
- 17.4.1 The razorbill population at North Caithness Cliffs SPA is in a favourable recovered condition with 4,000 individuals³⁵ when designated (classified 1996, with counts from 1985-87) and 3,503 birds in 2015 and 2016.³⁶
- 17.4.2 The RIAA records that in the breeding season it has been assumed that the Development may act in-combination with the Moray Firth Developments based on the foraging range of razorbill from the SPA. In the non-breeding seasons, the Development is assumed to act in-combination with all wind farms located in the post, non and pre-breeding BDMPS for razorbill as described by Furness (2015).
- 17.4.3 It is estimated that 1 razorbill from the North Caithness Cliffs SPA may be impacted from displacement mortality during the breeding season for the Development in-combination with the Moray Firth Developments and a further 2 birds of all ages may be impacted during the non-breeding season for the Development in-combination with the North Sea Developments (RIAA, table 6.9.39 and 6.9.40). The potential loss is assessed as 3 razorbill across the year.
- 17.4.4 PVA modelling was not undertaken for this SPA in the range of impacts estimated.

³⁵ SNH (2017b). Sitelinks. Scottish Natural Heritage. <https://gateway.snh.gov.uk/sitelink/index.jsp> .

³⁶ Swann, B. 2018. Seabird counts at North Caithness Cliffs SPA in 2015 and 2016 for Marine Renewables Casework. Scottish Natural Heritage Research Report No. 965. Available at: <https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20SNH%20Research%20Report%20965%20-%20Seabird%20counts%20at%20North%20Caithness%20Cliffs%20SPA%20in%202015%20and%202016%20for%20Marine%20Renewable%20Casework.pdf>

- 17.4.5 SNH advised that the Development in isolation and in-combination would not result in an adverse effect on the site integrity of the North Caithness Cliffs SPA with respect to razorbill.

17.5 Troup, Pennan and Lion's Heads SPA – Razorbill – Development in Isolation and in-combination

- 17.5.1 The razorbill population at Troup, Pennan and Lion's Heads SPA is in an unfavourable, declining condition with 4,800 individuals³⁷ when designated (classified 1997, with counts from 1995).
- 17.5.2 The RIAA records that in the breeding season it has been assumed that the Development may act in-combination with the Moray Firth Developments, Kincardine Offshore Wind Farm and Hywind Offshore Wind Farm, based on the foraging range of razorbill from the SPA. In the non-breeding seasons, the Development is assumed to act in-combination with all wind farms located in the post, non and pre-breeding BDMPS for razorbill as described by Furness (2015).³⁸
- 17.5.3 It is estimated that 1 razorbill from the Troup, Pennan and Lion's Heads SPA may be impacted by displacement mortality during the breeding season for the Development in-combination with the Moray Firth Developments and a further 2 birds of all ages may be impacted during the non-breeding season for the Development in-combination with the North Sea Developments (RIAA, tables 6.9.54-6.9.57). The potential loss is assessed as 3 razorbill across the year.
- 17.5.4 PVA modelling was not required for this SPA.
- 17.5.5 In the SNH Consultation Response, SNH advised that the Development, in isolation and in-combination, would not result in an adverse effect on the site integrity of the Troup, Pennan and Lion's Heads SPA with respect to razorbill.

17.6 Razorbill – Precaution in the Assessment

- 17.6.1 Scottish Ministers consider that the assessment completed by the Company with respect to razorbill is precautionary. In particular, the inclusion of a 2km buffer to all the Moray Firth Development sites, and no habituation to the wind

³⁷ SNH (2017b). Sitelinks. Scottish Natural Heritage. <https://gateway.snh.gov.uk/sitelink/index.jsp>.

³⁸ Furness, R.W. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Reports, Number 164.

farms. The inclusion of the 2km buffer in the displacement assessment has led to predicted displacement effects which are much greater than if the wind farm areas had been considered without the buffer.

17.7 Razorbill – Conclusion

17.7.1 In the SNH Consultation Response and the SNH Response to EIA Addendum Report, SNH advised that the Development would not have an adverse effect on the site integrity for razorbill as a qualifying interest of East Caithness Cliffs SPA, North Caithness Cliffs SPA, and Troup, Pennan and Lion's Heads SPA in isolation or in-combination with the Moray Firth Developments.

17.7.2 In reaching their conclusion, Scottish Ministers have considered the conservation objectives, the populations at the sites, the predicted levels of effect and population consequences, the precaution in the assessment methods and the advice from SNH. Scottish Ministers conclude that, subject to the appliance of conditions, there will be no adverse effect on the site integrity of the East Caithness Cliffs SPA, North Caithness Cliffs SPA, and Troup, Pennan and Lion's Heads SPA in respect of the razorbill as a qualifying interest as a result of the Development in isolation or in-combination with the other Moray Firth Developments and projects detailed in Appendices 1 and 2.

18 GUILLEMOT – East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast and Troup, Pennan and Lion's Heads SPA

18.1.1 The Scoping Opinion advised that the Company was only required to consider displacement effects as guillemot fly lower than the height of the turbine blades so are not at risk from collision.

18.1.2 The closest large guillemot colonies to the Development site are at the East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA. Guillemot at these four SPAs were identified as being at possible risk from the impacts of displacement.

18.1.3 This assessment follows the advice on displacement of guillemot provided in the Scoping Opinion and subsequent discussions, and assesses the Development site plus 2km buffer. A 60% displacement rate and 1% mortality rate are assumed during the breeding and non-breeding seasons.

18.2 East Caithness Cliffs SPA – guillemot – Development in Isolation

- 18.2.1 The guillemot population at East Caithness Cliffs SPA is in a favourable maintained condition with an increase in population from 106,700 individuals³⁹ when designated (classified 1996, with counts from 1985-87) to 149,228 birds in 2015, an increase of 40% though a slight decrease of 6.2% since 1999 (159,108 birds).⁴⁰
- 18.2.2 It is estimated that 68 guillemot from the East Caithness Cliffs SPA may be impacted by displacement mortality during the breeding season and a further 26 birds of all ages may be impacted during the non-breeding season (EIA Addendum Report, table 3.7). The potential loss is assessed as 94 guillemots across the year.
- 18.2.3 PVAs were undertaken by the Company for East Caithness Cliffs SPA over a period of 25 years in increments of 10 birds. Thus, the assessed loss of 94 guillemot is not one of the scenarios for which PVA outputs are provided. Assuming an effect of 90 mortalities, for East Caithness Cliffs SPA after 25 years, the median of the ratio of impacted to un-impacted population size for the Development in isolation is 0.987 and the ratio of impacted to un-impacted growth rate is 0.999 (EIA Addendum Report, table 3.24), for 94 birds these metrics would likely be slightly reduced.
- 18.2.4 In the SNH Response to EIA Addendum Report, SNH advised that the Development in isolation would not result in an adverse effect on site integrity of the East Caithness Cliffs SPA with respect to guillemot.

18.3 East Caithness Cliffs SPA – Guillemot – Development In-combination

- 18.3.1 The RIAA records that in the breeding season it has been assumed that the Development may act in-combination with the Moray Firth Developments based on the foraging range of guillemot from the SPA. In the non-breeding seasons, the Development is assumed to act in-combination with all wind

³⁹ SNH (2017b). Sitelinks. Scottish Natural Heritage. <https://gateway.snh.gov.uk/sitelink/index.jsp> .

⁴⁰ Swann, B. 2016. Seabird counts at East Caithness Cliffs SPA for Marine Renewables Casework. Scottish Natural Heritage Research Report No. 902. Available at: <https://www.nature.scot/sites/default/files/Publication%202016%20-%20SNH%20Commissioned%20Report%20902%20-%20Seabird%20counts%20at%20East%20Caithness%20Cliffs%20SPA%20for%20marine%20renewable%20casework.pdf> .

farms located in the non-breeding BDMPS for guillemot as described by Furness (2015).⁴¹

- 18.3.2 It is estimated that 198 guillemots from the East Caithness Cliffs SPA may be impacted by displacement mortality during the breeding season for the Development in-combination with the Moray Firth Developments and a further 61 birds of all ages may be impacted during the non-breeding season for Moray West in-combination the North Sea Developments (EIA Addendum Report, table 3.20). The potential loss is assessed as 259 guillemots across the year.
- 18.3.3 PVAs were undertaken by the Company for East Caithness Cliffs SPA over a period of 25 years in increments of 10 birds. Thus, the assessed loss of 259 guillemots is not one of the scenarios for which PVA outputs are provided. Assuming an effect of 260 mortalities, for East Caithness Cliffs SPA after 25 years, the median of the ratio of impacted to un-impacted population size for the Development in-combination is 0.964 and the ratio of impacted to un-impacted growth rate is 0.999 (EIA Addendum Report, table 3.24).
- 18.3.4 The SNH Response to EIA Addendum Report advised that the Development in isolation or in-combination would not result in an adverse effect on site integrity of the East Caithness Cliffs SPA with respect to guillemot.
- 18.4 North Caithness Cliffs SPA – Guillemot – Development in Isolation and In-combination**
- 18.4.1 The guillemot population at North Caithness Cliffs SPA is in a favourable maintained condition with 38,300 individuals⁴² when designated (classified 1996, with counts from 1985-87) and 38,863 birds in 2015 and 2016⁴³, a 53% decline since 1999 (72,725 individuals).
- 18.4.2 The RIAA records that in the breeding season it has been assumed that the Development may act in-combination with the Moray Firth Developments

⁴¹ Furness, R.W. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Reports, Number 164.

⁴² SNH (2017b). Sitelinks. Scottish Natural Heritage. <https://gateway.snh.gov.uk/sitelink/index.jsp>.

⁴³ Swann, B. 2018. Seabird counts at North Caithness Cliffs SPA in 2015 and 2016 for Marine Renewables Casework. Scottish Natural Heritage Research Report No. 965. Available at: <https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20SNH%20Research%20Report%20965%20-%20Seabird%20counts%20at%20North%20Caithness%20Cliffs%20SPA%20in%202015%20and%202016%20for%20Marine%20Renewable%20Casework.pdf>

based on the foraging range of guillemot from the SPA. In the non-breeding seasons, the Development is assumed to act in-combination with all wind farms located in the non-breeding BDMPs for guillemot as described by Furness (2015).⁴⁴

- 18.4.3 It is estimated that 12 guillemot from the North Caithness Cliffs SPA may be impacted by displacement mortality during the breeding season for the Development in-combination with the Moray Firth Developments (RIAA, table 6.9.36) and a further 25 birds of all ages may be impacted during the non-breeding season for the Development in-combination with the North Sea Developments (RIAA, table 6.9.37). The potential loss is assessed as 37 guillemot across the year.
- 18.4.4 PVA modelling was not undertaken for this SPA in the range of impacts estimated for 25 years, though PVA output was provided for a mortality of 50 birds modelled over 35 years, the median of the ratio of impacted to un-impacted population size is 0.950 and the ratio of impacted to un-impacted growth rate is 0.997 (RIAA, table 6.9.34), for 25 years for a mortality of 37 these metrics would be expected to increase (i.e. reduced population level impact).
- 18.4.5 In the SNH Consultation Response, SNH advised that the Development in isolation and in-combination would not result in an adverse effect on site integrity of the North Caithness Cliffs SPA with respect to guillemot.
- 18.5 Buchan Ness to Collieston Coast SPA – Guillemot – Development in Isolation and in-combination**
- 18.5.1 The guillemot population at Buchan Ness to Collieston Coast SPA is in a favourable maintained condition with 8,640 pairs⁴⁵ when designated (classified 1998).
- 18.5.2 The RIAA records that in the breeding season it has been assumed that the Development may act in-combination with the Moray Firth Developments, Kincardine Offshore Wind Farm and Hywind Offshore Wind Farm, based on the foraging range of guillemot from the SPA. In the non-breeding seasons, the Development is assumed to act in-combination with all wind farms

⁴⁴ Furness, R.W. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPs). Natural England Commissioned Reports, Number 164.

⁴⁵ SNH (2017b). Sitelinks. Scottish Natural Heritage. <https://gateway.snh.gov.uk/sitelink/index.jsp>.

located in the non-breeding BDMPS for guillemot as described by Furness (2015).⁴⁶

18.5.3 It is estimated that 3 guillemot from the Buchan Ness to Collieston Coast SPA may be impacted by displacement mortality during the breeding season for the Development in-combination with the Moray Firth Developments (RIAA, table 6.9.8) and a further 8 birds of all ages may be impacted during the non-breeding season for the Development in-combination with the Forth and Tay Developments and the North Sea Developments (RIAA, table 6.9.9). The potential loss is assessed as 11 guillemot across the year.

18.5.4 PVA modelling was not undertaken for this SPA.

18.5.5 SNH advised that the Development in isolation and in-combination would not result in an adverse effect on site integrity of the Buchan Ness to Collieston Coast SPA with respect to guillemot.

18.6 Troup, Pennan and Lion's Heads SPA – Guillemot – Development in Isolation and In-combination

18.6.1 The guillemot population at Troup, Pennan and Lion's Heads SPA is in an unfavourable declining condition with 4,800 individuals⁴⁷ when designated (classified 1997, with counts from 1995).

18.6.2 The RIAA records that in the breeding season it has been assumed that the Development may act in-combination with the Moray Firth Developments, Kincardine Offshore Wind Farm and Hywind Offshore Wind Farm, based on the foraging range of guillemot from the SPA. In the non-breeding seasons, the Development is assumed to act in-combination with all wind farms located in the non-breeding BDMPS for guillemot as described by Furness (2015).⁴⁸

18.6.3 It is estimated that 6 guillemot from the Troup, Pennan and Lion's Heads SPA may be impacted by displacement mortality during the breeding season for the Development in-combination with the Moray Firth Developments (RIAA, table 6.9.51) and a further 6 birds of all ages may be impacted during the

⁴⁶ Furness, R.W. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Reports, Number 164.

⁴⁷ SNH (2017b). Sitelinks. Scottish Natural Heritage. <https://gateway.snh.gov.uk/sitelink/index.jsp>.

⁴⁸ Furness, R.W. (2015). Non-breeding season populations of seabirds in UK waters: Population sizes for Biologically Defined Minimum Population Scales (BDMPS). Natural England Commissioned Reports, Number 164.

non-breeding season for the Development in-combination with the North Sea Developments (RIAA, table 6.9.52). The potential loss is assessed as 12 guillemot across the year.

18.6.4 PVA modelling was not undertaken for this SPA.

18.6.5 In the SNH Consultation Response, SNH advised that the Development in isolation and in-combination would not result in an adverse effect on site integrity to the Troup, Pennan and Lion's Heads SPA with respect to guillemot.

18.7 Guillemot – Precaution in the Assessment

18.7.1 Scottish Ministers consider that the assessment completed by the Company with respect to guillemot is precautionary. In particular, the inclusion of a 2km buffer to all the Moray Firth Development sites, and no habituation to the wind farms. The inclusion of the 2km buffer in the displacement assessment has led to predicted displacement effects which are much greater than if the Development sites had been considered without the buffer.

18.8 Guillemot – Conclusion

18.8.1 In advice dated 7 September 2018 (SNH Consultation Response) and 4 January 2019 (SNH Response to EIA Addendum Report), SNH advised that the Development would not have an adverse effect on the site integrity of East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast and Troup, Pennan and Lion's Heads SPA with respect to guillemot, in isolation or in-combination with the Moray Firth Developments, and other proposed or consented wind farms.

18.8.2 In reaching their conclusion, Scottish Ministers have considered the conservation objectives, the populations at the sites, the predicted levels of effect and population consequences, the precaution in the assessment methods and the advice from SNH. Scottish Ministers conclude that, subject to the appliance of conditions, there would be no adverse effect on the site integrity of the East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast and Troup, Pennan and Lion's Heads SPA in respect of the guillemot as a qualifying interest as a result of the Development in isolation or in-combination with the other Moray Firth Developments and projects detailed in Appendices 1 and 2.

19 PUFFIN - North Caithness Cliffs SPA

- 19.1.1 The Scoping Opinion advised that the Company was only required to consider displacement effects as puffin fly lower than the height of the turbine blades so are not at risk from collision. Displacement impacts during the non-breeding season were not required to be assessed as, following breeding, puffins disperse widely and are not present within the Moray Firth region in significant numbers.
- 19.1.2 The closest large puffin colony to the Development is located at North Caithness Cliffs SPA.
- 19.1.3 This assessment follows the advice on displacement of puffin provided in the Scoping Opinion and subsequent discussions, and assesses the Development site plus 2km buffer. A 60% displacement rate and 2% mortality rate are assumed during the breeding season.

19.2 North Caithness Cliffs SPA – Puffin - Development in Isolation and In-combination

- 19.2.1 The puffin population at North Caithness Cliffs SPA is in a favourable maintained condition with 2,080 pairs⁴⁹ (converted count, raw count was 3,500 adult individuals ashore)⁵⁰ when designated (classified 1996, with counts from 1985-87) declining to 3,053 birds (adult individuals ashore) in 2015 and 2016.⁵¹
- 19.2.2 The RIAA records that in the breeding season it has been assumed that the Development may act in-combination with the Moray Firth Developments, based on the foraging range of puffin from the SPA. In the non-breeding season, the approach applied for the Development was applied for all projects (i.e. using the contribution of the SPA population to the wider regional BDMPs population).

⁴⁹ SNH (2017b). Sitelinks. Scottish Natural Heritage. <https://gateway.snh.gov.uk/sitelink/index.jsp>

⁵⁰ Swann, B. 2016. Seabird counts at East Caithness Cliffs SPA for marine renewable casework. Scottish Natural Heritage Commissioned Report No. 902. Available at: <https://www.nature.scot/sites/default/files/Publication%202016%20-%20SNH%20Commissioned%20Report%20902%20-%20Seabird%20counts%20at%20East%20Caithness%20Cliffs%20SPA%20for%20marine%20renewable%20casework.pdf> .

⁵¹ Swann, B. 2018. Seabird counts at North Caithness Cliffs SPA in 2015 and 2016 for Marine Renewables Casework. Scottish Natural Heritage Research Report No. 965. Available at: <https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20SNH%20Research%20Report%20965%20-%20Seabird%20counts%20at%20North%20Caithness%20Cliffs%20SPA%20in%202015%20and%202016%20for%20Marine%20Renewable%20Casework.pdf> .

- 19.2.3 It was estimated that 40 puffin from North Caithness Cliffs SPA may be impacted by displacement mortality during the breeding season for the Development in-combination with the Moray Firth Developments (RIAA, table 6.9.44).
- 19.2.4 PVA modelling was not required for this SPA.
- 19.2.5 In the SNH Consultation Response, SNH advised that the Development in isolation and in-combination would not result in an adverse effect on the site integrity of the North Caithness Cliffs SPA with respect to puffin.

19.3 Puffin - Conclusion

- 19.3.1 In reaching their conclusion, Scottish Ministers have considered the conservation objectives, the population at the site, the predicted levels of effect and population consequences and the advice from SNH. Scottish Ministers conclude that, subject to the appliance of conditions, the Development will not adversely affect the site integrity of North Caithness Cliffs SPA with respect to puffin in isolation or in-combination with the other Moray Firth Developments and projects detailed in Appendix 1.

20 FULMAR – East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion’s Heads SPA

- 20.1.1 The Company was only required to consider displacement effects as fulmar fly lower than the height of the turbine blades so are not at risk from collision.
- 20.1.2 The closest large fulmar colonies to the Development are at the East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast and Troup, Pennan and Lion’s Heads SPA. Fulmar at these four SPAs were identified as being at possible risk from the impacts of displacement.
- 20.1.3 This assessment follows general guidance⁵² on displacement of fulmar and assesses the Development site plus 2km buffer. A 10-40% displacement rate and 1% mortality rate are assumed during the breeding and non-breeding seasons.
- 20.1.4 The RIAA estimated that 1-2 fulmar of all ages from all sites (i.e. un-apportioned) may be impacted by displacement mortality during the breeding season and a further 4-10 birds of all ages from all sites (i.e. un-apportioned) may be impacted during the non-breeding season for the Development in

⁵² http://jncc.defra.gov.uk/pdf/Joint_SNCB_Interim_Displacement_AdviceNote_2017.pdf.

isolation (RIAA, table 6.8.8). The potential loss is assessed as 5-12 fulmars across the year.

- 20.1.5 Due to the negligible effects predicted on fulmar, in-combination effects were not assessed.

20.2 Fulmar – Precaution in the Assessment

- 20.2.1 Scottish Ministers consider that the assessment completed by the Company with respect to fulmar is precautionary. In particular, the inclusion of a 2km buffer for the Development site, no habituation to the Development, and the low assessed sensitivity of fulmar to displacement.⁵³

20.3 Fulmar – Conclusion

- 20.3.1 In the SNH Consultation Response, SNH advised that the Development would not have an adverse effect of East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA in-combination with the Moray Firth Developments, and other proposed or consented wind farms with respect to fulmar.
- 20.3.2 In reaching their conclusion, Scottish Ministers have considered the conservation objectives, the populations at the sites, the predicted levels of effect and population consequences, the precaution in the assessment methods and the advice from SNH. Scottish Ministers conclude that, subject to the appliance of conditions, there will be no adverse effect on the site integrity of East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA and Troup, Pennan and Lion's Heads SPA in respect of fulmar as a qualifying interest as a result of the Development in isolation or in-combination with the Moray Firth Developments and projects detailed in Appendices 1 and 2.

21 Moray Firth pSPA

- 21.1.1 The Development does not overlap with the pSPA except for part of the Offshore Export Cable Corridor ("OECC"). Section 6.8.7 of the RIAA considers the impacts from the OECC on the pSPA. Disturbance and

⁵³ Wade H.M., Masden. E.A., Jackson, A.C. and Furness, R.W. (2016). Incorporating data uncertainty when estimating potential vulnerability of Scottish seabirds to marine renewable energy developments. Marine Policy 70, 108–113. Available at: <https://www.sciencedirect.com/science/article/pii/S0308597X1630241X?via%3Dihub>

changes to prey availability during the construction and decommissioning phases of the project were considered to be the key impacts which may cause LSE on the qualifying interests. The qualifying interests were considered as follows:

- 21.1.2 *Scaup* – the RIAA reported no apparent overlap of the OECC with observations of the species and concluded no adverse effect on the integrity of the pSPA with respect to scaup.
- 21.1.3 *Eider duck* – the RIAA reported low densities of eider duck where the OECC is proposed, and concluded that there would be no adverse effect on the integrity of the site with respect to eider duck due to disturbance or as a result of indirect effects on prey availability.
- 21.1.4 *Velvet scoter* – the RIAA reported no apparent overlap of the OECC with observations of the species and concluded no adverse effect on the integrity of the pSPA with respect to velvet scoter.
- 21.1.5 *Common scoter* - the RIAA reported no apparent overlap of the OECC with observations of the species and concluded no adverse effect on the integrity of the pSPA with respect to common scoter.
- 21.1.6 *Long-tailed duck* – the RIAA reported low densities of long-tailed duck where the OECC is proposed, and concluded that there would be no adverse effect on the integrity of the site with respect to long-tailed duck due to disturbance or as a result of indirect effects on prey availability.
- 21.1.7 *Goldeneye* - the RIAA reported no apparent overlap of the OECC with observations of the species and concluded no adverse effect on the integrity of the pSPA with respect to goldeneye.
- 21.1.8 *Red-breasted merganser* - the RIAA reported no apparent overlap of the OECC with observations of the species and concluded no adverse effect on the integrity of the pSPA with respect to red-breasted merganser.
- 21.1.9 *Red-throated diver* - the RIAA reported low densities of red-throated diver where the OECC is proposed, although aggregations of the species along the coast east of Lossiemouth is in relative close proximity to the OECC. The RIAA concluded that there would be no adverse effect on the integrity of the site with respect to long-tailed duck due to disturbance or as a result of indirect effects on prey availability.
- 21.1.10 *Great-northern diver* - the RIAA reported low densities of great-northern diver where the OECC is proposed, and concluded that there would be no adverse

effect on the integrity of the site with respect to great northern-diver due to disturbance or as a result of indirect effects on prey availability.

- 21.1.11 *Slavonian grebe* - the RIAA reported no apparent overlap of the OECC with observations of the species and concluded no adverse effect on the integrity of the pSPA with respect to Slavonian grebe.
- 21.1.12 *Shag* - the RIAA reported no apparent overlap of the OECC with observations of the species during the breeding season. There is some overlap between observations of the species and the OECC in the non-breeding season. The RIAA reported that although there may be some disturbance to the species in the non-breeding season it is unlikely that the levels of disturbance predicted would have any population level effects on shag. The RIAA concluded that there would be no adverse effect on the integrity of the site with respect to shag due to disturbance or as a result of indirect effects on prey availability.
- 21.1.13 In the SNH Consultation Response, SNH advised that for the Development alone and in-combination there would be no adverse effect on the site integrity for all of the qualifying interests of the Moray Firth pSPA. SNH advised that any disturbance during construction would be temporary in nature, and the loss of habitat along the cable route would be small/reversible. SNH advised that mitigation to minimise further any potential impacts should be detailed in the any post consent plans, such as the Vessel Management Plan (“VMP”), Cable Management Plan, and the cable routing study. These plans will be required through conditions of the s.36 consent and/or marine licences if granted.

21.2 Moray Firth pSPA - conclusion

- 21.2.1 In reaching their conclusion, Scottish Ministers have considered the conservation objectives, the limited overlap of the OECC with the qualifying interests, the limited impacts on prey species, the large area of habitat available and advice from SNH. Scottish Ministers conclude that there will be no adverse effect on the site integrity of the Moray Firth pSPA as a result of impacts arising from prey availability or disturbance from the Development in isolation or in-combination with the Moray Firth Developments.

21.3 Consideration of the pSPA under Article 4(4) of the Birds Directive

- 21.3.1 As detailed in paragraph 3.1.2, as the Moray Firth pSPA has not yet been designated, it also falls within the regime governed by the first sentence of Article 4(4) of the Birds Directive as follows:

“In respect of the protection areas referred to in paragraphs 1 and 2, Member States shall take appropriate steps to avoid pollution or deterioration of habitats or any disturbances affecting the birds, in so far as these would be significant having regard to the objectives of this Article. Outside these protection areas, Member States shall also strive to avoid pollution or deterioration of habitats.”

- 21.3.2 The Scottish Ministers have considered the information contained within the RIAA and the advice provided by SNH and conclude that the works will not cause pollution or deterioration of habitats and any disturbance will be negligible.

22 Overall Conclusion

- 22.1.1 In the ornithology assessments above Scottish Ministers have considered the conservation objective of “maintaining the population of the species as a viable component of the site” on the individual qualifying features of the SPAs, as well as additional conservation objectives in relation to the pSPA.

- 22.1.2 For the qualifying interests of the sites concerned, Scottish Ministers have determined that the Development in isolation and in-combination will not affect the populations as viable components of the SPAs. Scottish Ministers also conclude that the Development will not, in isolation or in-combination with the projects detailed in Appendices 1 and 2, adversely affect the integrity of the East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA, Troup, Pennan and Lion’s Heads SPA or Moray Firth pSPA where each SPA is taken as a whole.

- 22.1.3 In reaching their conclusion, Scottish Ministers consider that the most up to date and best scientific evidence available has been used and are satisfied that no reasonable scientific doubt remains. The Scottish Ministers conclude that, subject to the appliance of conditions, the Development with a 25 year operational life will not have an adverse effect on the site integrity of the East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA, Troup, Pennan and Lion’s Heads SPA or Moray Firth pSPA in isolation or in-combination with the Moray Firth Developments and other projects detailed in Appendices 1 and 2.

22.2 Reasons for diverging from SNH advice

- 22.2.1 In reaching their conclusions, Scottish Ministers have given considerable weight to SNH’s advice. The methods advised by SNH through scoping and additional information requested by SNH have been fully incorporated into this assessment. As such, divergence from SNH advice is limited to differing

conclusions in relation to site integrity for kittiwake at East Caithness Cliffs SPA and North Caithness Cliffs SPA and GBBG at East Caithness Cliffs SPA. In reaching a different conclusion, Scottish Ministers consider that the level of impact being adverse to site integrity is a subjective opinion. In reaching their own conclusions, Scottish Ministers have taken account of the entire context of this assessment, in particular 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, Scottish Ministers consider the levels of assessed impact to be reasonable and are convinced there will be no adverse impacts on site integrity of any of the SACs, SPAs or the pSPA considered in this AA.

SECTION 4: CONDITIONS

23 Requirement for conditions

- 23.1.1 The requirement for the below conditions is as a result of Moray West's commitments in the EIA Report, EIA Addendum Report and RIAA, along with SNH's advice regarding mitigation measures to ensure that there will be no adverse effect on the site integrity of the Natura sites listed above.
- 23.1.2 The conditions below relate to Natura concerns as well as covering other interests. The conditions here are written in their complete form and so may also refer to non-Natura interests. Where reference is made to other conditions these are numbered as per the condition numbers which will be used in the s.36 consent and marine licences if granted.

1. Duration of the Consent

The consent is for a period of 25 years from the date of Final Commissioning of the Development.

Written confirmation of the dates of First Commissioning of the Development and Final Commissioning of the Development must be provided by the Company to the Scottish Ministers and to Aberdeenshire Council, Moray Council, the Highland Council and Scottish Ministers no later than one calendar month after these respective dates.

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

2. Decommissioning

There must be no Commencement of the Development unless a Decommissioning Programme ("DP") has been submitted to and approved in writing by the Scottish Ministers. Such approval may only be granted following consultation by the Scottish Ministers with Scottish Environmental Protection Agency ("SEPA") and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The DP must outline measures for the decommissioning of the Development, proposals for the removal of the Development, the management and timing of the works and, environmental management provisions.

The Development must be decommissioned in accordance with the approved DP, unless otherwise agreed in writing in advance with the Scottish Ministers.

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.*

3. 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 the Application and any other supplementary and supporting information lodged in support of the Application (such as the additional environmental information (“EIA Addendum Report”), submitted by the Company on 23 November 2018, the Population Viability Analysis Report (“PVA Report”) submitted by the Company on 31 August 2018 and “the Information to Inform HRA - Great Black-Backed Gull” Report (“GBBG Report”), submitted on 18 March 2019).

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

4. 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 SNH, MCA, NLB, SFF, Aberdeenshire Council and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. Commencement of the Development cannot take place until such approval is granted.

The CMS must include, but not be limited to:

- a) Methods of construction as they relate to all aspects of the Development.
- b) 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.
- c) 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.
- d) Details of the manner in which 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 Moray Council and 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.*

5. Piling Strategy

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 SNH 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 harbour porpoise, minke whale, bottlenose dolphin, harbour seal, grey seal and Atlantic salmon.

The PS must, so far as is reasonably practicable, be consistent with the EMP, the Project Environmental Monitoring Programme (“PEMP”) and the CMS.

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

6. Environmental Management Plan

The Company must, no later than six months prior to the Commencement of the Development, submit an Environmental Management Plan (“EMP”), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. Commencement of the Development cannot take place until such approval is granted.

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 10);
- b) Marine Pollution and Contingency Plan (“MPCP”);
- 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 the way in these have been addressed.

The EMP must be regularly reviewed by the Company and the Scottish Ministers or Moray Firth Regional Advisory Group (“MFRAG”), 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 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.*

7. Vessel Management Plan

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

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; and

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

Reason: *To mitigate the impact of vessels.*

8. Inter Array Cable Plan

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

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

- a) The vessel types, location, duration and cable laying techniques for the inter array cables;
- b) The results of monitoring or data collection work (including geophysical, geotechnical and benthic surveys) which will help inform inter array cable routing;
- c) Technical specification of inter array 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 inter array cables where mechanical protection of cables laid on the sea bed is deployed; and
- f) Methodologies for inter array cable inspection with measures to address and report to the Scottish Ministers any exposure of inter array cables.

Any consented cable protection works must ensure existing and future safe navigation is not compromised. The Scottish Ministers 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 Scottish Ministers.

Reason: *To ensure all environmental and navigational issues are considered for the location and construction of the inter array cables.*

9. Export Cable Plan

The Licensee must, no later than six months prior to the Commencement of the Works, submit a CaP, in writing, to the Licensing Authority for its written approval. Such approval may only be granted following consultation by the Licensing Authority with SNH, MCA, SFF, SEPA, Mountaineering Scotland, FSDCC and any such other advisors or organisations as may be required at the discretion of the Licensing Authority. Commencement of the Works cannot take place until such approval is granted. The CaP must be in accordance with the Application.

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

- a) The vessel types used in the licensed activities;
- b) The finalised location of the export cable route;
- c) The duration and timings of the licensed activities;
- d) The cable laying techniques, including measures to bury cables where target burial has not initially been achieved;
- e) Measures to ensure the remediation, where practicable, of any seabed obstacles created during construction;
- f) The results of monitoring or data collection work (including geophysical, geotechnical and benthic surveys) which will help inform cable routing;
- g) Technical specification of cables, including a desk based assessment of attenuation of electro-magnetic field strengths and shielding;
- h) A cable burial risk assessment, to ascertain burial depths and where necessary alternative protection measures, and a mechanism for risk-based approach to protection measures where target burial has not been achieved;
- i) Survey methodologies and planning (inspection, over trawl, post-lay) for the cables through their operational life ; and

- j) Measures to address and report to the Licensing Authority any exposure of cables or risk to users of the sea from cables.

Any licensed 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 ensure all environmental and navigational issues are considered for the location and construction of the export cables.*

APPENDIX 1: IN-COMBINATION ASSESSMENT – OTHER PLANS AND PROJECTS

24 In-Combination Assessment (Other Plans & Projects) - Introduction

- 24.1.1 The AA above provides a detailed in-combination assessment with the Moray Firth Developments and where relevant the North Sea Developments for ornithology and also with the Forth and Tay Developments and AHEP for bottlenose dolphin.
- 24.1.2 Scottish Ministers are aware of a number of activities which currently have a marine licence and/or s.36 consent and where LSE was identified on the qualifying interests of the Moray Firth SAC, the Dornoch Firth and Morrich More SAC, East Caithness Cliffs SPA, North Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA, Troup, Pennan and Lion's Head SPA and Moray Firth pSPA.
- 24.1.3 Scottish Ministers have considered these other projects in reaching their conclusions above.
- 24.1.4 Table 7 below provides a summary of the projects which have been considered in this assessment. An overall conclusion regarding in-combination effects is included within the main body of the AA.

Table 7 Projects for which there is currently an active marine licence, s.36 consent and / or European Protected Species (EPS) Licence and where LSE was identified on the qualifying interests of the sites

Project Name	Licence/Consent Type(s)	Relevant site(s)
Aberdeen Harbour Expansion Project	Construction	<ul style="list-style-type: none"> • Moray Firth SAC • Buchan Ness to Collieston Coast SPA
Aberdeen Harbour maintenance dredge	Maintenance dredge and sea disposal	<ul style="list-style-type: none"> • Moray Firth SAC
Avoch Harbour trust	Construction	<ul style="list-style-type: none"> • Moray Firth pSPA
Beatrice Offshore Wind Farm	Offshore wind farm	<ul style="list-style-type: none"> • Moray Firth SAC • Dornoch Firth and Morrich More SAC • East Caithness Cliffs SPA

Appendix 1 – In-combination Assessment – Other Plans and Projects

		<ul style="list-style-type: none"> • North Caithness Cliffs SPA
Caithness Moray High Voltage Direct Current (“HVDC”) cable – geophysical survey	EPS	<ul style="list-style-type: none"> • Moray Firth SAC
Caithness Moray HVDC cable – rock placement	Construction (rock placement)	<ul style="list-style-type: none"> • Moray Firth SAC • Dornoch Firth and Morrich More SAC • Buchan Ness to Collieston Coast SPA • East Caithness Cliffs SPA • North Caithness Cliffs SPA • Troup, Pennan and Lion’s Head SPA • Moray Firth pSPA
Cromarty Harbour Trust – maintenance dredge and sea disposal	Maintenance dredge and disposal	<ul style="list-style-type: none"> • Moray Firth SAC
Dounreay Tri – Hexicon	Offshore wind farm	<ul style="list-style-type: none"> • Buchan Ness to Collieston Coast SPA • East Caithness Cliffs SPA • North Caithness Cliffs SPA • Troup, Pennan and Lion’s Head SPA
European Offshore Wind Deployment Centre (“EOWDC”)	Offshore wind farm (operational phase only)	<ul style="list-style-type: none"> • Moray Firth SAC • Buchan Ness to Collieston Coast SPA • Troup, Pennan and Lion’s Head SPA
Global Energy Nigg maintenance dredge	Maintenance dredge and disposal	<ul style="list-style-type: none"> • Moray Firth SAC
Hywind Scotland Pilot Park	Offshore wind farm (Operational phase only)	<ul style="list-style-type: none"> • Moray Firth SAC • Buchan Ness to Collieston Coast SPA
Inch Cape Offshore Wind	Offshore wind farm	<ul style="list-style-type: none"> • Moray Firth SAC • Buchan Ness to Collieston Coast SPA

Appendix 1 – In-combination Assessment – Other Plans and Projects

Farm (2014 consent)		
Kincardine Floating Offshore Wind Farm	Offshore wind farm	<ul style="list-style-type: none"> • Moray Firth SAC • Buchan Ness to Collieston Coast SPA • Troup, Pennan and Lion's Head SPA
Meygen	Offshore tidal array	<ul style="list-style-type: none"> • Moray Firth SAC • East Caithness Cliffs SPA • North Caithness Cliffs SPA
Montrose Port Authority construction of quay wall	Construction	<ul style="list-style-type: none"> • Moray Firth SAC
Montrose Port Authority – sea disposal	Sea disposal	<ul style="list-style-type: none"> • Moray Firth SAC
Moray Council capital dredge	Capital dredge	<ul style="list-style-type: none"> • Moray Firth SAC
Moray East Offshore Transmission Infrastructure	Offshore transmission infrastructure	<ul style="list-style-type: none"> • Moray Firth SAC • Dornoch Firth and Morrich More SAC • East Caithness Cliffs SPA • North Caithness Cliffs SPA
Moray Offshore Eastern Development	Offshore wind farm	<ul style="list-style-type: none"> • Moray Firth SAC • Dornoch Firth and Morrich More SAC • East Caithness Cliffs SPA • North Caithness Cliffs SPA
Neart na Gaoithe Offshore Wind Farm (2014 consent as varied)	Offshore wind farm	<ul style="list-style-type: none"> • Moray Firth SAC • Buchan Ness to Collieston Coast SPA
Port of Cromarty Firth – Phase 4 (Invergordon)	Construction, dredging, sea disposal and land reclamation	<ul style="list-style-type: none"> • Moray Firth SAC • Dornoch Firth and Morrich More SAC • Moray Firth pSPA
Scottish Water sea outfall extension - Ardersier	Sea outfall extension	<ul style="list-style-type: none"> • Moray Firth SAC • Moray Firth pSPA
Seagreen Alpha and Bravo	Offshore wind farm	<ul style="list-style-type: none"> • Moray Firth SAC

Offshore Wind Farms (2014 consents)		<ul style="list-style-type: none"> • Buchan Ness to Collieston Coast SPA
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25 Project Descriptions

25.1.1 Descriptions of the projects considered in the in-combination assessment are detailed below.

Offshore Renewables Projects

25.2 Beatrice Offshore Wind Farm

25.2.1 Installation and operation of the Beatrice Offshore Wind Farm which is located in the outer Moray Firth 13.5km from the Caithness coast. The total area of the development is 131.5km.² The operational lifespan of the wind farm is expected to be 25 years.

25.2.2 The original application was for a design envelope of up to 277 wind turbine generators (“WTGs”) and a maximum generating capacity of up to 1,000MW. Since consent was granted in 2014, the design has been revised and the development will comprise 84 turbines. Piling operations and cable laying activities are now complete.

25.2.3 Also included in the infrastructure is:

- Up to a maximum of three Offshore Substation Platforms (“OSPs”);
- Up to a maximum of three meteorological masts; and
- Up to 350km of inter-array cabling linking the turbines, OSPs and meteorological masts.

25.2.4 Construction started in April 2017 and will continue until approximately the end of 2019. A full project description can be found [here](#).

25.3 Moray Offshore Eastern Development

25.3.1 The Moray Offshore Eastern Development consists of three proposed wind farm sites: the Telford, Stevenson and MacColl Wind Farms. The original design envelope was for up to 339 WTGs with a maximum generating capacity of up to 1,500MW. This was reduced to a design with a maximum generating capacity of up to 1,116MW and for a maximum of 186 WTGs when consent was granted in 2014. The Design Specification and Layout Plan has

subsequently reduced the number of turbines to 100, and a variation granted in 2018 removed the overall maximum capacity from the s.36 consent. The proposals are located on the Smith Bank in the outer Moray Firth (approximately 22km from the Caithness coastline, in water depths of 38 – 57 metres (“m”). The operational lifespan of the wind farms is expected to be 25 years.

25.3.2 Substructure and foundation design for the WTGs will consist of either a mixture of steel lattice jackets with pin piles.

25.3.3 A full project description can be found [here](#).

25.4 Moray East Modified Offshore Transmission Infrastructure

25.4.1 The construction and operation of offshore transmission infrastructure in the outer Moray Firth, to support the Moray Offshore Eastern Development, consisting:

- Up to 2 OSPs with associated substructures and foundations;
- Inter-platform cabling within the three consented Telford, Stevenson and MacColl Wind Farms; and
- Up to 4 triplecore submarine export cables between the OSPs and the shore.

25.5 Seagreen Alpha and Bravo Offshore Wind Farms

25.5.1 Installation and operation of the Seagreen Alpha and Bravo Offshore Wind Farms (“the Seagreen Developments”), located 27km off the Angus coastline, in the outer Firth of Forth and Firth of Tay region. Section 36 consent was granted in respect of both Seagreen Alpha and Seagreen Bravo and the associated transmission infrastructure in October 2014. In total the Seagreen Developments cover an area of approximately 391km.² The operational lifespan for the Seagreen Developments is expected to be 25 years. The offshore transmission infrastructure will consist of up to 5 offshore substation platforms and 6 offshore export cables, in addition to inter-array cabling and scour protection. The s.36 consents for both projects were subsequently varied in 2018 to remove the maximum generating capacity for each site.

25.5.2 In September 2018, Seagreen Wind Energy Limited submitted applications for s.36 consent for revised designs for Seagreen Alpha and Bravo, within the same boundary as the consented projects. Seagreen Wind Energy Limited has submitted new applications for s.36 consent in order to reflect technological advancements in the intervening years since the s.36 consents

were granted in 2014. The operational lifespan of the revised design is expected to be 25 years. The Seagreen Developments will utilise the existing marine licence granted in respect of the offshore transmission infrastructure. It is anticipated that construction activities would take place over a period of four years.

Table 8 Summary of design parameters for the as-consented Seagreen Alpha and Bravo (2014) and new applications for s.36 consent (2018)

Design Parameter	As-consented (2014)	Application (2018)
Maximum number of WTGs	150	120
Rotor diameter	220m	167m
Blade tip height	209.7m	280m
Minimum blade tip clearance above LAT	29.8m	32.5m
Foundation options	Gravity base structures, pin piled jackets, suction caisson	As per 2014, expanded to include monopile foundation option at up to 70 WTG locations

25.5.3 A full project description of the existing consents can be found [here](#) and a description of the new applications can be found [here](#).

25.6 Inch Cape Offshore Wind Farm

25.6.1 Construction and operation of the Inch Cape Offshore Wind Farm and associated offshore transmission infrastructure, located 15km east off the Angus coastline, for which consent was granted in October 2014. The operational lifespan of the project is expected to be 25 years. The project covers a total area of approximately 150km.²

25.6.2 In August 2018, Inch Cape Offshore Limited submitted applications for marine licences and s.36 consent in respect of the revised design for the wind farm and offshore transmission infrastructure (with landfall at Cockenzie, East Lothian) to take advantage of technological advancements in the time period since consent was granted. The operational lifespan of the revised design is expected to be 50 years. Construction activities are anticipated to take approximately 24 months over a 3 year period.

Table 9 Summary of design parameters for the as-consented Inch Cape Offshore Wind Farm (2014) and new application (2018)

Design Parameter	As-consented (2014)	Application (2018)
Maximum number of WTGs	110	72
Blade tip height (above LAT)	215m	291m
Rotor diameter	Up to 172m	Up to 250m
Offshore substation platforms	5	2
Offshore Export Cables	6	2
Foundation options	Jackets and driven piles, jacket and suction piles, jacket and drilled piles, jacket and gravity based and gravity base	As per 2014, but with the inclusion of monopiles for jackets and driven piles
Inter-array cable length	353km	190km
Export cable length	83km	8km

- 25.6.3 A full project description of the existing consents can be found [here](#) and a description of the new applications can be found [here](#).

25.7 Neart na Gaoithe Offshore Wind Farm (Revised Design)

- 25.7.1 Construction and operation of the NnG Wind Farm and associated offshore transmission infrastructure, located 15.5km east of Fife Ness in the Firth of Forth, for which consent was granted in October 2014. The operational lifespan of the project is expected to be 25 years. The s.36 consent was subsequently varied in 2015 to increase the maximum rated turbine capacity and increase the maximum turbine hub heights and platform heights. The project covers a total area of approximately 150km.²
- 25.7.2 In March 2018, NnG Wind Farm Limited submitted applications for marine licences and s.36 consent in respect of the revised design for the wind farm and offshore transmission infrastructure to take advantage of technological advancements in the time period since s.36 consent was granted. In December 2018, s.36 consent and marine licences were granted and the development is expected to have an operational lifespan of 50 years. Construction activities are anticipated to take between 2020 and 2022.
- 25.7.3 It is likely that the NnG Wind Farm will be built in accordance with the s.36 consent granted in 2018; however, the as varied s.36 consent granted in

2015 has been considered in the in-combination assessment as this represents the WCS.

Table 10 Summary of design parameters for the NnG Wind Farm varied s.36 consent (2015) and s.36 consent (2018)

Design Envelope Parameter	s.36 consent (2018)	varied s.36 consent (2015)
Maximum number of WTGs	54	75
Maximum rotor tip height (above LAT)	208m	197m
Maximum hub height	126m	115m
Maximum rotor diameter	167m	126-152m
Minimum spacing between WTGs	800m	450m
Blade clearance above LAT	35m	30.5m
Maximum number of piles per foundation (Offshore Substation Platforms)	8	8
Number of piles per foundation (turbines)	6	4
Foundation options	Jackets	1. Gravity Base Structures 2. Jackets
Inter-array cables	Up to 10 WTGs per collector unit Up to 14 circuits 14km cable length	Up to 6 WTGs per collector unit Up to 15 circuits 75- 120km cable length
Offshore Substation Platforms – maximum	21m	18m

level of topside above LAT		
Offshore Export Cable Length (per cable)	43km	33km

25.7.4 A full project description can be found [here](#).

25.8 Hywind Scotland Pilot Park

25.8.1 Five 6MW turbines have been installed approximately 25km off the coast at Peterhead, north east Scotland, just outside the 12 nautical mile territorial water limit. The project will be expected to produce up to 135GWh of electricity per year. The turbines are positioned between 800 to 1,600m apart and attached to the seabed by a three-point mooring spread and anchoring system. Three anchors are required per turbine and the radius of the mooring system extends 600 to 1,200m out from each turbine.

25.8.2 The turbines are connected by inter-array cables which may require stabilisation in some locations. The export cable, which transports electricity from the Pilot Park to shore at Peterhead, is buried where seabed conditions allow. Where this is not possible cable protection in the form of concrete mattresses and rock is required. Both the inter-array and export cables have 33 kilovolt (“kV”) transfer voltage. The export cable comes ashore at Peterhead and connects to the local distribution network at SSE Peterhead Grange substation. The onshore project infrastructure comprises an underground cable approximately 1.5km in length and a small switchgear yard facility close to Peterhead Grange substation.

25.8.3 This project has now finished construction and moved into the operational phase. A full project description can be found [here](#).

25.9 Dounreay Tri Floating Wind Demonstration Project

25.9.1 The Development will consist of a demonstration floating offshore wind farm called Dounreay Tri which shall consist:

- A two turbine offshore wind farm with an installed capacity of between 8 to 12MW, at least 6km off Dounreay, Caithness;
- A single, 33 kV, export cable to bring the power to shore immediately to the west of the Dounreay Restoration Site fence line; and

- Subject to a Connection Offer from Scottish and Southern Energy Power Distribution, the associated onshore electrical infrastructure to connect the project at, or near, the existing substation at Dounreay.

25.9.2 The main offshore components will include:

- Two offshore wind turbines;
- A floating foundation;
- Mooring clump weight;
- Mooring chain and/or steel lines;
- Drag embedment anchors;
- One cable to bring the renewable electricity ashore; and
- Scour protection for the anchors and the export cable, where necessary.

25.9.3 A full project description can be found [here](#).

25.9.4 The AA for this project concluded that there would be no adverse effect on the site integrity of any SPAs provided the conditions set out in the AA were complied with.

25.10 European Offshore Wind Deployment Centre (“EOWDC”)

25.10.1 Installation and operation of a EOWDC consisting of 11 turbines, inter-array and export cables located 2 to 4.5km east of Blackdog, Aberdeenshire. Construction commenced in November 2017, beginning with foundations and cabling. Construction works are concluded and the project is now in the operational phase. A full project description can be found [here](#).

25.10.2 The AA for this project concluded that there would be no adverse effect on any SPAs or SACs subject to conditions attached to the s.36 consent.

25.11 Kincardine Floating Offshore Wind Farm

25.11.1 The works consist of the construction and operation of a demonstrator floating offshore wind farm development, located to the south east of Aberdeen, approximately eight miles from the Scottish coastline. The development is considered a commercial demonstrator site, which will utilise floating semi-submersible technology to install six or eight WTGs, with a combined maximum generating capacity of 50MW, in approximately 60 to 80 m of water. The proposal also includes inter-array cabling to the connection point at the onshore Redmoss substation, Altens, Aberdeen. A full project description can be found [here](#). The construction works are scheduled to take place in three phases between March 2018 and June 2020.

- 25.11.2 The AA for this project concluded that there would be no adverse effect on any SPAs or SACs subject to conditions attached to the s.36 consent.

25.12 Meygen

- 25.12.1 Construction and operation of a tidal array in the Inner Sound of the Pentland Firth. Phase 1 of the project is nearing completion with 4 tidal turbines having been installed. Phases 1b and 1c are likely to commence late 2019.
- 25.12.2 A full project description can be found [here](#).
- 25.12.3 The AA for this project concluded that there would be no adverse effect on any SPAs or SACs subject to conditions attached to the s.36 consent.

Large-scale construction projects

25.13 Aberdeen Harbour Expansion Project (“AHEP”) – construction works, capital dredging and sea disposal operations

- 25.13.1 Development of a new harbour facility at Nigg Bay, Aberdeen, approximately 0.8km south of the existing harbour in Aberdeen City centre. The works include the construction of two breakwaters, quaysides and associated infrastructure, a large-scale capital dredge and dredge spoil deposit operation. Works commenced in late 2016 and are scheduled to take place over a 3 year period. Construction works began in May 2017 with the construction of the northern breakwater.
- 25.13.2 Dredging operations are expected to last until September 2018, which is when their dredging licence expires. Blasting operations are expected to commence in August 2018 for a maximum of 7 consecutive months; however, these timescales may be subject to change. Impact piling will no longer be used and rotary piling used instead, which is thought to produce less noise. All marine elements of the works are scheduled to be complete by February 2020.
- 25.13.3 Full details of the project can be found in the documentation [here](#).
- 25.13.4 The AA for this project concluded that there would be no adverse effect on the site integrity of any SPAs or SACs provided that the conditions set out in the AA were complied with.

25.14 Port of Cromarty Firth Phase 4 – Construction of Laydown Area & Capital Dredging

- 25.14.1 These works involve land reclamation to provide an additional 4.5 hectares of laydown space to the west of the previously completed phase 3 development, including the construction of 215m of quay wall to create a new berth adjacent to the existing berth 5, providing a 369m long combined quay face. Fendering will then be installed along berth 5 and the new berth 6.
- 25.14.2 A rock armour revetment will be constructed along the north and west sides of the new laydown area with a tubular and sheet piled wall forming the new quay. The existing rock armour will be removed from the western edge of the phase 3 development and re-used on phase 4. The area will then be lined with a geotextile membrane and infilled, before appropriate drainage, bollards and services are installed prior to surfacing.
- 25.14.3 Dredging will be required along the toe of the new revetment structure and a second campaign will be required to create a finished depth of 12 metres along the new berth. The total dredge volume is estimated to be 110,000 meter cubed ("m³"). It is anticipated that up to 60,000m³ of dredge material will be suitable for re-use within the land reclamation and that the remainder will be deposited at the Sutors dredge spoil deposit area
- 25.14.4 The works are scheduled to take place between 1 November 2018 and 31 March 2020.

Dredging operations, maintenance works and small-scale construction projects

25.15 Avoch Harbour – Construction of a Groyne, Pontoon and Slipway

- 25.15.1 These works involve the construction of an armoured rock groyne which was undertaken in 2017. Pontoon installation is due to commence in March 2019 and is expected to be complete by October 2019. The concrete slipway will be constructed in March 2021 / 2022.
- 25.15.2 The AA completed for these works concluded that there would be no adverse effect on the integrity of the Moray Firth pSPA.

25.16 Caithness Moray Cable – Rock Protection

- 25.16.1 The works consist of the placement of rock protection along the route of the Caithness to Moray subsea cable within the marine area adjacent to Scotland (within 12 nautical miles). The rock is placed from a vessel either by fall pipe or by crane and rock grab.

- 25.16.2 The AA completed for these works concluded that there would be no adverse effect on the integrity of the Buchan Ness to Collieston Coast SPA, the Dornoch Firth and Morrich More SAC, the East Caithness Cliffs SPA, the Moray Firth SAC, the Moray Firth pSPA, the North Caithness Cliffs SPA, and the Troup, Pennan and Lion's Heads SPA.

25.17 Montrose Port Authority – construction of a new quay wall

- 25.17.1 The proposed works include the construction of a new quay wall and hard standing area. The new quay wall will be a piled structure installed using a combination of vibro and impact piling. If necessary, the existing quay wall will then be removed before the area is infilled to form the final surface. The main piling works were scheduled to commence in September 2018. Works are scheduled to continue until June 2019.

- 25.17.2 The AA completed for the construction of new quay wall and hard standing area at Montrose concluded that there would be no adverse effect on the integrity of the Moray Firth SAC.

25.18 Scottish Water sea outfall extension – Ardersier

- 25.18.1 The works are to extend the outfall pipe to the lowest astronomical tide by installing a new 310m long pipe in order to meet Scottish Environment Protection Agency's dilution requirements.

- 25.18.2 The AA concluded that there would be no adverse impacts to the integrity of the Moray Firth SAC or the Moray Firth pSPA.

Dredging and Sea Disposal

Table 11 Dredging and sea disposal operations which were identified as having a likely significant effect on the bottlenose dolphin qualifying feature of the Moray Firth SAC

Location of Dredge	Type of Dredge	Amount of Dredge Material	Disposal Site
Aberdeen Harbour – Maintenance dredge	Maintenance	645,000m ³	Aberdeen
Cullen (Moray Council capital dredge)	Capital	1,000m ³	Buckie
Findochty (Moray Council capital dredge)	Capital	2,900m ³	Buckie
Global Energy Nigg		6,000m ³	Sutors

Hopeman (Moray Council capital dredge)	Capital	500m3	Burghead
Portknockie (Moray Council capital dredge)	Capital	1,000m3	Buckie
Montrose	Maintenance	246,000 wet tonnes	Lunan
Cromarty Harbour	Maintenance	2000m3	Sutors

EPS Licences

25.19 Scottish and Southern Energy (“SSE”), Geophysical survey and cable laying activities

- 25.19.1 SSE applied for a EPS licence for geophysical survey works, use of positioning equipment, and cable laying activities along the route of the Caithness to Moray high-voltage, direct current cable. The survey works consist of the use of geophysical equipment which emits sound and noise generate from cable laying activities. The cable laying works were initially licensed until 31 March 2018 but SSE have since applied for two variations to extend the validity of the licence. The current licence expires on 31 August 2019.
- 25.19.2 The AA for this project concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC provided that the work is undertaken strictly in accordance with the agreed mitigation.

26 Assessment of in-combination effects

26.1 Assessment of in-combination effects on the Buchan Ness to Collieston Coast SPA

- 26.1.1 The following projects have the potential to have a LSE on the relevant qualifying interests of the Buchan Ness to Collieston Coast SPA:
- AHEP
 - Caithness Moray HVDC cable – rock placement
 - Dounreay Tri – Hexicon
 - EOWDC
 - Hywind Scotland Pilot Park Project
 - Inch Cape Offshore Wind Farm
 - Kincardine Floating Offshore Wind Farm
 - NnG Wind Farm
 - Seagreen Alpha and Bravo Offshore Wind Farms

- 26.1.2 The Caithness Moray HVDC cable rock placement project work is scheduled to be completed in August 2019 and therefore no temporal overlap with the Development is anticipated. The AA for the HVDC works concluded that there would be no adverse effect on the site integrity due to the limited extent and duration of disturbance to foraging seabirds and prey species.
- 26.1.3 The AAs for AHEP and the offshore wind farm projects listed in paragraph 26.1.1 concluded that there would be no adverse effect on the site integrity of the Buchan Ness to Collieston Coast SPA, either in isolation or in-combination with other plans or projects, provided that the conditions set out in the AAs and marine licences and s.36 consents were implemented and complied with. The proposed timeframes for the Development will overlap with the operational phases of the projects listed in paragraph 26.1.1. The AAs for these projects identified LSE on the relevant qualifying interests of the SPA during the operational phases of the works as a result of collision risks and displacement and barrier effects.
- 26.1.4 Scottish Ministers have considered the projects at paragraph 26.1.1 in the in-combination assessment completed.
- 26.2 Assessment of in-combination effects on the East Caithness Cliffs SPA**
- 26.2.1 The following projects have the potential to have a LSE on the relevant qualifying interests of the East Caithness Cliffs SPA:
- Beatrice Offshore Wind Farm
 - Caithness Moray HVDC cable – rock placement
 - Dounreay Tri – Hexicon
 - Kincardine Floating Offshore Wind Farm
 - Meygen
 - Moray Offshore Eastern Development
 - Moray East Offshore Transmission Infrastructure
- 26.2.2 The Caithness Moray HVDC cable rock placement project work is scheduled to be completed in August 2019 and therefore no temporal overlap is anticipated. The AA for the HVDC works concluded that there would be no adverse effect on the site integrity due to the limited extent and duration of disturbance to foraging seabirds and prey species. The risk of disturbance was minimised by implementing a management plan to ensure boat movements and anchoring do not take place within 1km of the East

Caithness Cliffs SPA during the breeding season (April to late August inclusive).

26.2.3 The Meygen tidal array currently consists of four tidal turbines. A deployment of an additional four turbines is due to commence in late 2019. S.36 consent was granted for the deployment of a maximum of 61 turbines although currently there is no deployment date for further turbines. The proposed timeframe for the Development will overlap with the operational phase of the Meygen tidal array. The AA for the Meygen works concluded that there would be no adverse effect on site integrity as disturbance impacts would be temporary and localised and any collision impacts during the operational phase would be unlikely to have a population level effect.

26.2.4 The AAs for the offshore wind farm projects listed at paragraph 26.2.1 concluded that there would be no adverse effect on the site integrity of the East Caithness Cliffs SPA, either in isolation or in-combination with other plans or projects, provided that the conditions set out in the marine licences and s.36 consents were implemented and complied with. Conditions were attached to the respective marine licences and s.36 consents to mitigate the impacts on the relevant qualifying interests of the SPA.

26.2.5 Scottish Ministers have considered the projects listed at paragraph 26.2.1 in the in-combination assessment completed.

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

26.3.1 The following projects have the potential to have a LSE on the relevant qualifying interests of the North Caithness Cliffs SPA:

- Beatrice Offshore Wind Farm
- Caithness Moray HVDC cable – rock placement
- Dounreay Tri – Hexicon
- Kincardine Floating Offshore Wind Farm
- Meygen
- Moray Offshore Eastern Development
- Moray East Offshore Transmission Infrastructure

26.3.2 The Caithness Moray HVDC cable rock placement project work is scheduled to be completed in August 2019 and therefore no temporal overlap is anticipated. The AA for HVDC works concluded that there would be no adverse effect on the site integrity due to the limited extent and duration of disturbance to foraging seabirds and prey species.

- 26.3.3 The Meygen tidal array currently consists of four tidal turbines. A deployment of an additional four turbines is due to commence in late 2019. Section 36 consent was granted for the deployment of a maximum of 61 turbines although currently there is no deployment date for further turbines. The proposed timeframe for the Development will overlap with the operational phase of the Meygen tidal array. The AA for the Meygen works concluded that there would be no adverse effect on site integrity as disturbance impacts would be temporary and localised and any collision impacts during the operational phase would be unlikely to have a population level effect.
- 26.3.4 The AAs for the offshore wind farm projects listed at paragraph 26.3.1 concluded that there would no adverse effect on the site integrity of the North Caithness Cliffs SPA, either in isolation or in-combination with other plans or projects, provided that the conditions set out in the marine licences and s.36 consents were implemented and complied with. Conditions were attached to the respective marine licences and s.36 consents to mitigate the impacts on the relevant qualifying interests of the SPA.
- 26.3.5 Scottish Ministers have considered the projects at paragraph 26.3.1 in the in-combination assessment completed.
- 26.4 Assessment of in-combination effects on the Troup, Pennan and Lion's Head SPA**
- 26.4.1 The following projects have the potential to have a LSE on the relevant qualifying interests of the Troup, Pennan and Lion's Head SPA:
- Caithness Moray HVDC cable – rock placement
 - Dounreay Tri – Hexicon
 - EOWDC
 - Kincardine Floating Offshore Wind Farm
- 26.4.2 The Caithness Moray HVDC cable rock placement project work is scheduled to be completed in August 2019 and therefore no temporal overlap is anticipated. The AA for the HVDC works concluded that there would be no adverse effect on the site integrity due to the limited extent and duration of disturbance to foraging seabirds and prey species.
- 26.4.3 The AAs for the offshore wind farm projects listed at paragraph 26.4.1 concluded that there would be no adverse effect on site integrity of the Troup, Pennan and Lion's Head SPA either alone or in-combination with other plans and projects, provided that conditions set out in the marine licences and s.36 consents were implemented and complied with. The AAs for these projects

identified LSE on the relevant qualifying interests of the SPA. Conditions were attached to the respective marine licences and s.36 consents to mitigate the impacts on the relevant qualifying interests of the SPA.

- 26.4.4 Scottish Ministers have considered the projects listed at paragraph 26.4.1 in the in-combination assessment completed.

26.5 Assessment of in-combination effects on the Moray Firth SAC

- 26.5.1 The following projects have the potential to have a LSE on the bottlenose dolphin qualifying interest of the Moray Firth SAC:

- AHEP
- Aberdeen Harbour maintenance dredge
- Beatrice Offshore Wind Farm
- Caithness Moray HVDC cable – rock placement
- Caithness Moray HVDC cable – geophysical survey
- Cromarty Harbour Trust – maintenance dredge and sea disposal
- EOWDC
- Global Energy Nigg maintenance dredge
- Hywind Scotland Pilot Park
- Inch Cape Offshore Wind Farm
- Kincardine Floating Offshore Wind Farm
- Meygen
- Montrose Port Authority construction of quay wall
- Montrose Port Authority – sea disposal
- Moray Council capital dredge
- Moray Offshore Eastern Development
- Moray East Offshore Transmission Infrastructure
- NnG Wind Farm (Revised Design)
- Port of Cromarty Firth – Phase 4 (Invergordon)
- Scottish Water sea outfall extension – Ardersier
- Seagreen Alpha and Bravo Offshore Wind Farms

- 26.5.2 The AAs for the above projects concluded that there would no adverse effect on the site integrity of the Moray Firth SAC, either in isolation or in-combination with other plans or projects, provided that the conditions set out in the marine licences, EPS licences and s.36 consents were implemented and complied with. The AAs for these projects identified LSE on the relevant qualifying interests of the SAC. Conditions were attached to the respective marine licences and s.36 consents to mitigate the impacts on the bottlenose dolphin qualifying interests of the SAC.

26.5.3 With the exception of the offshore wind farms listed above and Meygen tidal array, all the projects listed at paragraph 26.5.1 are due to be complete before the Development commences construction in 2022.

26.5.4 Scottish Ministers have considered these projects in the in-combination assessment completed.

26.6 Assessment of in-combination effects on the Dornoch Firth and Morrich More SAC

26.6.1 The following projects have the potential to have a LSE on the relevant qualifying interests of the Dornoch Firth and Morrich More SAC:

- Beatrice Offshore Wind Farm
- Caithness Moray HVDC cable – rock placement
- Moray East Offshore Transmission Infrastructure
- Moray Offshore Eastern Development
- Port of Cromarty Firth – Phase 4 (Invergordon)

26.6.2 The AAs for the above projects concluded that there would no adverse effect on the site integrity of the Dornoch Firth and Morrich More SAC, either in isolation or in-combination with other plans or projects, provided that the conditions set out in the marine licences and s.36 consents were implemented and complied with.

26.6.3 Scottish Ministers have considered the projects at paragraph 26.6.1 in the in-combination assessment completed.

26.7 Assessment of in-combination effects on the Moray Firth pSPA

26.7.1 The following projects have the potential to have a LSE on the relevant qualifying interests of the Moray Firth pSPA:

- Avoch Harbour trust
- Caithness Moray HVDC cable – rock
- Scottish Water sea outfall extension - Ardersier placement

26.7.2 The AAs for the above projects concluded that there would no adverse effect on the site integrity of the Moray Firth pSPA, either in isolation or in-combination with other plans or projects, provided that the conditions set out in the marine licences and s.36 consents were implemented and complied with.

- 26.7.3 Scottish Ministers have considered the projects at paragraph 26.7.1 in the in-combination assessment completed.

APPENDIX TWO: IN-COMBINATION ASSESSMENT – NORTH SEA OFFSHORE WIND FARMS

List of the North Sea Developments assessed for non-breeding season effects:

1. Blyth Demonstrator
2. Dogger Creke Beck A&B
3. Dogger Teeside A&B
4. Dudgeon
5. East Anglia 1
6. East Anglia 3
7. EOWDC
8. Galloper
9. Greater Gabbard
10. Hornsea 1
11. Hornsea 2
12. Humber Gateway
13. Hywind
14. Inch Cape
15. Kentish Flats Extension
16. Kincardine
17. Lincs
18. London Array
19. Methil
20. Neart na Gaoithe
21. Race Bank
22. Seagreen Alpha and Bravo
23. Teeside
24. Thanet
25. Triton Knoll
26. Westermost Rough

APPENDIX THREE: ADDRESSING CONCERNS RAISED BY RSPB SCOTLAND

27 Addressing concerns raised by RSPB Scotland

27.1.1 RSPB Scotland has responded to several consultations in relation to the Application. This Appendix details the way in which Scottish Ministers have considered the concerns raised. RSPB Scotland responded to consultations as follows:

- i. During the scoping phase to inform the Scoping Opinion – August 2016 & August 2017
- ii. Following the HRA screening report – October 2017
- iii. Following the Application (including EIA Report and RIAA) – September 2018
- iv. Following the EIA Addendum Report – January 2019
- v. Following the GBBG Report – April 2019

27.2 Scope of assessment

27.2.1 RSPB Scotland provided consultation responses during the scoping phase and on the subsequent HRA screening report. On the scoping report, RSPB Scotland was in general agreement with the suggested scope and assessment methodologies for ornithological interests. Some specific further suggestions were made by RSPB Scotland, these are addressed under the appropriate headings below.

27.3 HRA Screening

27.3.1 RSPB Scotland advised that some SPA sites and qualifying features further afield than those identified by the Company as being at risk from LSE could be affected depending on the foraging range of the qualifying species, specifically, gannet as a qualifying feature of Forth Islands SPA was identified. RSPB Scotland made this point again following the RIAA, noting that in-combination impacts on SPA populations for gannet should be assessed for the non-breeding season.

27.3.2 The mean maximum foraging range for gannet is 229 km (Thaxter et al, 2012).⁵⁴ The Forth Islands SPA, which is the nearest SPA colony to the Development site, with gannet as a qualifying feature lies beyond this range. The non-SPA colony of gannet at Gamrie and Pennan Coast Site of Special Scientific Interest (“SSSI”) is closer to the Development site, for which the

⁵⁴ Thaxter, C.B., Lascelles, B., Sugar, K., Cook, A.S.C.P., Roos, S., Bolton, M., Langston, R.H.W., Burton, N.H.K. (2012) Seabird foraging ranges as a preliminary tool for identifying candidate Marine Protected Areas. *Biological Conservation* 156: 53–61.

Company did perform PVA (RIAA, Appendix 4.5), the PVA indicates that even if all collisions from the Development were apportioned to the SSSI colony (12 annual collisions, EIA Report, Table. 10.7.7) the ratio of impacted to un-impacted population size would be >0.95 (RIAA, Appendix 4.5, Figure 5). In the SNH Consultation Response, SNH advised that there would be no major significant adverse impacts to gannet. Due to the very low numbers of annual collisions from the Development (during both the breeding and the non-breeding season), the fact that the Forth Island SPA lies beyond the mean maximum foraging range, and based on advice from SNH, Scottish Ministers consider that there will be no LSE on gannet as a feature of Forth Islands SPA, and therefore this species is not included in the AA.

27.4 Baseline survey data

- 27.4.1 In RSPB Scotland's consultation response to the HRA screening report in October 2017, RSPB Scotland stated) that the requirement for two years of baseline survey data for ornithology is a long established UK minimum standard. RSPB Scotland stated that site characterisation and environmental baseline should be based on site specific survey data that is equivalent to two full years of site survey effort. The Company used a single year of baseline survey data, though drew on survey data collected earlier for the other Moray Firth Developments to characterise baseline bird species abundance (EIA Report, Technical Appendix 10.2). RSPB Scotland also reiterated its general concern in its consultation response to the Application stating that the lack of two years of baseline survey data was an "important and fundamental omission to the assessment".
- 27.4.2 The approach to characterising the ornithological baseline was discussed between SNH, Marine Scotland and the Developer pre-application. However, the SNH Consultation Response noted that no agreement was reached on the suitable baseline values to take forward for impact assessment prior to submission of the Application. SNH also noted that the document outlining the Company's approach to the baseline data (EIA Report, Technical Appendix 10.2) was missing although it was later provided with the EIA Addendum Report.
- 27.4.3 MSS provided advice on an earlier draft of the method used to characterise the baseline bird densities "Decision Support System" in its consultation response to the Application dated 5 September 2018. MSS noted that the approach used to determine densities indicated that a "suitably precautionary approach" had been followed. MSS also noted that there was large variation between densities from different data sources and further noted that it would be useful for SNH and RSPB Scotland to view the document and review the appropriateness of the approach.

27.4.4 The Company included a revised version of the Decision Support System with its EIA Addendum Report (Annex B Updated Decision Support System Flow Charts and Report). However, no detailed comments were provided on this in the SNH Response to EIA Addendum Report. The RSPB Response to EIA Addendum Report did not make comment on Annex B, describing the manner in which the ornithological baseline was characterised.

27.4.5 Scottish Ministers consider that although two years of baseline characterisation surveys is preferable, the approach undertaken by the Company was suitably precautionary and adequate in order to inform the AA.

27.5 GBBG as a qualifying feature of East Caithness Cliffs SPA

27.5.1 In RSPB Scotland's consultation response to the Application dated 7 September 2018 ("RSPB Scotland Consultation Response"), RSPB Scotland stated that the assessment of GBBG in the EIA Report was not accurate and it was insufficient in HRA terms. RSPB Scotland stated that a full appropriate assessment is required for the species for relevant SPAs during both breeding and non-breeding seasons. The RSPB Response to EIA Addendum Report did not provide further comment on the species.

27.5.2 Following consultation responses from SNH, RSPB Scotland and MSS, further consideration of GBBG was requested. The Company provided additional consideration in the EIA Addendum Report and a subsequent GBBG Report as a feature of East Caithness Cliffs SPA.

27.5.3 RSPB Scotland provided a further consultation response on 2 April 2019, in response to the GBBG Report submitted by the Company. RSPB Scotland stated that the assessment did not account for uncertainty particularly in collision risk modelling. The GBBG Report provides information on the various assumptions and refinements suggested by the Company, these along with the general precaution in assessment mean that uncertainty is taken into account. The Company was not requested to use a stochastic collision risk model⁵⁵ that became available between the initial application and the subsequent GBBG Report. RSPB Scotland also queried the manner in which the PVA was performed for GBBG as a feature of East Caithness Cliffs SPA, specifically querying how productivity (number of fledged young) was modelled. In the MSS Advice on GBBG Report, MSS advised that the PVA modelling did appear to follow appropriate methods. MSS noted that productivity rates were modelled using values taken from Horswill, and

⁵⁵ McGregor, R.M., King, S., Donovan, C.R., Caneco, B., and Webb, A. 2018. A Stochastic Collision Risk Model for Seabirds in Flight. Available online: <https://www2.gov.scot/Topics/marine/marineenergy/mre/current/StochasticCRM> .

Robinson,⁵⁶ and the expanded generic population model (in Annex B to the GBBG Report) indicated that productivity rates were applied prior to modelling survival between age classes.

27.6 Herring gull as qualifying feature of East Caithness Cliffs SPA and Troup, Pennan and Lions' Heads SPA

- 27.6.1 In the RSPB Scotland Consultation Response, RSPB Scotland emphasised the importance of contextual information in interpreting the significance of assessed impacts. RSPB Scotland noted that the status of herring gull as a feature of the two SPAs is either unfavourable or unfavourable declining and cited the most recent population count for East Caithness Cliffs SPA which indicated a continuing decline.
- 27.6.2 Herring gull has been considered in this AA as a qualifying feature of three SPAs, in addition to Buchan Ness to Collieston Coast SPA, together with the contextual information provided by RSPB Scotland.

27.7 Auk species (razorbill, common guillemot, and puffin)

- 27.7.1 The RSPB Scotland Consultation Response stated that it disagreed with the tests used in the RIAA for assessing whether impacts were likely to have adverse effects on integrity of auks as qualifying features of relevant SPAs. Further assessment was made for auks as features of some SPAs in the subsequent EIA Addendum Report. The RSPB Response to EIA Addendum Report noted that there remained considerable uncertainty in the assessment and that the extent of this had not been quantified.
- 27.7.2 Scottish Ministers have, in this AA, considered the RIAA, the EIA Addendum Report, the consultation responses and other contextual data (e.g. SPA status) in relation to the auk species and are satisfied that the Development will not, in isolation, or in-combination, adversely affect the integrity of any SPA with regards to razorbill, guillemot or puffin. This was also the advice provided by SNH.

27.8 Collision risk models

- 27.8.1 **Nocturnal activity scores:** The RSPB Scotland Consultation Response stated that there was no peer reviewed evidence for a change in the nocturnal activity factor to use for kittiwake or large gulls. For the species and features of greatest concern in this AA the assessment has been made

⁵⁶ Horswill, C. & Robinson, R.A. (2015). Review of seabird demographic rates and density dependence. JNCC Report No. 552. Joint Nature Conservation Committee, Peterborough.

without using the refinements suggested by the Company for nocturnal flight activity scores, this in accordance with SNH advice.

- 27.8.2 **Flight height data:** The RSPB Scotland Consultation Response noted that the Skov et al (2018)⁵⁷ study obtained flight height data that suggested that some species may fly higher than indicated by the generic flight height data currently used for options 2 and 3 of the Band 2012 CRM. Scottish Ministers acknowledge that flight height distribution is a source of uncertainty in collision risk modelling. However, at the time of this assessment the Johnston et al (2014)⁵⁸ generic flight height distributions are still generally agreed to be the best available evidence.

⁵⁷ Skov, H., Heinanen, S., Norman, T., Ward, R.M., Mendez-Roldan, S. & Ellis, I. 2018. ORJIP Bird Collision and Avoidance Study. Final report – April 2018. The Carbon Trust. United Kingdom. 247 pp. Available at: <https://www.carbontrust.com/resources/reports/technology/bird-collision-avoidance/>

⁵⁸ Johnston, A., Cook, A. S., Wright, L. J., Humphreys, E. M., & Burton, N. H. 2014. Modelling flight heights of marine birds to more accurately assess collision risk with offshore wind turbines. *Journal of Applied Ecology*, 51(1), 31-41.

1 ANNEX C Decision Notice and Conditions

E:MS.MarineRenewables@gov.scot



Scottish Government
Riaghaltas na h-Alba
gov.scot

Mr Daniel H. Finch
Moray Offshore Windfarm (West) Limited
C/O Shepherd And Wedderburn Llp
Condor House
10 St. Paul's Churchyard
London
EC4M 8AL

Our Reference: 012/OW/MORLW – 8

XX Month 2019

Dear Mr Finch

THE ELECTRICITY ACT 1989 (AS AMENDED)

**THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT)
(SCOTLAND) REGULATIONS 2017 (AS AMENDED)**

**DECISION NOTICE FOR THE SECTION 36 CONSENT FOR THE CONSTRUCTION
AND OPERATION OF THE MORAY WEST OFFSHORE WIND FARM,
APPROXIMATELY 22.5KM SOUTHEAST FROM THE CAITHNESS COASTLINE**

1 Application and description of the Development

- 1.1 On 5 July 2018, Moray Offshore Windfarm (West) Ltd (Company Number 10515140) having its registered office at Condor House, 10 St. Paul's Churchyard, London EC4M 8AL ("Moray West" or "the Company"), submitted to the Scottish Ministers applications under the Electricity Act 1989 (as amended) ("the Electricity Act 1989") for:
- A consent under section 36 ("s.36") of the Electricity Act 1989 for the construction and operation of the Moray West Offshore Wind Farm, approximately 22.5km southeast off the Caithness coastline ("the Application").
- 1.2 The Application was accompanied by an Environmental Impact Assessment Report ("EIA Report") as required under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended) ("the 2017 EW regulations") and a Habitats Regulations Appraisal ("HRA") as required

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under the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended) and the Conservation of Habitats and Species Regulations 2017 (collectively hereinafter referred to as “the Habitats Regulations”). An addendum of additional information (“EIA Addendum Report”) concerning ornithology and seascape and landscape visual impacts was submitted by the Company on 23 November 2018. A Report to Inform the Appropriate Assessment (“RIAA”) was submitted on 5 July 2018. A Population Viability Analysis Report (“PVA Report”) to amend and update the RIAA was submitted on 31 August 2018. On 18 March 2019, the Company also submitted an “Information to Inform HRA– Great Black-Backed Gull” Report (“GBBG Report”) in addition to the RIAA. The EIA Addendum Report, PVA Report and the GBBG Report are also referred to as part of the Application.

1.3 The Scottish Ministers carried out four consultation exercises:

- 1) A consultation on the Application (“the Original Consultation”);
- 2) A consultation on the PVA Report; this consultation was carried out at the same time as the Original Consultation. Responses were included within the Original Consultation. Therefore the PVA consultation is considered part of the Original Consultation;
- 3) A consultation on the EIA Addendum Report (“the EIA Addendum Consultation”); and
- 4) A consultation on the GBBG Report (“the GBBG Report Consultation”).

1.4 In addition to the Application, the Company has also applied for two marine licences (under the Marine and Coastal Access Act 2009 and the Marine (Scotland) Act 2010) to construct the offshore renewable energy works and offshore transmission infrastructure (“OfTI”). Separate decision notices will be issued in respect of any marine licences granted.

1.5 The Application is for the construction and operation of an offshore energy generating station, within a maximum generating capacity of around 850 megawatts (“MW”). The offshore generating station shall comprise either:

1. No more than 85 three-bladed horizontal axis Wind Turbine Generators (“WTG”) each with:
 - a. a maximum rotor tip height of 230 metres (measured from Highest Astronomical Tide (“HAT”));
 - b. a maximum rotor diameter of 195 metres;
 - c. a maximum hub height of 132.5 metres (measured from HAT);
 - d. a minimum blade tip clearance of 35 metres (measured from HAT);
 - e. blade width of up to 6 metres; and

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- f. a minimum spacing of 1,050 metres crosswind and 1,200 metres downwind.

or

If the rotor tip height of the WTGs exceeds 230 metres (measured from HAT), no more than 72 WTGs each with:

- a. a maximum rotor tip height of 265 metres (measured from HAT);
- b. a maximum rotor diameter of 230 metres;
- c. a maximum hub height of 150 metres (measured from HAT);
- d. a minimum blade tip clearance of 35 metres (measured from HAT);
- e. blade width of up to 6 metres; and
- f. a minimum spacing of 1,050 metres crosswind and 1,200 metres downwind;

- 2. No more than 275km of inter-array cable;
- 3. Monitoring equipment, such as metocean buoys;
- 4. Up to 85 foundations and substructures, and associated fixtures, fittings and protections;
- 5. Scour and inter-array cable protection;
- 6. The design of the WTG substructure will be chosen from the following options:
 - i. Gravity base;
 - ii. Monopile;
 - iii. Jacket Foundation;
 - iv. Suction Caisson;

All as described in the Application.

- 1.6 The total area within the Moray West Offshore Wind Farm (“the Development”), site boundary is 225km². The location and boundary of the Development site is shown in Figure 1.

This decision notice contains the Scottish Ministers’ decision to grant consent for the Development detailed above, in accordance with regulation 21 of the 2017 EW regulations.

2 Summary of environmental information

2.1 The environmental information provided was:

- An [EIA Report](#) that provided an assessment of the impact on a range of receptors;
- A [RIAA](#);
- A [PVA Report](#) to amend the conclusions of the RIAA;
- An [EIA Addendum Report](#) as a result of the responses from Scottish Natural Heritage (“SNH”) and the Royal Society for the Protection of Birds Scotland (“RSPB Scotland”), received through the Original Consultation; and
- A [GBBG Report](#) as a result of the responses from SNH, in relation to great black-backed gull (“GBBG”), received through the EIA Addendum Consultation.

2.2 In May 2016, the Company submitted a [scoping report](#) and a request for a scoping opinion in respect of the Development to the Scottish Ministers. Following consultation with statutory and other consultees, a [scoping opinion](#) was issued by Scottish Ministers on 15 August 2016, advising on the scope of the impacts to be addressed and the methods of assessment to be used within the EIA Report.

2.3 The EIA Report and the EIA Addendum Report assessed the impact pathways identified in the scoping opinion and was prepared in accordance with the terms of the 2017 EW Regulations. As the request for a scoping opinion was made before 16 May 2017, the transitional arrangements within Part 12 of the 2017 EW regulations applied.

2.4 A summary of the environmental information provided in the EIA Report and the EIA Addendum Report is given below.

2.5 Physical Processes and Water Quality

2.5.1 Impacts on receptors, and the associated pathways, during construction, operation and decommissioning phases were assessed. Impacts scoped into the EIA Report were increases in Suspended Sediment Concentration (“SSC”) and deposition of disturbed sediments to the seabed; jack-up vessel footprints on the seabed; impacts to designated marine and coastal geomorphological features; impacts to recreational surfing venues; impacts to the Smith Bank; and changes to water quality due to chemical release and contaminated sediments.

2.5.2 Changes to water quality due to sediment disturbance were required to be scoped in by the Scottish Ministers only if the Offshore Export Cable (“OEC”)

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corridor would make landfall at Cullen Bay. The Company did not choose this location for the Development landfall, therefore changes to water quality to sediment disturbance were scoped out of the EIA Report.

- 2.5.3 All impacts assessed in respect of effects of the Development on physical processes and water quality alone and in-combination with the Moray East Offshore Wind Farm and the Beatrice Offshore Wind Farm (“the Moray Firth Developments”) were considered to be of negligible or minor significance in the EIA Report. Changes to pathways were not considered to result in impacts on marine processes or receptors.

2.6 Benthic and Intertidal Ecology

- 2.6.1 Using information gathered during geophysical, benthic and intertidal surveys, the likely significant effects on benthic and intertidal ecology of the construction, operation and maintenance and decommissioning phases of the Development and OfTI were assessed in the EIA Report. As requested by SNH and Joint Nature Conservation Committee (“JNCC”) during scoping, biotope and habitat mapping were included within the EIA Report and this was used to inform the initial wind farm layout.
- 2.6.2 With embedded mitigation, the EIA Report concluded that effects on the benthic and intertidal habitats from the Development were, at worst, of minor adverse significance during construction, operation and decommissioning. Stated embedded mitigation includes avoidance of sensitive benthic habitats/species and species/habitats of conservation importance during construction, with this managed through post consent surveys and plans.
- 2.6.3 The EIA Report also considered the cumulative impact of long term habitat loss from the Development in combination with the Moray Firth Developments and concluded that the cumulative effect of habitat loss caused by these developments is considered to be negligible and therefore not significant in Environmental Impact Assessment (“EIA”). The cumulative effects of scouring of benthic habitats at foundations and around cables was also assessed and concluded to be of negligible to minor significance and therefore not significant in EIA terms.
- 2.6.4 The OEC corridor traverses through the Southern Trench proposed Marine Protected Area (“pMPA”) and includes the proposed qualifying features: Seapens and burrowing megafauna in circalittoral fine mud (burrowing mud). Potential impacts upon this biotope may therefore occur as a result of the cable laying, and cable operation and maintenance. Within the EIA Report, the effects on this biotope have been assessed as not significant in terms of EIA. A HRA for benthic habitats associated with the Moray Firth Special Area of Conservation (“SAC”) and its qualifying feature of subtidal sandbanks has been undertaken as a separate exercise, within the RIAA.

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2.7 Fish and Shellfish ecology

- 2.7.1 The following impacts for all phases of the Development (construction, operation and maintenance and decommissioning) were depicted in the EIA Report chapter on fish and shellfish ecology: temporary and long term habitat loss, noise and vibration, increased suspended sediment concentration/deposition, accidental release of hydrocarbons and chemicals from infrastructure installation processes or from vessels, creation of new substrate and habitat, Electro Magnetic Field (“EMF”), seabed sediment heating from subsea cables, removal of structures and hard substrates.
- 2.7.2 For the Development alone, the aforementioned impacts were deemed to be not significant in EIA terms. Similarly, given that there is limited potential for any overlap in construction periods within the Moray Firth Developments, the cumulative impacts were assessed to be not significant.
- 2.7.3 The EIA Addendum Report did not identify any additional significant impacts on fish and shellfish as result of the change of boundaries request.

2.8 Marine Mammals

- 2.8.1 In relation to the potential impacts on marine mammals, the following were scoped out of the EIA Report: toxic contamination; disturbance leading to long-term avoidance as a result of operational noise; and stranding due to EMF. The impacts assessed were underwater noise during construction and decommissioning; collision risk from vessels; and reduction in foraging and prey availability during all phases of the Development. The species subject to the study were harbour seal, grey seal, bottlenose dolphins, harbour porpoises and minke whales.
- 2.8.2 The Company committed to a range of mitigation measures in the EIA Report to reduce the effects on marine mammals, including the implementation of a Vessel Management Plan (“VMP”) to ensure avoidance of high risk areas and a Piling Strategy (“PS”) that will incorporate a Marine Mammal Mitigation Plan.
- 2.8.3 The specific effects of the Development were predicted to be not significant on any marine mammal species in terms of the EIA Regulations. No significant effects were predicted for any marine mammal species as a result of the cumulative impact assessment.
- 2.8.4 The EIA Report also considered the impacts of the Development on minke whales. The baseline provided in the EIA Report on marine mammals concludes that higher densities of minke whales have been recorded in the Southern Trench possible Marine Protected Area (“pMPA”), particularly in the summer months. The EIA Report concludes that overall the impacts of the Development on minke whales are not significant in EIA terms.

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- 2.8.5 For the Development alone, the RIAA predicted no significant effects on any marine mammal species. The cumulative impacts were also assessed to be not significant.
- 2.8.6 The EIA Addendum Report did not identify any additional impacts on marine mammals as a result of the change of boundaries request. The conclusion of the EIA Report of no significant impacts on marine mammals was still valid.
- 2.9 Ornithology
- 2.9.1 The EIA Report assessed the impacts on ornithology receptors during the construction, operation and maintenance and decommissioning phases of the Development. Effects from the Development in isolation were reported to be of negligible or minor significance. These included impacts from disturbance and displacement, barrier, collision, attraction to lit structures and pollution. No additional mitigation measures beyond the embedded mitigation, were proposed. Impacts during the decommissioning phase of the Development were assessed to be similar or identical to those during the construction phase.
- 2.9.2 The Company committed to mitigation measures within the EIA Report to reduce the effects on ornithological receptors including an appropriate EMP and a Marine Pollution Contingency Plan (“MPCP”), a VMP, installation of appropriate lighting on wind farm structures, and a minimum blade tip clearance of 35 metres above HAT. Cumulative impacts on disturbance and displacement were considered to be of only minor adverse significance.
- 2.9.3 Cumulative assessment of collision impacts were assessed in combination with the Moray Firth Developments during the breeding season. In addition cumulative impacts were assessed in-combination with the Kincardine Floating Offshore Wind Farm and the Hywind Scotland Pilot Park Offshore Wind Farm. During the non-breeding season, impacts from additional Scottish and North Sea wind farm developments were also considered. The cumulative impacts due to collision with turbines, in both scenarios, were assessed as not significant.
- 2.9.4 The EIA Report concluded that that only minor adverse effects were predicted when considering the Development in-combination with other projects and activities. During the operational phase, cumulative impacts were considered not significant in EIA terms.
- 2.9.5 Within the EIA Addendum Report, the Company made a commitment to limit kittiwake collisions to no more than 53 through a reduction in turbine numbers or changes to other design parameters. The EIA Addendum Report did not identify any additional significant impacts on ornithology as a result of the change of boundaries request.
- 2.9.6 In addition to the EIA Report, the RIAA considered the impact of the Development on East Caithness Cliffs Special Protection Area (“SPA”),

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North Caithness Cliffs SPA, Buchan Ness to Collieston Coast SPA, Troup, Pennan and Lion's Head SPA, Moray Firth SAC, Dornoch Firth and Morrich More SAC and Moray Firth proposed SPA ("pSPA"). The GBBG Report also considered the impact of collision mortality and the integrity of the East Caithness Cliffs SPA.

- 2.9.7 The RIAA and the GBBG Report, concluded that the Development would not adversely affect the integrity of these protected sites alone or in-combination with other plans or projects.

2.10 Commercial Fisheries

- 2.10.1 Impacts from the construction, operation, maintenance and decommissioning phases were considered within the EIA Report. The construction period is anticipated to last three years of which a period of six months is included for installation of the OEC.
- 2.10.2 Construction phase impacts considered the potential for temporary loss or restricted access to traditional fishing grounds for a range of fish resources, associated with the implementation of safety measures. Safety zones would be implemented around active areas of construction and construction vessels within the Development, along the OEC corridor, and around the installed or partially installed infrastructure prior to commissioning. Due to the temporary nature of the construction phase, impacts on fishing fleets, ranging from six months to three years, were considered to be not significant.
- 2.10.3 Potential operational phase impacts included those arising from the physical presence of the project infrastructure within the Development, leading to a reduction in access to, or exclusion from, established fishing grounds. Specific potential impacts were identified as collision or snag risks, additional steaming to alternative fishing grounds for vessels, and navigational conflict within fishing grounds, arising from changes to shipping routes and maintenance vessel traffic.
- 2.10.4 Permanent loss or restricted access to fishing grounds may occur as a result of the presence of the OEC and with the exception of the safety zones around the infrastructure (50 metres) and maintenance works (500 metres). Fishing activity is not prohibited outside safety zones and vessels will have the option to steam throughout the Development site. Impacts during the operational phase were therefore assessed to be not significant and safety issues were assessed to be within acceptable limits where compliance with mitigation is in place. Displacement of fishing activity into other areas was assessed to be minor or negligible.
- 2.10.5 Decommissioning phase impacts were assessed to be the same as for the construction phase.
- 2.10.6 The cumulative impact assessment considered the impact of other relevant projects in the following areas:

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Area	Project
Moray Firth	Consented Moray East Offshore Ltd Eastern Works (Telford, Stevenson and MacColl offshore wind farms)
	Under construction Beatrice Offshore Wind Ltd Wind Farm
	Active Beatrice Oil Field
	Consented Caithness Moray Interconnector High Voltage Direct Current cable
Forth and Tay and wider area	Consented Inch Cape Offshore Wind Ltd Wind Farm (Revised Design)
	Consented Neart na Gaoithe Offshore Wind Ltd Wind Farm Revised Design
	Proposed Seagreen Wind Energy Ltd Phase I Wind Farm
	Operational Aberdeen Offshore Wind Farm Ltd Wind Farm
	Operational Hywind Scotland Demonstration WTG
	Operational Kincardine Offshore Windfarm Ltd Floating Offshore Wind Farm
	Consented Forthwind Ltd Wind Farm Demonstrator Project – Phase 1
	Proposed Forthwind Ltd Wind Farm Demonstrator Project – Phase 2
	Operational ORE Catapult Levenmouth Demonstration WTG
English Wind Farms	Consented Dounreay Tri Ltd Floating Wind Demonstration Project
	Operational Blyth Offshore Wind Farm
	Under construction Blyth Offshore Wind Demonstration Project – Array 2
	Operational Rampion Offshore Wind Farm

As the same obligations for safety issues will apply to all developments, this was not considered as part of the assessment. Fishing may continue within traditional grounds as a result of the limited area lost during operation. A significant level of fishing activity currently occurs for the most part inshore, coinciding with locations of export cables for the majority of projects.

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Permanent loss or restricted access to traditional fishing grounds was therefore found to be minor or negligible and therefore not significant in EIA terms.

2.11 Shipping and Navigation

2.11.1 The impacts of the Development on shipping and navigation receptors during the construction, operation and decommissioning phases were considered in the EIA Report. The impacts of the Development in isolation were found to be broadly acceptable for all vessels with the exception of oil and gas vessels which were found to be tolerable with mitigation, which includes vessel presence outside the buoyed construction area and the implementation of minimum safe passing distances. Diminishing emergency response resources were also considered within the operational phase due to the potential for an increase in incidents requiring deployment of Search and Rescue (“SAR”). However, the EIA Report concluded that the frequency of occurrence, in circumstances where there would not be emergency response capability, would be negligible and therefore not significant.

2.11.2 Cumulative construction and operation effects were considered alongside the Moray Firth Developments, with regards to increased vessel to vessel collision risk, vessel to structure allision risk, and anchor interaction and snagging with export and other cables and pipelines. The EIA Report concluded that the impacts were not significant. Mitigation to reduce vessel to vessel collision risks include the implementation of a VMP and Navigational Safety Plan (“NSP”) to ensure that construction traffic does not interact with third party activity. Vessel displacement due to deviation around the Development was also considered within the operational phase. The EIA Report concluded that vessels are likely to slowly adapt to alternative routes over time and considered the impact to be not significant.

2.11.3 The EIA Report did not anticipate any cumulative decommissioning effects.

2.12 Military and Aviation

2.12.1 The EIA Report concluded that the Development would have major significant effects on military and aviation receptors.

2.12.2 The EIA Report stated that the Development in isolation would have major significant effects on the National Air Traffic Service Safeguarding (“NATS”), en route Allanshill Primary Surveillance Radar (“PSR”), and Royal Air Force (“RAF”) Lossiemouth PSR, from the turbines masking or reflecting aircraft signals and from clutter on the radar system. Helicopter approach procedures to offshore installations, Wick Airport approach procedures and minimum safe altitude requirements were also assessed as significant. Mitigation within the EIA Report, including the necessity to notify the presence of obstructions to NATS for inclusion in appropriate aviation related documentation and aviation mapping, reduced the effects to not significant. Residual mitigation is to be agreed with the Ministry of Defence (“MOD”),

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when the final locations of the constructed turbines, turbine movement and maximum height of construction infrastructure is known. Interference with Helicopter Main Route X-Ray, used by helicopters to prevent direct physical conflict with the WTGs, was considered negligible and assessed as not significant.

- 2.12.3 The EIA Report concluded that no further assessment with respect to cumulative effects was required. Whilst other wind farm developments may be located in close proximity to the Development, the impact on any aviation receptor is a standalone effect and can therefore be considered in isolation. The EIA Report stated that it is necessary for mitigation measures to be carried out under separate arrangements, such as negotiations and discussions with aviation stakeholders.

2.13 Cultural Heritage

- 2.13.1 The EIA Report considered impacts on archaeological and cultural heritage receptors, both onshore and offshore, arising from the construction, operation, maintenance and decommissioning phases of the Development.

- 2.13.2 The effects arising from the Development on the setting of onshore cultural heritage and marine archaeology receptors were reported to be of minor or negligible significance where the implementation of mitigation measures are embedded.

- 2.13.3 The EIA Report considered the effects of the Development on cultural heritage during the construction and operational phases, and in-combination with the export cables for the Moray Firth Developments. These effects were deemed to be of negligible or no significance where a Protocol for Archaeological Discoveries (“PAD”) is followed.

- 2.13.4 Cumulative effects on the setting of onshore cultural heritage assets and marine archaeology receptors, was also reported to be of minor, negligible or no significance. No cumulative effects were identified during the decommissioning phase.

2.14 Seascape and Landscape Visual Impact Assessment

- 2.14.1 The EIA Report concluded that there would be significant visual effects, during all phases of the Development, as occurring along the coastal area of Caithness, north east Sutherland and the Highlands (between the A9 at Crakaig in the east and Wick in the north) spanning a section of coast approximately 60km in length. Significant effects at night were predicted to be concentrated in the coastal areas between Wick and Navidale. Significant effects related to construction and decommissioning of the OEC were identified in the Sandend area on the Moray coast. Sandend Beach and all potential landfall locations to the west towards Findlater Castle have now been removed from the design. Investigations for the final location are ongoing.

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- 2.14.2 Significant effects on landscape and seascape character were concentrated along the coast between north east Helmsdale and Sarclet Head and between the A9/A99 and the coast. This included a small part of the area designated as the Flow Country and Berriedale Coast Special Landscape Area (“SLA”), as well as the Dunbeath Castle Gardens Designated Landscape, as a result of increased extent of open sea views affected by the Development and the scale of proposed turbines.
- 2.14.3 The EIA Report considered impacts upon seascape and landscape of the Development cumulatively with current operational and consented offshore and onshore wind farms. Significant impacts were reported in the Highlands where, when visibility is very good or excellent, there are open sea views towards the Development and the Moray Firth Developments. In some instances, predicted visual effects were the sequential and/or successive visibility of the Development in-combination with onshore wind farms. Along the moray coast in locations where visibility is excellent, significant cumulative visual effects would occur as a result of the Development being seen in the context of the Moray East Offshore Wind Farm.
- 2.14.4 The EIA Addendum Report concluded that mitigation via the removal of the Model 4 WTG, the largest of the proposed turbines from the design and the reduction in the duration of the wind farm operation from 50 years to 25 years could lead to a reduction in impact.
- 2.15 Socio-Economics
- 2.15.1 The EIA Report advised that socio-economic impacts during the construction, operation and decommissioning phases of the Development were positive, with effects that are quantifiable, ranging from minor to major positive effects upon the “Local Study Area” (defined as the combined local authorities of Highlands, Moray, Aberdeenshire & Aberdeen City) to minor to moderate positive Scotland wide effects.
- 2.15.2 Positive significant effects, ranging from minor to moderate, were reported for the construction phase of the Development resulting from direct and indirect employment creation in the construction supply chain for both the Local Study Area and Scotland. Positive significant effects, resulting from indirect and direct Gross Value Added (“GVA”) creation in the construction supply chain, ranged from minor to major for the Local Study Area and minor to moderate for Scotland.
- 2.15.3 Positive significant effects, ranging from moderate to major for the Local Study Area were reported during the operational and maintenance phases of the Development from the direct and indirect employment impact resulting from localised high value and long term employment opportunities. Minor positive significant Scotland wide effects were reported due to the localised nature of jobs. Effects during the decommissioning phase were stated to be similar to that during the construction phase.

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- 2.15.4 The EIA Report assessed the cumulative effects dependant on the extent to which the Development and other relevant projects, namely the Moray Firth Developments and the Beatrice Oil Field decommissioning, draw on a similar supply chain and labour market within the Local Study Area. The report also considered whether the construction phase for the Development and other projects are undertaken simultaneously or consecutively and the ability of the supply chain and labour markets to adapt to increased demand. The EIA Report concluded that cumulative impacts were expected to be of major beneficial significance. In-combination effects may be even higher for the Local Study Area, however, this cannot be quantified as it is not yet known which port the Development would use for the operational and maintenance phases.

3 Consultation

- 3.1 In accordance with the 2017 EW Regulations, on 5 July 2018, the Company submitted an EIA Report and HRA Report describing the Development and giving an analysis of its environmental effects. On 31 August 2018, the Company submitted a PVA Report amending some of the results in the RIAA. On 18 March 2019, the Company submitted the GBBG Report.
- 3.2 Advertisement of the Application was made in the local and national press and the Application website. The notices were placed in the public domain and the opportunity given for those wishing to make representations.
- 3.3 The dates of the consultation exercises are given below. The regulatory requirements regarding consultation and public engagement have been met and the responses received taken into consideration. Where matters have not been fully resolved, conditions have been included to ensure appropriate action is taken.

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Document	Date received	Dates of consultation	Publication
EIA Report and Application	5 July 2018	8 July 2018 – 21 August 2018 8 July 2018 – 12 November 2018 (for Planning Authorities)	The Press & Journal (10 July 2018 and 18 July 2018) The Edinburgh Gazette (10 July 2018) The Scotsman (10 July 2018) The Banffshire Journal (10 July 2018)
PVA Report	31 August 2018	31 August 2018 – 2 October 2018	The Press & Journal (4 September 2018) The Edinburgh Gazette (4 September 2018)
EIA Addendum Report	23 November 2018	23 November 2018 – 7 January 2019	The Press & Journal (23 November 2018 and 30 November 2018) The Edinburgh Gazette (23 November 2018) The Scotsman (24 November 2018)
GBBG Report	18 March 2019	19 March 2019 – 2 April 2019	The Press & Journal (19 March 2019) The Edinburgh Gazette (19 March 2019)

4 Summary of statutory consultee responses

- 4.1 Under the 2017 EW Regulations, the statutory consultees are as follows: SNH, the Scottish Environment Protection Agency (“SEPA”) and Historic Environment Scotland (“HES”). The planning authorities whom the Scottish Ministers considered appropriate to consult in respect of the proposed Development are Aberdeenshire Council, Moray Council and the Highland Council.
- 4.2 In addition, the Maritime and Coastguard Agency (“MCA”) and Northern Lighthouse Board (“NLB”) are statutory consultees under the Marine (Scotland) Act 2010.
- 4.3 Aberdeenshire Council
- 4.3.1 Aberdeenshire Council responded to the Original Consultation, the EIA Addendum Consultation and the GBBG Report Consultation.
- 4.3.2 Aberdeenshire Council raised no objection to the Application and underlined that there are crossovers between the Application and the Company’s application for the onshore components of the project.
- 4.3.3 Aberdeenshire Council stated that the Development in isolation would have a non-significant impact on the landscape and seascape. Aberdeenshire Council also underlined that although Sandend village is stated in the EIA Report to have potential significant impacts, these would be short term and temporary. Aberdeenshire Council had no substantial concerns with the potential cumulative visual impacts, of the Development in-combination with the Moray Firth Developments. However, it recommended that any wind turbines should be of an appropriate scale to reduce any potential adverse impacts of this nature as far as possible.
- 4.3.4 In order to ensure that the recreational activities in Sandend are minimally impacted by the construction activities, Aberdeenshire Council requested that the Company continues to engage with the affected community and local businesses.
- 4.3.5 Due to the issues raised by the local community of Sandend and sports groups, the Company withdrew Sandend as a potential site for landfall by letter to the Scottish Ministers on the same day the Application was submitted.
- 4.3.6 Concerning the archaeology assessment presented in the EIA Report, Aberdeenshire Council accepted the methodology used and agreed with its conclusions. Aberdeenshire Council welcomed the Company’s commitment to the creation of a Written Scheme of Investigation (“WSI”), albeit the Council requested that the WSI should be appropriately secured.

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- 4.3.7 In terms of onshore and offshore works interactions, Aberdeenshire Council requested that, where possible, these should run concurrently and that details of timings of works should be submitted to the Council to ensure that potential disruptions to the community are limited. Aberdeenshire Council also commented on the protection of rocks and cliffs around the shoreline, and that the Company should ensure ongoing engagement with the local community as the proposal evolves and decisions are made on cable landfall and installation method. In addition, Aberdeenshire Council recommended that, if Horizontal Directional Drilling (“HDD”) is not used, then further intertidal surveys at the exact landfall area should take place.
- 4.3.8 Aberdeenshire Council stated that any proposed impact on the Cullen to Stakeness Coast Site of Special Scientific Interest (“SSSI”) running along the coast should be addressed. In addition, it is requested that the Company should demonstrate that no adverse noise impact would occur.
- 4.3.9 In its response to the EIA Addendum Consultation, Aberdeenshire Council referred back to the comments submitted with the Original Consultation. Overall, Aberdeenshire Council had no objections to the changes proposed by the EIA Addendum Report.
- 4.3.10 Aberdeenshire Council submitted a response on the GBBG Report. As GBBG are not a qualifying interest for any designated sites within the Aberdeenshire region, Aberdeenshire Council stated that the GBBG Report did not raise any concerns in relation to the Application.
- 4.3.11 Conditions have been attached to the s.36 consent to address the concerns raised by Aberdeenshire Council, these mandate that the Company prepares, consults on, and adheres to, the terms of a PAD and WSI, a Construction Programme (“CoP”), a Construction Method Statement (“CMS”) and a Design and Layout Specification Plan (“DSLSP”). Further, conditions will be attached to any marine licence(s) granted, in relation to any cable landfall area and the use of HDD.
- 4.4 Historic Environment Scotland
- 4.4.1 HES responded to the Original Consultation and to the EIA Addendum Consultation.
- 4.4.2 HES did not object to the Application. HES stated that any consent should ensure that the WSI that includes the PAD should be approved by Scottish Ministers and/or HES before the works are allowed to commence.
- 4.4.3 HES submitted a response to the EIA Addendum Consultation. HES was content that the part 1 of the Addendum (Ornithology and Seascape, Landscape and Visual Assessment, (“SLVIA”)) did not relate to its cultural remit, and that Part 2 (the site boundary variation) included an updated baseline and that due consideration has been given to archaeological assets.

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- 4.4.4 HES stated that the conclusions of the EIA Report are still valid and that the changes are unlikely to increase the effects on marine archaeological assets. HES reiterated its recommendation to include a condition on PAD and WSI in the s.36 consent, if this were to be granted.
- 4.4.5 A condition requiring the Company to prepare, consult on and adhere to, a PAD and WSI has been attached to the s.36 consent.
- 4.5 Maritime and Coastguard Agency
- 4.5.1 MCA responded to the Original Consultation and to the EIA Addendum Consultation.
- 4.5.2 MCA did not object to the Application and confirmed that it was content that all recommendations regarding the Marine Guidance Note (MGN) 543 checklist provided as part of the Navigation Risk Assessment (“NRA”) were addressed.
- 4.5.3 The main concerns raised by MCA related to the proximity of the Development to the Moray Firth Developments, in relation to the layout designs affecting the safety of navigation and SAR capabilities. MCA highlighted that there is no designated navigational corridor or sufficient air space to allow SAR helicopters to manoeuvre safely outside the turbine boundaries.
- 4.5.4 MCA requested that the Company should discuss the turbine layout as soon as possible and that, prior to construction, the layout must be approved. In addition, MCA requested that the Company should conduct a radio survey prior to any construction taking place.
- 4.5.5 MCA requested that conditions should be added to the s.36 consent, including:
- A lighting and marking plan which includes the use of aviation lights visible at 360°, compatible with night vision imaging systems as detailed in CAP 764 CAA Policy and Guidelines on Wind Turbines and in compliance with the updated MGN;
 - Hydrographic surveys should fulfil the requirements of the International Hydrographic Organisation (“IHO”) Order 1a standard;
 - Any consented cable protection works must ensure existing and future safe navigation is not compromised. MCA would accept a maximum of 5% reduction in surrounding depth referenced to Chart Datum. The Beatrice Offshore Wind Farm cables would have to be addressed in the cable burial plans; and
 - Safety zones.
- 4.5.6 MCA highlighted that the Company must ensure that its contractors and subcontractors must have the required certification for all vessel operations, and early engagement with the local Marine Office should be undertaken,

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where necessary, to ensure there are no issues with regards to survey and inspections, towage and safety requirements.

- 4.5.7 MCA responded on the EIA Addendum Consultation stating that there was no concern in principle. However, the change in redline site boundary would require a change in security measures to ensure that all the requirements of MGN 543 are fulfilled.
- 4.5.8 The Company withdrew the change of site boundary on 25 February 2019.
- 4.5.9 Conditions have been placed upon the s.36 consent to mitigate the impacts highlighted by MCA, including the requirement to prepare, consult on and adhere to the Emergency Co-operation Plan (“ERCoP”), Cable Plan (“CaP”), CMS, DSLP, NSP, VMP and Lighting and Marking Plan (“LMP”).
- 4.6 Moray Council
- 4.6.1 Moray Council raised no objections to the Application or to the EIA Addendum Report.
- 4.7 Northern Lighthouse Board
- 4.7.1 NLB responded to the Original Consultation and the EIA Addendum Consultation.
- 4.7.2 NLB did not object to the Application. NLB noted that there was no defined number, size or location of the turbines. therefore its response was general in nature. NLB requested that the Company should establish a NSP and an LMP. The LMP should cover all phases of the Development. NLB confirmed that the lighting and marking of the Development may require to be altered to reflect developments in the future. During the operational phase the Development shall be marked and lit as per the International Association of Marine Aids to Navigation (“IALA”) Recommendations O-139.
- 4.7.3 NLB also required that an emergency response plan should be prepared by the Company. NLB stated that all navigational lighting and marking should require NLB Statutory Sanction and that works should be published via Notice to Mariners (“NtMs”), Navigation Warnings and relevant publications. Finally, all turbine locations, cable route and landing points should be communicated to the United Kingdom Hydrographic Office (“UKHO”).
- 4.7.4 NLB advised that its Original Consultation response remained valid in respect of the EIA Addendum Report.
- 4.7.5 Conditions have been placed upon the s.36 consent to mitigate the impacts highlighted by NLB, including the requirement to prepare, consult on and adhere to the DSLP, NSP, and LMP.

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4.8 Scottish Environmental Protection Agency

- 4.8.1 SEPA responded to the Original Consultation and to the EIA Addendum Consultation.
- 4.8.2 SEPA did not object to the Application. However, SEPA requested that a condition for a decommissioning plan will be attached to the s.36 consent. SEPA confirmed that if this condition was not applied then the response should be treated as an objection.
- 4.8.3 SEPA requested that a decommissioning schedule and plan, and an active waste management strategy and plan be included as conditions of the s.36 consent.
- 4.8.4 In response to the EIA Addendum Consultation, SEPA raised no objection and advised the Company to refer to its standing advice.
- 4.8.5 Conditions requiring the Company to prepare, consult on and adhere to CoP, CMS, EMP and Decommissioning Programme (“DP”) have been attached to the s.36 consent.

4.9 Scottish Natural Heritage

- 4.9.1 SNH responded to the Original Consultation, the EIA Addendum Consultation and the GBBG Report Consultation.
- 4.9.2 SNH objected to the Application based on the Development having adverse predicted effects on the site integrity for kittiwake as a qualifying interest of the East and North Caithness Cliffs SPA, in- combination with the Moray Firth Developments, collision risk being the key impact. SNH raised concerns on the cumulative impacts of the Development on the landscape and seascape of the East Sutherland Coast.
- 4.9.3 SNH stated that the Company had provided insufficient information to enable it to conclude whether there would be no adverse effect caused by the Development in isolation on site integrity for kittiwake as a qualifying interest of the East Caithness Cliffs SPA; or in-combination effects on common guillemot and razorbill of the East Caithness Cliffs SPA; and to reach a conclusion for GBBG as a qualifying feature of East Caithness Cliffs SPA.
- 4.9.4 SNH advised that for the Development in isolation and in-combination with the Moray Firth Developments there would be no adverse effect on site integrity of any SPAs with respect to the following qualifying interests:
- East Caithness Cliffs SPA – fulmar and herring gull;
 - North Caithness Cliffs SPA – common guillemot, razorbill, puffin, fulmar;
 - Buchan Ness to Collieston Coast SPA– herring gull, common guillemot, fulmar and kittiwake; and

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- Troup, Pennan and Lion's Head SPA – herring gull, kittiwake, common guillemot, razorbill, fulmar.
- 4.9.5 SNH also advised that, for the Development in isolation and in-combination with the Moray Firth Developments, there would be no adverse effect on site integrity for all of the qualifying interests of the Moray Firth pSPA.
- 4.9.6 SNH advised that there would be no adverse effect on the site integrity of the Moray Firth SAC, with respect to the bottlenose dolphin qualifying interest, provided appropriate mitigation is implemented through s.36 consent and/or marine licence conditions.
- 4.9.7 SNH advised that there would be no adverse effect on site integrity of the Dornoch Firth and Morrich More SAC with respect to the harbour seal qualifying interest, provided appropriate mitigation is implemented through s.36 consent and/or marine licence conditions. SNH advised that the Development, both in isolation and in-combination with the Moray Firth Developments, had no significant long term effect on the population trajectory of harbour seals.
- 4.9.8 In relation to noise modelling, to inform assessment of effects on marine mammals, SNH stated that although it would be more accurate to conduct noise modelling using a conversion factor of 1%, SNH accepted the assessment conducted in the EIA Report with a 0.5% conversion factor.
- 4.9.9 In relation to the potential impacts of the Development on the Southern Trench pMPA, SNH advised that the Development was unlikely to have an impact on the minke whale qualifying interest when the animals are within the pMPA. Potential impacts on the Southern Trench pMPA from the OfTI will be considered in the OfTI decision notice.
- 4.9.10 SNH agreed with the EIA Report conclusions that there would be no significant effects on physical processes caused by the Development. However, in relation to the landfall area, SNH stated that it is preferable to avoid the Cullen to Stakeness coast SSSI and that a detailed landfall plan should be agreed with SNH and Marine Scotland in advance of the works.
- 4.9.11 SNH supported the conclusions of the EIA Report, that the Development would be unlikely to have significant impacts on the benthic environment. However, considering that details on the landfall area are unclear, SNH indicated that further work to assess potential impacts would be necessary, in particular by way of intertidal surveys.
- 4.9.12 SNH welcomed the commitment of the Company to bury cables to one metre depth and, where not possible, protect the cables to reduce the impacts of magnetic fields on diadromous fish. SNH also welcomed the commitment of the Company to submit a PS.

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- 4.9.13 SNH underlined that if Marine Scotland is to recommend approval of the Development, then SNH wishes to provide advice on the conditions to mitigate impacts on natural heritage interests.
- 4.9.14 In its consultation response to the EIA Addendum Report, SNH maintained its objection. SNH based its objection on the information provided for ornithology impacts. Specifically, SNH stated that the amended proposal would continue to have an adverse effect on site integrity for kittiwake as a qualifying interest of the East and North Caithness Cliffs SPAs, in-combination with the Moray Firth Developments. SNH also stated that there was still insufficient information to allow it to reach a conclusion for GBBG as a qualifying feature of the East Caithness SPA. SNH advised of no adverse effect on site integrity for common guillemot and razorbill for East Caithness Cliffs SPA.
- 4.9.15 In relation to the SLVIA, SNH welcomed the changes proposed to reduce the visual impacts, in particular the proposed reduction in turbine height and change in site boundary.
- 4.9.16 Concerning marine mammals, SNH was pleased to see that the noise modelling was run with a 1% conversion factor. SNH agreed with the conclusions of the EIA Addendum Report, that the magnitude of impact would be low or negligible. SNH reiterated that the Company would have to apply for a European Protected Species (“EPS”) licence. Finally, considering that the Company predicted large effect zones on minke whale, SNH advised that an EPS licence for injury may be required, unless appropriate mitigation is included in the PS.
- 4.9.17 In response to the GBBG Report Consultation, SNH advised on 2 April 2019 that the Development, in-combination with the Moray Firth Developments, would have an adverse effect on the integrity of East Caithness Cliffs SPA with respect to GBBG. SNH advised that if s.36 consent was to be granted, pre-construction monitoring should be undertaken to understand the movements of adult GBBG recorded in the Development site during the breeding season.
- 4.9.18 Conditions requiring the Company to prepare, consult on and adhere to a CoP, CMS and EMP have been attached to the s.36 consent to mitigate concerns raised by SNH.
- 4.10 The Highland Council
- 4.10.1 The Highland Council responded to the Original Consultation and to the EIA Addendum Consultation.
- 4.10.2 The Highland Council raised no objections to the Development. The Highland Council stated that although the Development would be likely to have visual impacts, it would also be likely to have positive effects on the

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local economy, in particular upon the number of jobs that are to come to the Highlands.

4.10.3 The Highland Council had no objections to the changes proposed in the EIA Addendum Report, subject to the addition of conditions that would address the following issues:

- Design, layout and lighting of the Development;
- Maximisation of the GVA in terms of employment and associated economic activities that comes to the Highlands, as a result of the construction phase of the project;
- Engagement with the Highlands renewable energy supply chain and its ports and harbours, including Nigg and Port of Cromarty as a potential operation and maintenance facility;
- Engagement with the relevant public and private sector bodies in the Highlands to ensure that the area achieves maximum socio-economic returns from the Development.

4.10.4 Officials considered the request from the Highland Council and concluded that the specific conditions could not be attached to the s.36 consent, if granted. Therefore, officials contacted the Highland Council to request further clarification on its position if conditions related to the socio-economic impacts of the Development were not attached to the s.36 consent, if granted. Officials also underlined that these aspects could be monitored via specific plans.

4.10.5 The Highland Council responded to the officials' correspondence stating that whilst understanding the reason why specific conditions cannot be attached, it is pleased that monitoring of the socio-economic impacts is possible. Although, the Highland Council welcomed the fact that the Company received a "supply chain certificate" from BEIS, it was not aware of any specific dialogue with the Company in respect of its request for the Highlands to benefit more widely from this Development. The Highland Council underlined that members of the committee were keen to ensure that Moray West would invest in the Highlands. The Highland Council concluded that the fact that the suggested conditions cannot be secured is not a reason to object to the development. Therefore the Highland Council does not object to the Application.

4.10.6 Conditions requiring the Company to prepare, consult on and adhere to a DSLP, Design Statement ("DS"), PEMP and LMP have been attached to the s.36 consent.

5 Summary of non-statutory consultee responses

5.1 British Telecom (“BT”)

5.1.1 BT did not object to the proposal and confirmed that the project should not cause interference to BT’s current and planned radio networks.

5.1.2 BT did not object to the EIA Addendum Report.

5.2 Cruising Association (“CA”)

5.2.1 CA had no comments on the Application.

5.3 Fordyce, Sanded and District Community Council (“FSDCC”)

5.3.1 FSDCC responded to the Original Consultation and to the EIA Addendum Consultation.

5.3.2 FSDCC had no comments in respect of the Development and its electricity generation infrastructure.

5.3.3 FSDCC highlighted several deficiencies in the EIA Report with respect to the OfTI and associated cable landfall proposals. FSDCC concluded that the failure to include a landfall geology assessment to inform the HDD installation method demonstrated that this method is unproven. Until the HDD method is proven to be suitable, FSDCC is of the view that the landfall cable methodology proposed is flawed.

5.3.4 In addition, FSDCC felt that any change in the morphodynamics of the embayment below Mean High Water Springs (“MHWS”) would potentially impact on the propagation of waves within the bay at Sandend. FSDCC also highlighted that the Company had not demonstrated any quantifiable analysis of the outcome of the sea bed installation works and ongoing cable burial over 50 years or on the morphodynamics which currently exist.

5.3.5 FSDCC had no comments in relation to the EIA Addendum Report. However, it reiterated that it retained its interest in matters regarding the OfTI.

5.3.6 To mitigate concerns raised in relation to the export cable, FSDCC will be consulted on post consent plans required as conditions of the marine licence for the OfTI, if granted. Such conditions will require the Company to prepare, consult on and adhere to a CoP, a CMS and an CaP.

5.4 Highlands and Islands Enterprise (“HIE”)

5.4.1 HIE had no comments on the Application and did not respond to the EIA Addendum Consultation.

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5.5 Ministry of Defence

5.5.1 MOD responded to the Original Consultation and to the EIA Addendum Consultation.

5.5.2 MOD objected to the Application stating that the Development's turbines would be detectable by and cause unacceptable interference to the Air Traffic Control ("ATC") radar used by RAF Lossiemouth. MOD confirmed that following an operational assessment of the proposal by an ATC subject matter expert, the proposed turbines would have a significant and detrimental effect on the provision of air traffic services at RAF Lossiemouth. MOD therefore objected on these grounds.

5.5.3 In addition, MOD objected to the Development for the following reasons:

- a) Restrictions that the Development would impose upon departure routes including Standard Instrument Departures ("SIDS");
- b) Restrictions that the Development would impose upon approach and arrival procedures;
- c) Restrictions that the Development would impose upon traffic patterns, in particular the radar to visual profile;
- d) Restrictions that the Development would impose upon lower airspace radar service and the Lossiemouth zone controller;
- e) Restrictions that the Development would impose upon special tasks conducted by the ATC unit;
- f) Restrictions that the Development would impose upon aircraft operating areas;
- g) Restrictions that the Development would impose upon Tactical Aid to Navigation procedures;
- h) Restrictions that the Development would impose upon final approach routes;
- i) Restrictions that the Development would impose upon holding areas;
- j) Restrictions that the Development would impose upon instrument flight paths;
- k) The position of the Development in relation to controlled airspace;
- l) The position of the Development in relation to restricted/danger areas;
- m) MOD's future airspace and operational requirements;
- n) The frequency of the provision of MOD traffic service and deconfliction service in the vicinity of the Development;
- o) Air traffic density in the vicinity of the Development;
- p) Existing clutter or wind farms in the vicinity of the Development;

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- q) The type and characteristics of aircraft routinely using the airspace in the vicinity of the Development;
 - r) The performance of the radar;
 - s) The complexity of the ATC task.
- 5.5.4 MOD stated that, should the Company overcome these issues, the turbines in the Development would be required to be fitted with aviation lighting in accordance with Article 219 of the Air Navigation Order.
- 5.5.5 In response to the EIA Addendum Report, MOD maintained its objection and added that the proposed variation of the site boundary would cause unacceptable interference to the Precision Approach Radar (“PAR”) located at RAF Lossiemouth. As a result of this objection, on the 25 February 2019, the Company submitted a letter to the Scottish Ministers withdrawing the request for a change of site boundary
- 5.5.6 On 10 April 2019, MOD sent an official letter to the Scottish Ministers to provide clarity on its position in relation to the Application. MOD informed the Scottish Ministers that it has been in discussions with the Company to reach agreement on measures to address the unacceptable impacts identified by MOD.
- 5.5.7 MOD added that the Company submitted a technical proposal to mitigate the impacts on the ATC radar at RAF Lossiemouth. MOD accepted the proposal. In its letter, MOD has proposed four draft conditions, previously agreed with the Company, to be attached to s.36 consent, if consent were to be granted.
- 5.5.8 Conditions have been attached to the s.36 consent requesting that the Company prepare, consult and submit for approval to the Scottish Ministers an ATC Radar Mitigation Scheme and a LMP. Conditions regarding MOD notification when works commence and in relation to charting requirements have also been attached to the s.36 consent.
- 5.6 National Air Traffic Services
- 5.6.1 NATS responded to the Original Consultation and to the EIA Addendum Consultation.
- 5.6.2 NATS objected to the Application on the basis that the Development would have unacceptable impacts on NATS (En Route) Public Limited Company (“NERL”) Allanshill Radar. The concerns of NATS related to the generation of false primary plots and a possible reduction in the probability of the radar’s detection of real aircraft.
- 5.6.3 NATS maintained its objection to the Application in its response to the EIA Addendum Consultation. However, NATS notified the Scottish Ministers that it and the Company were actively working to agree on an option for mitigation.

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- 5.6.4 NATS submitted a letter to inform the Scottish Ministers that the Company and NATS have entered an agreement on future mitigation implementation. Therefore, NATS would withdraw its objection, subject to the imposition of a proposed condition. The Company submitted a letter on 5 April 2019 notifying the Scottish Ministers that it accepts and recognises the need of the condition proposed by NATS.
- 5.6.5 A condition has been attached to the s.36 consent requiring the Company to prepare and submit an Primary Radar Mitigation Scheme (“PRMS”) for approval by the Scottish Ministers. Such condition states also that no part of any WTG shall be erected above mean sea level until a PRMS has been submitted and approved by Scottish Ministers. No blades should be fitted until the mitigation measures are fully implemented in accordance with the PRMS. .
- 5.7 Royal Society for the Protection of Birds Scotland
- 5.7.1 RSPB Scotland responded to the Original Consultation, the EIA Addendum Consultation and the GBBG Report Consultation.
- 5.7.2 RSPB Scotland objected to the Application based on the in-combination impacts on seabird population from the Moray Firth Developments and other UK east coast projects.
- 5.7.3 RSPB Scotland noted that the Company had used more up-to-date assessment methods than had been deployed in relation to the Moray Firth Developments. However, RSPB Scotland considered that the EIA Report confirmed that the impacts of the already consented Moray Firth Developments would exceed the environmental capacity of regional seabird populations to cope with new threats.
- 5.7.4 RSPB Scotland advised that the Development in-combination with the Moray Firth Developments would lead to an adverse effect on the site integrity of East Caithness Cliffs and North Caithness Cliffs SPAs with respect to kittiwake. RSPB advised that the effects would likely lead to an adverse effect on the site integrity of Troup, Pennan and Lion’s Heads SPA with respect to kittiwake.
- 5.7.5 RSPB Scotland maintained its objection to the Application in its response to the EIA Addendum Consultation. RSPB Scotland stated that the concerns that it raised in its original response still stood and that the impacts of the Development alone and in-combination would be too significant. However, RSPB Scotland welcomed the change in duration of the Development from 50 to 25 years and the efforts made to change the Application to reduce the impacts of the Development.
- 5.7.6 In response to the GBBG Report Consultation, RSPB Scotland advised on 2 April 2019 that the Development in-combination with the Moray Firth Developments would have an adverse effect on the integrity of East

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Caithness Cliffs SPA with respect to GBBG. RSPB Scotland also raised queries on some technical aspects of the PVA modelling.

5.7.7 The Company responded to RSPB providing further clarity on points raised by RSPB. RSPB responded to the Company reiterating its position of maintaining its objection.

5.7.8 To mitigate concerns raised, a condition requiring the Company to prepare, consult on and adhere to a Project Environment Monitoring Programme (“PEMP”) has been attached to the s.36 consent.

5.8 Royal Yachting Association Scotland (“RYA”)

5.8.1 RYA responded to the Original Consultation and to the EIA Addendum Consultation.

5.8.2 RYA did not object to the Application. RYA noted that the layout is yet to be agreed and confirmed that it wished to be consulted on the post consent DSLP.

5.8.3 RYA submitted a response to the EIA Addendum Consultation, stating that the alternative layout would be preferable to the original one for recreational sailors.

5.9 Scottish Fishermen’s Federation (“SFF”)

5.9.1 SFF objected to the Application. SFF stated that it felt that the Development runs contrary to the following general planning policies within Scotland’s National Marine Plan (“NMP”):

- GEN 1 General planning principle;
- GEN 2 Economic benefit;
- GEN 3 Social benefit;
- GEN 4 Co-existence;
- GEN 17 Fairness.

SFF also stated that the Development runs contrary to the following within the fisheries policies of Scotland’s NMP:

- Fisheries 1 - which refers to safeguarding fishing opportunities wherever possible;
- Fisheries 2 - which refers to the cultural and economic importance of fishing, potential impacts on sustainability of fish and shellfish, and impacts of displacement of fish stocks and the socio-economic costs to fishers;

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- Fisheries 3 - which states that where existing fishing opportunities or activity cannot be safeguarded, a Fisheries Management and Mitigation Strategy (“FMMS”), should be prepared.

- 5.9.2 Whilst SFF welcomed the Company’s acknowledgment that the Development would have an effect on the fishing industry at the Development, SFF highlighted that the potential losses must be taken into account. In particular, SFF stated that the exclusion from fishing grounds could cause ten million pounds per annum losses mostly in relation to scallop and nephrops, but also in respect of smaller fisheries in the area such as squid.
- 5.9.3 SFF underlined that in the worst case scenario the Development could exclude fishers from the area for the Development life-cycle of 50 years. SFF stated that this aspect would render it difficult for stakeholders to comment on some of the conclusions of the EIA Report. In particular, SFF advised that it would be difficult for stakeholders to consider the extent to which fishing would be feasible after construction, as it was impossible to define which areas of ground would be safe for use of mobile gear.
- 5.9.4 SFF consistently asked for the seabed to be restored post-decommissioning to ensure the safety of fishing activities, and stated that rig-to-reef options are not acceptable.
- 5.9.5 In response to the EIA Addendum Report, SFF maintained its objection to the Development. SFF stated that dropping the Model 4 of turbines had a negative impact on fisheries, as using Model 4 would have allowed the Company to install fewer turbines (62 as originally intended rather than 85).
- 5.9.6 Although SFF welcomed the change in the Development life from 50 years to 25 years, it was not satisfied that the worst case scenario for impacts on fisheries would be 36 months of displacement or loss of fishing grounds. SFF advised that the worst case scenario should be of 25 years of displacement or loss of fishing grounds. Therefore, monitoring of fishing activities post-construction should be in place and the FMMS should outline the manner in which the Company intended to compensate losses.
- 5.9.7 SFF also stated that, as there is insufficient evidence, further monitoring should be in place for increased sediment and deposition, noise and vibration and EMF.
- 5.9.8 SFF identified squid and scallop fisheries as the most affected by the variation due to the larger size of the Development. SFF also requested that any consent/licence would contain a condition to address potential issues that could arise during construction.
- 5.9.9 The Company has engaged with SFF and other stakeholders as depicted in the table below:

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Date	Relevant document/ engagement type	Subject / Purpose	Main Outcome
May 2016	Moray West Offshore Wind Farm scoping report	Commencement of formal EIA scoping consultation period	<p>SFF responded to Marine Scotland's request for comments on the scoping report and its comments were addressed in the EIA Report.</p> <p>The following commercial fisheries organisations and other advisors were consulted on the scoping report but did not provide a response:</p> <ul style="list-style-type: none"> • Marine Scotland Compliance (Buckie, Fraserburgh, Scrabster and Ullapool offices); • North & East Coast Inshore Fisheries Groups; • Scottish Fishermen's Organisation.
May 2017	Moray West offshore transmission infrastructure scoping report	Additional formal EIA scoping consultation period	<p>SFF responded to Marine Scotland's request for comments on the scoping report and its comments were addressed in the EIA Report.</p> <p>The following commercial fisheries organisations and other advisors were consulted on the scoping report but did not provide a response:</p> <ul style="list-style-type: none"> • Inshore fisheries (Scottish Government); • Marine Scotland Compliance (Buckie, Fraserburgh, Scrabster and Ullapool offices); • North & East Coast Inshore Fisheries Group; • Scottish Fishermen's Organisation.
14 May 2018	SFF and Scottish White Fish Producers Association Meeting (Aberdeen)	To discuss draft FMMS in advance of the Application	The meeting and discussion points were incorporated into an updated version of the draft FMMS that was subsequently shared with SFF on 22 May 2018 in advance of the Application.

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31 May 2018	Wider commercial fisheries and offshore wind industry meeting (Dundee)	Bringing the offshore wind and fisheries sectors together	Moray West provided the attendees (including members of SFF) with a project update and participated in group discussions. As well as this Moray West had discussions on a one-to-one basis with SFF, other commercial fisheries representatives and individual fishermen at this event.
10 July 2018	EIA Report	Commencement of Original Consultation	<p>SFF responded to Marine Scotland's request for comments on the Application on 26 August 2018</p> <p>The following commercial fisheries organisations and other advisors were consulted on the EIA Report but did not provide a response:</p> <ul style="list-style-type: none"> • Marine Scotland Compliance (Buckie, Fraserburgh, Scrabster and Ullapool offices). • North & East Coast Inshore Fisheries Groups. • Scottish Fishermen's Organisation. <p>No other commercial fisheries representatives or individuals responded.</p>
1 Oct 2018	Meeting (Edinburgh)	To discuss SFF's response to the Application	<p>Moray West committed to the following:</p> <ul style="list-style-type: none"> • Continued engagement with SFF throughout the Development process and during preconstruction, construction and operation; • Issue of an indicative layout of the turbines and export cable in the future, post consent and post Contracts for Difference ("CfD") award.
23 Nov 2018	EIA Addendum Report	Commencement of EIA Addendum Consultation.	SFF responded to Marine Scotland's request for comments on the EIA Addendum Report on 11 January 2019.

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			No other commercial fisheries representatives or individuals responded the public consultation.
6 Dec 2018	SFF and SWFPA Meeting (Edinburgh)	To present the EIA Addendum Report to SFF, allowing for an opportunity to comment and ask questions prior to receiving the formal SFF response	Moray West gave an overview of the Application and EIA Addendum. SFF committed to providing its response to the addendum by mid-January 2019.
11 Jan 2019	Fishermen's Meeting (Helmsdale and Wick)	Moray West engagement meetings with fishing vessel owners of the Reliant CY799 and Southern Belle WK25	Moray West updated the fishermen with the latest project developments / timelines and committed to future engagement (e.g. through NtMs) throughout the Development project. SFF attended both meetings and contributed to discussions at both meetings.
15 Jan 2019	Wider commercial fisheries and offshore wind industry meeting (Dundee)	Bringing the offshore wind and fisheries sectors together	Moray West provided the attendees (including members of SFF) with a project update and participated in group discussions. As well as this Moray West had discussions on a one-to-one basis with SFF, other commercial fishermen representatives and individual fishermen at this event.

5.9.10 To mitigate concerns raised, SFF will be consulted on conditions requiring the Company to prepare, consult and adhere to a CoP, CMS, DSLP, VMP, NSP, CaP, PEMP and FMMS.

5.10 Sports Scotland

5.10.1 Sports Scotland noted that the area is used by a range of sports businesses and that the Company should engage with Mountaineering Scotland and other sports bodies in regards to the potential impacts at Redhythe Point.

5.11 The Joint Radio Company Limited ("JRC")

5.11.1 JRC did not foresee any potential problems arising from the Development, based on known interference scenarios. However, it stated that if any details change, particularly the disposition or scale of the WTGs, then it would be necessary for it to re-evaluate the proposal.

6 Representations from other organisations and members of the public

- 6.1 Three organisation representations and four public representations were received, five of these objected to the Development.
- 6.2 Wick Harbour
- 6.2.1 Wick Harbour submitted a representation in support of the Application due to the potential for job creation. Wick Harbour requested to become a consultee for future projects that are close to the port.
- 6.3 Mountaineering Scotland
- 6.3.1 Mountaineering Scotland stated that the EIA Report had omitted to assess the impacts on the landfall works on Redhythe Point and “the Widow” sites used by various outdoors centres.
- 6.3.2 Mountaineering Scotland welcomed the Company’s decision to remove Sandend beach from the plans and acknowledged that views of the surfing community had been taken into account and accommodated.
- 6.3.3 The Company responded to Mountaineering Scotland stating that viable locations had been identified on the boundary between Redhaven and Skedam Cliff. Mountaineering Scotland raised concerns regarding the close proximity of the areas of “the Widow” of 500 metres and 700 metres respectively.
- 6.3.4 The Company confirmed that the area of concern is outside the marine licence area for the cable landfall and that there would therefore be no direct effects on the climbing area. The Company stated that the CaP will confirm the location of the landfall site and installation techniques. Approval of working methods will be sought from Aberdeenshire Council and SNH to avoid unacceptable impacts within the Cullen and Stakeness Coast SSSI where the climbing area is located.
- 6.3.5 Mountaineering Scotland requested to be consulted on plans that will be requested by the potential OfTI marine licence. Furthermore, Mountaineering Scotland requested that it be included in conversations on the choice of the landfall area and on potential impacts on the rock climbing community.
- 6.4 Caithness Wind Farm World Council for Nature
- 6.4.1 Caithness Wind Farm World Council for Nature responded to the Original Consultation with enquiries relating to information within the Application documentation and requirements for public notice. The enquiry was forwarded onto the Company and no formal objection was received.
- 6.5 Three public representations raised an objection related to the landfall area of the Development being Redhythe Point. The main concerns raised were

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with regards to the onshore impacts on the sea cliff as a result of construction work and how these could impact rock climbers.

- 6.6 A member of the public objected to the Development based on the impacts of the landfall works on Sandend beach. The individual also stated that the EIA Report did not include onshore impacts of landfall works on the bay area.

7 Advice from third parties

- 7.1 Marine Scotland-Licensing Operations Team (“MS-LOT”) sought advice from the Marine Analytical Unit (“MAU”) on the Application and from Marine Scotland Science (“MSS”) on the Application, EIA Addendum Report, PVA Report, GBBG Report and consultation responses. MSS provided advice as follows and also provided expertise in completing the Appropriate Assessment (“AA”).

7.2 Marine Mammals

- 7.2.1 Overall, MSS agreed with SNH comments on marine mammals. However, MSS advised that the Company would run the noise modelling with a 1% conversation factor to ensure a precautionary approach is followed. MSS advised that precaution was built in to other aspects of the model.

- 7.2.2 Regarding the EIA Addendum Report, MSS noted the inclusion of results of the noise modelling conducted with 1% conversion factor and agreed that the impacts on marine mammals due to noise are not significant in EIA terms. MSS noted that even though some scenarios for minke whales have a large effect zone, these are very unlikely scenarios and an EPS for injury would be a precautionary measure.

7.3 Ornithology

- 7.3.1 MSS noted that the technical appendix 10.1A ‘Baseline Data Decision Support Flow Charts and use of a single year’s baseline survey’ was missing from the EIA Report. The absence of this appendix did not allow a full review of the process of the assessment on the EIA Report conclusions on the Development’s impacts on seabirds.

- 7.3.2 MSS agreed with SNH and RSPB comments on: collision risk modelling and the choice of avoidance rates; lack of clarity of the method used to calculate displacement effects; and on the PVA scenarios run.

- 7.3.3 In addition, MSS agreed with SNH’s advice in relation to the lack of sufficient information on the manner in which the Development would affect the GBBG qualifying interest of the East Caithness Cliffs SPA.

- 7.3.4 As regards the EIA Addendum Report, MSS agreed with SNH’s conclusions on the effects of the Development on kittiwake. MSS also stated that there was insufficient information on GBBG.

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- 7.3.5 MSS provided comments on the GBBG Report. MSS accepted the refinements applied to the collision risk modelling for the in-combination impacts of the Development with the Moray Firth Developments. MSS stated that the Company followed the apportioning method advised by SNH for the breeding season. In relation to the non-breeding season apportioning, MSS discussed the two methods proposed by the Company and concluded that the first method is more biologically accurate.
- 7.3.6 MSS was content that the Company followed the approach to the PVA modelling, advised at the scoping stage, in the GBBG Report.
- 7.3.7 MSS stated that pre-construction studies on the presence of GBBG in the Development area could provide useful data. MSS underlined that it is not clear how practical such a study could be due to the current GPS tracking technology. However, MSS also added that the evolution of this technology could allow tracking of GBBG for longer time periods.
- 7.3.8 In consideration of RSPB Scotland's response to the GBBG Report, specifically on its criticism of the PVA modelling, MSS stated that, after reviewing the model, it was appropriate.
- 7.4 Marine Fish Ecology
- 7.4.1 Whilst MSS did not disagree with the conclusions of the EIA Report, it did advise that there was not enough information on the effects of offshore development on cod. Therefore, MSS suggested that post-construction surveys should be carried out to better understand the extent to which the Development would affect cod presence at the local level across the site.
- 7.4.2 In terms of impacts on sandeel, MSS advised that if gravity bases were to be used, then further considerations should be given to micro-siting to avoid areas of suitable habitat after site characterisation has taken place.
- 7.4.3 MSS welcomes the embedded mitigation and any involvement with the EMP, MPCP, Cable Burial Risk Assessment ("CBRA") and PS.
- 7.4.4 MSS advised that the EIA Addendum Report considered all the comments MSS submitted in regards to the Original Consultation.
- 7.5 Diadromous Fish
- 7.5.1 Overall MSS agreed with the conclusion in the EIA Report in relation to diadromous fish. MSS emphasised the importance of the National Research and Monitoring Strategy for Diadromous Fish, considering that the Company did not commit to contribute to specific research.
- 7.5.2 In its advice on the EIA Addendum Report on diadromous fish, MSS stated that the information used lacked clarity in relation to salmon research and

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- EMF impacts. MSS also questioned whether salmon fisheries representatives were consulted.
- 7.5.3 The Company responded to MSS, providing clarification on the points raised and officials clarified that Fisheries Management Scotland was consulted as representatives of salmon fisheries.
- 7.5.4 MSS did not raise any issues with the responses provided.
- 7.6 Commercial Fisheries
- 7.6.1 MSS welcomed a draft copy of the FMMS. MSS underlined that the Company failed to address the need for a resolution mechanism for when construction vessels cause damage to static gear.
- 7.6.2 MSS also noted the absence of any post-construction monitoring programmes to validate the assumption that fleets would regain access to the site after the end of construction.
- 7.6.3 Concerning potential cumulative impacts that could arise during construction, MSS suggested that, as the construction schedule is presented, there should be further discussion with the fishing industry to limit the impacts on the nomadic scallop fleet.
- 7.6.4 In the EIA Addendum Report, the Company responded to MSS concerns on post-construction monitoring, stating that Marine Scotland already possessed the tools to monitor fisheries operations post-construction. MSS stated that Marine Scotland conducting certain monitoring of fishing activities would not abrogate the Company of responsibility to validate the assumptions made in the EIA Report.
- 7.7 Benthic Ecology
- 7.7.1 With regard to the Development's impacts on the benthic environment, MSS focused on the proposed worst case scenario of using of gravity bases and the proposal to use open cut-trenching for the export cable route.
- 7.7.2 MSS advised that there would be a need for further surveys and mitigation if gravity bases were to be used. MSS also stated that HDD would be the preferred method for export cable landfall installation.
- 7.7.3 Concerning the Company's proposal to leave the cables in situ after decommissioning, MSS advised that the Company would carry out periodic inspections to ensure that no cable parts had become exposed.
- 7.7.4 A telephone call was organised with the Company, MSS benthic advisor and MS-LOT, to discuss the comments on benthic ecology. During this telephone call, it was agreed that further surveys and mitigation should be in place in case gravity bases were to be chosen as foundation structures.

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- 7.7.5 MSS was satisfied with the content of the EIA Addendum Report, and reiterated that even although certain comments were addressed during these telephone conversations, these comments remain relevant.

7.8 Physical Processes

- 7.8.1 MSS agreed with the model used during the assessment and the results of the EIA Report.

7.9 Socio-economics

- 7.9.1 MAU stated that the Company had provided a comprehensive socio-economic baseline included in the EIA Report related to the socio-economic impact assessment of the Development. However, the assessment lacked evidence of how the main socio-economic indicators would change as a result of the Development. Moreover, MAU advised that the EIA Report failed to provide further evidence for the estimates of employment and GVA impacts presented. Therefore, MAU could not provide final advice due to the lack of evidence in the EIA Report.

- 7.9.2 MAU also stated that the assessment only focused on a minimal number of indicators, which did not give enough understanding of the social impacts of the Development.

- 7.9.3 The Company submitted an official response to MAU and provided commercially sensitive data to ensure that MAU could formulate final advice. The Company also stated that the number of indicators was limited to those aspects that were included in the scoping opinion as needing further assessment.

- 7.9.4 In response, MAU stated that, following review of the evidence provided, the Company's approach on the assessment of GVA and employment impacts provided greater clarity and confidence in the results within the EIA Report. In addition, MAU welcomed the Company's initiative to engage and develop a local supply chain for the Development, therefore increasing the potential to have higher GVA and employment.

7.10 Summary

- 7.10.1 Scottish Ministers have considered the advice provided in reaching their decision.

8 Public Local Inquiry("PLI")

- 8.1 Scottish Ministers did not require a PLI to be held.

9 The Scottish Ministers Considerations

9.1 Environmental Matters

- 9.1.1 Scottish Ministers are satisfied that an environmental impact assessment has been carried out. Environmental information including the EIA Report has been produced and the applicable procedures regarding publicity and consultation laid down in regulations have been followed. The environmental impacts of the Development have been assessed and the Scottish Ministers have taken the environmental information into account when reaching their decision.
- 9.1.2 The Scottish Ministers are satisfied that the Company, when formulating its proposal to construct the generating station, had regard to the desirability of preserving natural beauty, of conserving flora, fauna, and geological and physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic, or archaeological interest.
- 9.1.3 The Scottish Ministers have had regard to the desirability of the matters mentioned in the previous paragraph and the extent to which the Company has done what it reasonably could to mitigate the effects of the Development on those features, and are satisfied that the Company has done what it reasonably could with regard to mitigation.
- 9.1.4 The Scottish Ministers have considered fully and carefully the Application, EIA Report, RIAA, PVA Report, EIA Addendum Report, GBBG Report and all relevant representations from consultees, MSS and third parties .

9.2 Main Determinative Issues

- 9.2.1 The Scottish Ministers, having taken account of all relevant information, consider that the main determining issues are:
- The extent to which the Development accords with and is supported by Scottish Government policy and the terms of the NMP and relevant local development plans;
 - Renewable energy generation and associated policy benefits;
 - Economic impacts; and
 - The significant effects of the Development on the environment, which are in summary:
 - Impacts on marine mammals and seabirds including impacts on European sites and European offshore marine sites;
 - Impacts on commercial fisheries;
 - Impacts on cultural heritage;
 - Impacts on seascape, landscape and visual amenity; and
 - Impacts on aviation.

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9.3 Scottish Government Policy Context

9.3.1 The NMP, formally adopted in 2015, and recently reviewed in Spring 2018, provides a comprehensive statutory planning framework for all activities out to 200nm. Scottish Ministers must take authorisation and enforcement decisions, which affect the marine environment, in accordance with the NMP.

9.3.2 Of particular relevance to this proposal are:

- Chapter 4 policies ‘GEN 1-21’, which guide all development proposals;
- Chapter 6 Sea Fisheries, policies ‘FISHERIES 1-3’;
- Chapter 11 Offshore Wind and Marine Renewable Energy, policies ‘RENEWABLES 1, 3-10’;
- Chapter 12 Recreation and Tourism, policies ‘REC & TOURISM 2 and 6’;
- Chapter 13 Shipping, Ports, Harbours and Ferries, policies ‘TRANSPORT 1 and 6’;
- Chapter 14 Submarine Cables, policies ‘CABLES 1, 2 and 5’; and
- Chapter 15 Defence, policy ‘DEFENCE 1’.

9.3.3 The Development will contribute to Scotland’s renewable energy targets and will provide wider benefits to the offshore wind industry which are reflected within Scotland’s Offshore Wind Route Map and the National Renewables Infrastructure Plan (“NRIP”). Offshore wind is seen as an integral element in Scotland’s contribution towards action on climate change. The development of offshore wind also represents one of the biggest opportunities for sustainable economic growth in Scotland for a generation. Scotland’s ports and harbours present viable locations to service the associated construction and maintenance activities for offshore renewable energy.

9.3.4 Scottish Planning Policy 2014 (“SPP”) sets out the Scottish Government’s planning policy on renewable energy development. Efficient supply of low carbon and low cost heat and generation of heat and electricity from renewable energy sources are vital to reducing greenhouse gas (“GHG”) emissions and can create significant opportunities for communities. Renewable energy also presents a significant opportunity for associated development, investment and growth of the supply chain, particularly for ports and harbours identified in the NRIP. Communities can also gain new opportunities from increased local ownership and associated benefits.

9.3.5 Whilst the SPP makes clear that the criteria against which applications should be assessed will vary depending upon the scale of the development and its relationship to the characteristics of the surrounding area, it states that these are likely to include: impacts on landscapes and the historic environment; ecology (including birds, mammals and fish); biodiversity and nature conservation; the water environment; communities; aviation;

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telecommunications; noise; shadow flicker and any cumulative impacts that are likely to arise. It also makes clear that the scope for the development to contribute to national or local economic development should be a material consideration when considering an application.

9.3.6 Scotland's National Planning Framework 3 ("NPF3") sets out the ambition for Scotland to move towards a low carbon country, placing emphasis on the development of onshore and offshore renewable energy. It recognises the significant wind resource available in Scotland, and reflects targets to meet at least 30% of overall energy demand from renewable sources by 2020 including generating the equivalent of at least 100% of gross electricity consumption from renewables with an interim target of 50% by 2015. It also identifies targets to source 11% of heat demand and 10% of transport fuels from renewable sources by 2020.

9.3.7 NPF3 aims for Scotland to be a world leader in offshore renewable energy and expects that, in time, the pace of onshore wind development will be overtaken by the development of marine energy including wind, wave and tidal power.

9.4 Impacts of the Development on the environment

9.4.1 *Impacts on marine mammals, seabirds, European sites and European offshore marine sites*

9.4.1.1 The Habitats Regulations require Scottish Ministers to consider whether the proposed Development would be likely to have a significant effect on a European site or European offshore marine site (either alone or in combination with other plans or projects), as defined in the Habitats Regulations.

9.4.1.2 Owing to SNH's view that the Development is likely to have a significant effect on the qualifying interests of the Moray Firth SAC, Dornoch Firth and Morrich More SAC, East and North Caithness Cliffs SPAs, Buchan Ness to Collieston Coast SPA, Troup, Pennan and Lion's Head SPA and Moray Firth pSPA, MS-LOT, on behalf of the Scottish Ministers, as the "competent authority", was required to carry out an AA.

9.4.1.3 For marine mammals species, the main impact of the Development would be underwater noise from piling, underwater noise from construction and decommissioning activities and collision with vessels during the construction phase and the operational and maintenance phase.

9.4.1.4 For the SAC qualifying interests, namely bottlenose dolphin and harbour seal, SNH advised that there would be no adverse effect on the integrity of the above SACs. The AA considered the conservation objectives, the populations at the sites, the predicted levels of effect and population consequences, the precaution in the assessment methods and the advice from SNH. Scottish Ministers concluded that the Development, subject to the

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application of conditions, would not adversely affect the site integrity of the Moray Firth SAC with respect to bottlenose dolphin and the Dornoch Firth and Morrich More SACs, with respect to harbour seal, either alone or in-combination with the Moray Firth Developments. The AA provides detail on the noise propagation modelling and population modelling undertaken to inform the assessment.

9.4.1.5 For bird species, the main impacts come from either collision and/or displacement and barrier effects. SNH considered that there would be a likely significant effect (“LSE”) as follows:

- East Caithness Cliffs SPA – kittiwake, GBBG, guillemot, razorbill, herring gull and fulmar;
- North Caithness Cliffs SPA – kittiwake, guillemot, razorbill, puffin and fulmar;
- Buchan Ness to Collieston Coast SPA – kittiwake, herring gull, guillemot and fulmar;
- Troup, Pennan and Lion’s Head SPA – herring gull, kittiwake, guillemot, razorbill and fulmar;
- Moray Firth pSPA – all species.

9.4.1.6 After receiving information provided by the Company, SNH objected to the Development on 7 September 2018. SNH’s objection was on the basis that the Development, in-combination with the Moray Firth Developments, would have an adverse effect on site integrity for kittiwake as a qualifying interest of the East and North Caithness Cliffs SPAs. Collision risk was identified as the key impact. SNH also advised that there was insufficient evidence to conclude no adverse effect on site integrity for GBBG, guillemot and razorbill as qualifying interests of the East Caithness Cliffs SPA.

9.4.1.7 As a result of the EIA Addendum Report, SNH advised that due to changes to the Development, including the reduction of the operational life from 50 to 25 years, it could conclude there would be no adverse effect on the site integrity of the East Caithness Cliffs SPA with respect to common guillemot and razorbill. On 2 April 2019, SNH advised that the Development, in-combination with the Moray Firth Developments, would have an adverse effect on the integrity of East Caithness Cliffs SPA with respect to GBBG and kittiwake. SNH advised that if s.36 consent was granted then pre-construction monitoring should be undertaken to understand the movements of adult GBBG recorded in the Development site during the breeding season.

9.4.1.8 RSPB Scotland also objected to the Application due to in-combination effects with the Moray Firth Developments leading to an adverse effect on the site integrity of East Caithness Cliffs, North Caithness Cliffs, Troup, Pennan and Lion’s Heads SPAs with respect to kittiwake. RSPB Scotland raised concerns regarding the assessment of impacts on GBBG, herring gull, guillemot, razorbill and puffin. RSPB Scotland advised that gannet should be

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included in the assessment. However, this was not advised by SNH through the scoping exercise or HRA screening exercise. On 11 January 2019, RSPB Scotland, in response to the EIA Addendum Report, maintained its objection and highlighted its particular concern with regard to predicted impacts on kittiwake. On 2 April 2019, RSPB Scotland advised that the Development, in combination with Moray Firth Developments, would have an adverse effect on the integrity of East Caithness Cliffs SPA with respect to GBBG.

- 9.4.1.9 The AA considered the conservation objectives, the populations at the sites, the predicted levels of effect and population consequences, the precaution in the assessment methods and the advice from SNH. Scottish Ministers concluded that there will be no adverse effect on the site integrity of the Buchan Ness to Collieston Coast SPA, East Caithness Cliffs SPA, North Caithness Cliffs SPA, Troup, Pennan and Lion's Head SPA, Moray Firth pSPA, Moray Firth SAC or Dornoch Firth and Morrich More SAC (where each SAC, SPA or pSPA is taken as a whole) from the Development either in isolation or in combination with other plans or projects.
- 9.4.1.10 In reaching their conclusion, Scottish Ministers have given considerable weight to SNH's advice. The methods advised by SNH through scoping, and additional information requested by SNH, have been fully incorporated into the AA. As such, divergence from SNH advice is limited to differing conclusions in relation to site integrity for kittiwake at East Caithness Cliffs SPA and North Caithness Cliffs SPA and GBBG at East Caithness Cliffs SPA. In reaching a different conclusion, Scottish Ministers consider that the level of impact being adverse to site integrity is a subjective opinion. In reaching their own conclusions, Scottish Ministers have taken account of the entire context of this assessment, in particular 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, Scottish Ministers consider the levels of assessed impact to be reasonable and are convinced that there will be no adverse impacts on site integrity of any of the SACs, SPAs or the pSPA considered in this AA.
- 9.4.1.11 Scottish Ministers are currently in the process of identifying a suite of new marine SPAs in Scottish waters. In 2014, advice was received from the Statutory Nature Conservation Bodies ("SNCBs") on the sites most suitable for designation and at this stage they became draft SPAs ("dSPAs"). Once Scottish Ministers have agreed the case for a dSPA to be the subject of a public consultation, the proposal is given the status of pSPA and receives policy protection, which effectively puts such sites in the same position as designated sites, from that point forward until a decision on classification of the site is made.
- 9.4.1.12 It is not a legal requirement under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna or flora ("the Habitats Directive") or the Habitats Regulations for the AA to assess the implications of the Development on the pSPA. Nevertheless, the AA includes an

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assessment of implications upon this site in accordance with domestic policy. Scottish Ministers are required to consider article 4(4) of Council Directive 2009/147/EC on the conservation of wild birds (“the Birds Directive”) in respect of the pSPA. The considerations under article 4(4) of the Birds Directive are separate and distinct to the considerations which must be assessed under this Habitats Directive assessment but they are, nevertheless, set out within the AA.

- 9.4.1.13 SNH advised that the Development in-combination with the Moray Firth Developments would not adversely affect the integrity of the Moray Firth pSPA. The completed AA came to the same conclusion.
- 9.4.1.14 Considering article 4(4) of the Birds Directive, Scottish Ministers concluded that the Development will not cause pollution or deterioration of habitats and any disturbance will be negligible.
- 9.4.1.15 In accordance with regulation 50 of the Conservation (Natural Habitats, &c.) Regulations 1994, and regulation 65 of the Conservation of Habitats and Species Regulations 2017, the Scottish Ministers will review their decision authorising the Development as soon as reasonably practicable following the formal designation of the pSPA. If required, this will include a supplementary AA being undertaken concerning the implications of the Development on the site as designated (as the site is currently a pSPA, the conservation objectives are currently in draft form; the conservation objectives will be finalised at the point at which the site is designated). If the conservation objectives, site boundary and qualifying features do not change when the site becomes designated, then a further AA may not be required as the effects of the Development have been fully considered in the current AA.
- 9.4.1.16 Conditions requiring the Company to prepare, consult on and adhere to a DP, CMS, EMP, PS, VMP, and CaP have been attached to the s.36 consent to mitigate these concerns.
- 9.4.1.17 Scottish Ministers consider that, having taken into account the information provided by the Company, the responses of the consultative bodies, and having regard to the conditions attached, there are no outstanding concerns in relation to the impact of the Development on marine mammals, seabirds, European sites or European offshore marine sites which would require consent to be withheld.

9.5 *Impacts on commercial fisheries*

- 9.5.1 Minor and negligible significant effects were identified by the Company on several commercial fisheries throughout the lifespan of the Development.
- 9.5.2 SFF responded on behalf of its members, objecting to the Development. SFF objected to aspects of the assessment presented in the EIA Report, in relation to loss of access to fishing grounds during all phases of the works, the socio-economic assessment of impacts of potential losses to the fishing

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industry, the absence of a cable plan, restoration of the seabed post development, the impacts on squid and scallop fishing and spawning grounds for herring. In response to the EIA Addendum Report, SFF maintained its objection stating that the removal of the Model 4 WTG from the design had a negative effect as it allowed the Company to install 85 WTGs instead of 62 WTGs.

- 9.5.3 Conditions requiring the Company to prepare, consult and adhere to a FMMS and PEMP, which will include monitoring in relation to commercial fisheries, and to participate in the Moray Firth Commercial Fisheries Working Group (“MFCFWG”), as well as the requirement for a CBRA have been attached to the s.36 consent to mitigate these concerns.
- 9.5.4 Scottish Ministers have taken account of the terms of the NMP in relation to SFF’s concerns. Conditions requiring the Company to prepare, consult on and adhere to a FMMS and PEMP (to include monitoring of commercial fisheries) and CaP will be attached to the s.36 consent and marine licences. A condition requiring a Fisheries Liaison Officer (“FLO”) to establish and maintain effective communications between the Company, its contractors and sub-contractors, and fishermen and other users of the sea during the construction of the Development will be added to the s.36 consent. Conditions to require the Company to participate in the MFCFWG, and the ScotMER, will also be attached to the s.36 consent and marine licences to mitigate concerns regarding commercial fisheries.
- 9.6 *Impacts on seascape, landscape and visual amenity*
- 9.6.1 SLVIA was undertaken for the Development and in-combination with the Moray Firth Developments. The Development, in isolation, identified low to moderate significant impacts on the coastal character of Caithness, north east Sutherland and the Highlands, spanning a section of coast roughly 60km in length. Low to medium significant impacts resulting from aviation and navigation lighting on visual amenity were assessed as concentrated on the coastal areas between Wick and Navidale, largely due to the relatively dark coastal landscape and sea skyline. Low to medium significant cumulative impacts were identified within the Highlands and in some instances the A9/A99, where, when visibility is very good or excellent, the Development can be seen in context of the Moray Firth Developments. Along the Moray Coast, low to medium significant impacts were identified where visibility is excellent.
- 9.6.2 SNH objected to the Development due to the cumulative impacts on sensitive landscape and in particular the distinctive landscape character of the East Sutherland coast, including both day time and night time impacts. SNH advised that the proposed reduction in turbine height (by the removal of the largest turbine design), creates some improvement with respect to cumulative visual effects. SNH also welcomed the proposed alteration to the site boundary within the EIA Addendum Report to reduce linear extent of the Development. However, the Company has since withdrawn this proposal.

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- 9.6.3 The Highland Council stated that the Development is likely to have visual impacts but raised no objection due to the likely positive effects on the local economy and jobs.
- 9.6.4 FSDCC objected to the Development with regards to the landfall area for the export cable which was originally to be sited at the Sandend beach area. The Company has removed Sandend Beach and all potential landfall locations to the west towards Findlater Castle from the design. Investigations for the final location are ongoing.
- 9.6.5 There were four objections from public representatives. Primary concerns raised included the location of cable landfall areas and the impact on the integrity of the sea cliff and risks to climbers at Redhythe Point. The Company will continue to engage with Mountaineering Scotland and the climbing community about the location of landfall and arrangements for access.
- 9.6.6 The Company has removed the largest wind turbine design to mitigate impacts on seascape, landscape and visual amenity.
- 9.6.7 Conditions requiring the Company to prepare and consult on and adhere to a DSLP, LMP, DS, PEMP, CoP and CMS have been added to the s.36 consent and OfTI marine licence to mitigate concerns regarding seascape, landscape and visual amenity.
- 9.6.8 Scottish Ministers consider that, having taken into account the information provided by the Company, the responses of the consultative bodies and the public representations, and having regard to the conditions attached, there are no outstanding concerns in relation to the impact of the Development on seascape, landscape and visual amenity which would require consent to be withheld.
- 9.7 *Impacts on cultural heritage*
- 9.7.1 Minor adverse effects on marine assets were identified as a result of the Development in isolation and were not considered significant in EIA terms.
- 9.7.2 Cumulative impacts on marine archaeology assets were considered in combination with the Beatrice Offshore Wind Farm export cable route and the Caithness Moray cable where there are spatial overlaps with the Development. Cumulative impacts were considered to be minor to negligible on marine archaeology assets.
- 9.7.3 The Highland Council did not raise any objection to the Development and no comment with regards to marine assets or cultural heritage was made.
- 9.7.4 HES did not raise an objection to the Development and was content that there are no assets within the Development Local Study Area that are subject to statutory protection. HES considered that, with the implementation of the

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embedded mitigation measures, there would not be any adverse effects that would raise issues of national interest.

9.7.5 Conditions requiring the Company to prepare, consult on and adhere to a PAD have been added to the s.36 consent.

9.7.6 Scottish Ministers consider that, having taken into account the information provided by the Company, the responses of the consultative bodies and the public representations, and having regard to the conditions attached, there are no outstanding concerns in relation to the impact of the Development on cultural heritage which would require consent to be withheld.

9.8 *Impacts on aviation and defence*

9.8.1 The EIA Report concluded that there would be significant adverse impacts on military and aviation receptors as a result of the Development, in isolation, which would have major significant effects on NATS (En Route) Public Limited Company (“NERL”), Allanshill PSR and RAF Lossiemouth PSR. Helicopter approach procedures to offshore installations, Wick Airport approach procedures and minimum safe altitude requirements were also assessed as significant. Mitigation in the EIA Report, to be agreed in discussion with stakeholders, could reduce the effects so as to render them not significant. No further assessment with respect to cumulative effects was required, due to the conclusion that the impact on any aviation receptor is a standalone effect.

9.8.2 MOD submitted an objection to the Development due to unacceptable interference with ATC Radar at RAF Lossiemouth. MOD requested that the turbines should be fitted with aviation lighting in accordance with Article 219 of the Air Navigation Order and that MOD safeguarding should be consulted and notified about the progress of planning applications and submissions to verify that there would be no adverse effects to its interests. MOD maintained its objection in response to the EIA Addendum Report adding that the proposed variation of the site boundary would cause unacceptable interference with to the PAR located at RAF Lossiemouth. The Company subsequently withdrew the proposed variation to the site boundary and four consent conditions were agreed which enabled MOD to lift its objection.

9.8.3 NATS submitted an objection to the Development due to unacceptable impacts on aviation radar.

9.8.4 The Company held discussions with NATS and subsequently entered into an agreement regarding consent conditions which enabled NATS to withdraw its objection.

9.8.5 Conditions requiring the Company to prepare, consult on and adhere to the ATC Radar Mitigation Scheme, LMP, DSLP and MOD notification prior to commencement of works have been attached to the s.36 consent.

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9.8.6 Scottish Ministers consider that, having taken into account the information provided by the Company, the responses of the consultative bodies, and having regard to the conditions attached, there are no outstanding concerns in relation to the impact of the Development on aviation and defence which would require consent to be withheld.

9.9 *Renewable energy generation and associated policy benefits*

9.9.1 The key environmental benefit of the Development is to offset GHG emissions that might otherwise be produced by other means of electricity generation. Over the lifetime of the Development, carbon emissions from fabrication, construction, operation and decommissioning will be offset by the net reduction in emissions through low carbon wind energy technology.

9.9.2 There are multiple benefits associated with the Development, including:

- a) The reduction in emissions of carbon dioxide, nitrogen oxides, and sulphur dioxide during the operational phase equivalent to the annual emissions of carbon dioxide, nitrogen oxides, and sulphur dioxide from traditional thermal generation sources;
- b) Improvements to the security of the UK's domestic energy supply through increased energy generation;
- c) Reduction in the reliance on fossil fuels; and
- d) Providing a contribution towards the ambitious Scottish, UK and European Union renewable energy targets.

9.9.3 The proposed installed capacity of the Development will be around 850MW however, the exact value is dependent on the nominal capacity and number of WTGs installed and cannot yet be confirmed. Based on the Scottish Government's published Renewable Electricity Output Calculator,¹ it is estimated that, depending on the fuel type displaced, up to 520,476 tonnes of carbon dioxide will be saved each year. It is estimated that the Development will generate enough electricity each year to meet the needs of the equivalent of 569,130 Scottish households per year.

9.10 *Economic benefits*

9.10.1 SPP advises that economic benefits are material issues which must be taken into account as part of the determination process. SPP also confirms the Scottish Ministers' aim of achieving a thriving renewables industry in Scotland. Further, national policy and strategies, such as NPF3 and The Scottish Energy Strategy: The Future of Energy in Scotland (Scottish Government, 2017), support the role of renewable energy development in

¹ <https://www.gov.scot/Topics/Statistics/Browse/Business/Energy/onlinetools/ElecCalc> (Last accessed: 9 May 2019).

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achieving socio-economics benefits and supporting the growth of the low carbon economy. The EIA Report reported that the Development would support the development of the domestic renewable energy industry and offset GHG emissions.

- 9.10.2 Whilst impacts on tourism were scoped out of the EIA Report, the Company assessed socio-economic impacts related to the offshore elements of the Development Local Study Area and across Scotland.
- 9.10.3 The Company has estimated that net additional employment from the Development is estimated to be between 220 FTE (“Full Time Equivalent”) and 840 FTE direct and indirect and induced construction jobs at a Local Study Area level, dependant on the impact scenario considered. For the rest of Scotland, net additional employment from the Development was estimated to be between 1080 FTE and 3080 FTE direct, indirect and induced construction jobs. The Company estimates levels of between ten million pounds and £50 million direct and indirect GVA per annum at a Local Study Area level, and between £50 million and £180 million for Scotland.
- 9.10.4 During the operation and maintenance phase, the Company estimates that the net additional employment from the Development would represent a new GVA at a Local Study Area of ten million pounds per annum under both low and high scenarios, and between £50 million and £180 million per annum for Scotland as a whole. The Company estimates that between 30 and 60 FTE jobs would be supported in total within the Local Study Area and between 100 and 160 FTE jobs for Scotland.
- 9.10.5 The Company estimates that during the decommissioning phase the number of jobs will be equal to or less than those estimated for the construction phase.
- 9.10.6 The Highland Council stated that despite detrimental impact on the open and panoramic sea views recognised in the assessment of Highlands SLAs the economic benefits offered, namely the positive effects on the local economy and the amount of jobs to be created by the Development, outweighed any adverse impacts.
- 9.10.7 In its consultation response, SFF stated that the EIA Report did not fully consider the potential negative socio-economic impacts on commercial fisheries and disagreed this would have only minor impacts and contended this given the potential length of disturbance to and displacement of fishing grounds.
- 9.10.8 MAU advised that the socio-economic assessment provided a comprehensive baseline. However, the assessment lacked evidence of the effects of the Development and failed to provide evidence for estimates for employment and GVA presented. The Company responded to MAU and provided commercially sensitive data which enabled MAU to have more confidence in agreeing with the results provided in the EIA Report.

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- 9.10.9 The Scottish Ministers consider that there is sufficient information regarding the socio-economic impacts of the Development to inform their decision.

10 The Scottish Ministers' Determination

- 10.1 The Scottish Ministers are satisfied that an environmental impact assessment has been carried out, and that the applicable procedures regarding publicity and consultation in respect of the Application have been followed.
- 10.2 When formulating proposals for the construction of the proposed generating station, the Company must comply with paragraph 3 of Schedule 9 to the Electricity Act 1989. Paragraph 3(1)(a) of Schedule 9 requires the Company in formulating such proposals to have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest. Paragraph 3(1)(b) requires the Company to do what it reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects. Under paragraph 3(3) of that Schedule, the Company must also avoid, so far as possible, causing injury to fisheries or to the stock of fish in any waters.
- 10.3 Under paragraph 3(2) of Schedule 9, the Scottish Ministers must have regard to the desirability of the matters mentioned in paragraph 3(1)(a) of that Schedule and the extent to which the Company has complied with its duty under paragraph 3(1)(b). Under paragraph 3(3) the Scottish Ministers must avoid, so far as possible, causing injury to fisheries or to the stock of fish in any waters.
- 10.4 In considering the Application, the Scottish Ministers have had regard to the desirability of the matters mentioned in paragraph 3(1)(a) of Schedule 9 and the extent to which the Company has complied with its duty under paragraph 3(1)(b). Ministers consider that the Company has done what it reasonably can to mitigate the effect of the proposed Development on the matters mentioned in paragraph 3(1)(a). The Scottish Ministers are content that the requirements of paragraph 3 of Schedule 9 are satisfied.
- 10.5 Scottish Ministers have weighed the impacts of the proposed Development, and the degree to which these can be mitigated, against the economic and renewable energy benefits which would be realised. Scottish Ministers have undertaken this exercise in the context of national and local policies.
- 10.6 Scottish Ministers have considered the extent to which the Development accords with and is supported by Scottish Government policy, the terms of the SPP, the NMP, local development plans and the environmental impacts of the Development, in particular: impacts on seabirds and marine mammals (including impacts on European sites and European offshore marine sites),

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impacts on benthic communities, impacts on seascape, landscape and visual amenity, impacts on commercial fisheries, impacts on cultural heritage and impacts on aviation and defence. Scottish Ministers have also considered the estimated contribution made by the Development to reducing carbon dioxide emissions and the socio-economic and the renewable energy benefits of the Development.

- 10.7 Scottish Ministers are satisfied that the environmental issues have been appropriately addressed by way of the design of the Development and through mitigation measures, and that the issues which remain are, on balance, outweighed by the benefits of the Development. In particular, Scottish Ministers are satisfied that the proposal will not adversely affect the integrity of the Moray Firth, Dornoch Firth and Morrich More SACs, East Caithness Cliffs and North Caithness Cliffs SPAs, the Buchan Ness to Collieston Coast SPA, the Troup, Pennan and Lion's Head SPA and the Moray Firth pSPA.
- 10.8 Scottish Ministers have had regard to the requirements of Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds, and Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.
- 10.9 In their consideration of the environmental impacts of the Development, Scottish Ministers have identified conditions to be attached to the s.36 consent to reduce and monitor environmental impacts. These include requirements for pre-construction, construction and operational monitoring of birds, marine mammals and benthic communities, CMS, an EMP, Operation and Maintenance Programme ("OMP") and a VMP.
- 10.10 A condition requiring the appointment of an Environmental Clerk of Works ("ECoW") and defining the terms of the ECoW's appointment has been attached to the s.36 consent. The ECoW will be required to monitor and report on compliance with all consent conditions, monitor that the Development is being constructed in accordance with plans and the terms of the Application, the s.36 consent and all relevant regulations and legislation. The ECoW will also be required to provide quality assurance on the final draft versions of any plans and programmes required under the s.36 consent.
- 10.11 Under section 36B of the Electricity Act 1989, the Scottish Ministers may not grant a consent in relation to any particular offshore generating activities if they consider that interference with the use of recognised sea lanes, essential to international navigation is likely to be caused by the carrying on of those activities or is likely to result from their having been carried on. The Scottish Ministers, when determining whether to give consent for any particular offshore generating activities, and considering the conditions to be included in such consent, must have regard to the extent and nature of any obstruction of or danger to navigation which, without amounting to interference with the use of such sea lanes, is likely to be caused by the

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carrying on of the activities, or is likely to result from their having been carried on. In determining this consent, the Scottish Ministers must have regard to the likely overall effect (both while being carried on and subsequently) of the activities in question and such other offshore generating activities which are either already the subject of section 36 consent or activities for which it appears likely that such consents will be granted. You can be satisfied that appropriate consultation was carried out on the Application. Consultation responses were received from MCA, NLB, SFF, Wick Harbour and RYA. Concerns were raised around safety and navigation in the vicinity of the Development, and access to fishing grounds, during each phase of the Development. Any potential obstruction or danger to navigation has been addressed through specific consent conditions attached to the s.36 consent. Scottish Ministers have concluded that the Company has had regard to the potential interference of recognised sea lanes essential to international and national navigation and has discharged its responsibilities in terms of section 36B to the Electricity Act 1989.

- 10.12 Scottish Ministers are satisfied, having regard to current knowledge and methods of assessment, that this reasoned conclusion, as required under the 2017 EW Regulations, is valid.
- 10.13 Subject to the conditions set out in Annex 2, Scottish Ministers grant consent under s.36 of the Electricity Act 1989 for the construction and operation of the Moray West Offshore Wind Farm (as described in Annex 1).
- 10.14 The embedded mitigation and any additional mitigation identified in the EIA Report has been incorporated into the conditions of this s.36 consent and/or any marine licence(s) granted. The conditions also capture monitoring measures required under Regulation 22 of the 2017 EW Regulations.
- 10.15 In accordance with the 2017 EW Regulations, the Company must publicise notice of this determination and provide that a copy of this decision letter may be inspected on the Application website, in the Edinburgh Gazette and a newspaper circulating in the locality to which the Application relates is situated. The Company must provide copies of the public notices to the Scottish Ministers.
- 10.16 Copies of this letter have been sent to the public bodies consulted on the Application, including the relevant planning authorities, SNH, SEPA and HES. This letter has also been published on the [Marine Scotland Information website](#).
- 10.17 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 consent. The rules relating to

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the judicial review process can be found on [the Scottish Courts and Tribunals website](#).

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

Yours sincerely,

Zoe Crutchfield

Leader, Marine Scotland Licensing Operations Team

A member of the staff of the Scottish Ministers

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Annex 1 – Description of the Development

Annex 1 – DESCRIPTION OF THE DEVELOPMENT

The Application is for the construction and operation of an offshore energy generating station, within a maximum generating capacity of around 850 megawatts (“MW”). The offshore generating station shall comprise either:

1. No more than 85 three-bladed horizontal axis Wind Turbine Generators (WTG) each with either:

- a. a maximum rotor tip height of 230 metres (measured from HAT);
- b. a maximum rotor diameter of 195 metres;
- c. a maximum hub height of 135 metres (measured from HAT);
- d. a minimum blade tip clearance of 35 metres (measured from HAT);
- e. blade width of up to 6 metres; and
- f. a minimum spacing of 1,050 metres crosswind and 1,200 metres downwind.

or

If the rotor tip height of the WTGs exceeds 230 metres (measured from HAT), no more than 72 WTGs each with:

- a. a maximum rotor tip height of 265 metres (measured from HAT);
- b. a maximum rotor diameter of 230 metres;
- c. a maximum hub height of 150 metres (measured from HAT);
- d. a minimum blade tip clearance of 35 metres (measured from HAT);
- e. blade width of up to 6 metres; and
- f. a minimum spacing of 1,050 metres crosswind and 1,200m downwind

2. No more than 275km of inter-array cable;

3. Monitoring equipment, such as metocean buoys;

4. Up to 85 foundations, substructures, and associated fixtures, fittings and protections;

5. Scour and inter-array cable protection; and

6. The design of the WTG substructure will be chosen from the following options:

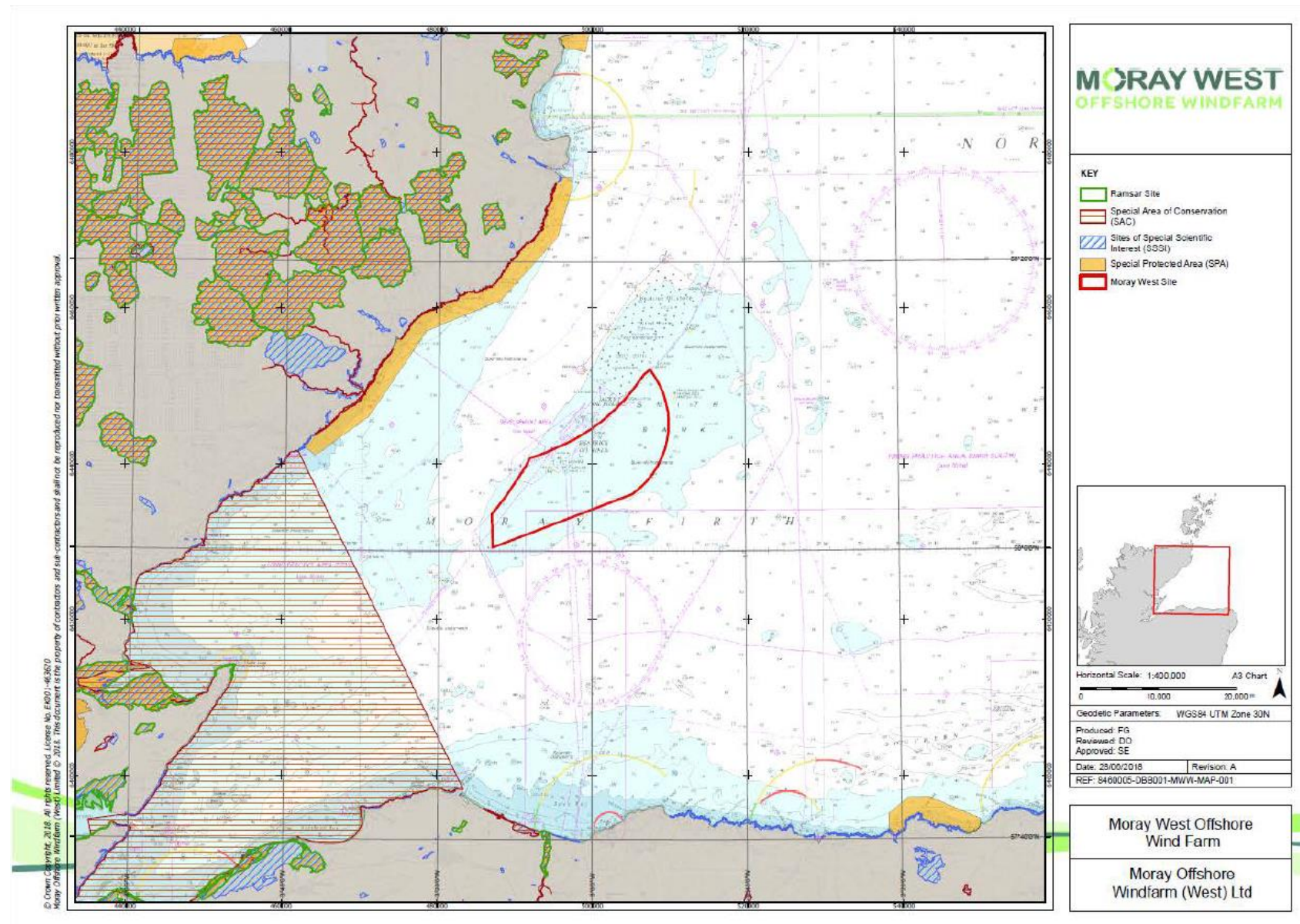
- i. Gravity base;
- ii. Monopile;
- iii. Jacket Foundation;
- iv. Suction Caisson;

All as described in the Application.

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Annex 1 – Description of the Development

Figure 1 Moray West Offshore Windfarm Site



ANNEX 2 – SECTION 36 CONSENT CONDITIONS

The consent granted under Section 36 of the Electricity Act 1989 is subject to the following conditions:

The Company must submit the requested plans as detailed in the conditions prior to the Commencement of the Development, where required, 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 the conditions or as may be required at the discretion of the Scottish Ministers. Commencement of the Development cannot take place until such approvals are granted.

The Development must, at all times, be constructed in accordance with the approved plans as updated or amended.

Any updates or amendments made to the approved plans must be submitted, in writing, to the Scottish Ministers for their prior written approval.

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.

The Company must ensure that all personnel adhere to the Scottish Marine Wildlife Watching Code, where appropriate, during all construction, operation and maintenance activities.

Part 1 – Conditions Attached to Section 36 Consent

1. Duration of the Consent

The consent is for a period of 25 years from the date of Final Commissioning of the Development.

Written confirmation of the dates of First Commissioning of the Development and Final Commissioning of the Development must be provided by the Company to the Scottish Ministers and to Aberdeenshire Council, Moray Council, the Highland Council and Scottish Ministers no later than one calendar month after these respective dates.

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 Aberdeenshire Council, Moray Council and 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 unless a Decommissioning Programme (“DP”) has been submitted to and approved in writing by the Scottish Ministers. Such approval may only be granted following consultation by the Scottish Ministers with Scottish Environmental Protection Agency (“SEPA”) and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The DP must outline measures for the decommissioning of the Development, proposals for the removal of the Development, the management and timing of the works and, environmental management provisions.

The Development must be decommissioned in accordance with the approved DP, unless otherwise agreed in writing in advance with the Scottish Ministers.

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 is not capable of being assigned, alienated or transferred otherwise than in accordance with the assignment procedure as directed by Scottish Ministers.

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

5. Redundant wind turbine generators

If one or more 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 the relevant WTG(s) 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 any redundant WTG(s) is/are 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, 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 the Application and any other supplementary and supporting information lodged in support of the Application (such as the additional environmental information (“EIA Addendum Report”), submitted by the Company on 23 November 2018, the Population Viability Analysis Report (“PVA Report”) submitted by the Company on 31 August 2018 and “the Information to Inform HRA - Great Black-Backed Gull” Report (“GBBG Report”), submitted on 18 March 2019).

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

8. Transportation for site inspections

As far as reasonably practicable, the Company must, on being given reasonable notice by the Scottish Ministers (of at least 72 hours), provide transportation to and from the site for any persons authorised by the Scottish Ministers to inspect the site.

Reason: *To ensure access to the site for the purpose of inspecting compliance with this consent.*

9. 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. Such approval may only be granted following consultation by the Scottish Ministers with Scottish Natural Heritage (“SNH”), Aberdeenshire Council, Scottish Fishermen’s Federation (“SFF”) and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. Commencement of the Development cannot take place until such approval is granted. 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 final CoP must be sent to Aberdeenshire Council, Maritime and Coastguard Agency (“MCA”), Northern Lighthouse Board (“NLB”), Moray Council and the Highland Council for information only.

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

10. **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 SNH, MCA, NLB, SFF, Aberdeenshire Council and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. Commencement of the Development cannot take place until such approval is granted.

The CMS must include, but not be limited to:

- a) Methods of construction as they relate to all aspects of the Development.
- b) 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.
- c) 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.
- d) Details of the manner in which 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 Moray Council and 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.*

11. **Piling Strategy**

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 SNH 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;

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- 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 harbour porpoise, minke whale, bottlenose dolphin, harbour seal, grey seal and Atlantic salmon.

The PS must, so far as is reasonably practicable, be consistent with the EMP, the Project Environmental Monitoring Programme (“PEMP”) and the CMS.

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

12. **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 (“DSLPL”), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, Royal Yachting Association Scotland (“RYA”), MCA, NLB, Ministry of Defence (“MOD”), Civil Aviation Authority (“CAA”), SFF, Aberdeenshire Council, Moray Council, the Highland Council, Joint Radio Company (“JRC”) and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. Commencement of the Development cannot take place until such approval is granted.

The DSLPL 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 shape file using WGS84 format;
- c) 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;
- d) The generating output of each WTG used on the site (Figure 1) and a confirmed generating output for the site overall;
- e) The finishes for each WTG (see condition **20** on WTG lighting and marking); and

- f) The length and proposed arrangements on the seabed of all inter-array cables.

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

13. Design Statement

The Company must, no later than six months prior to the Commencement of the Development, submit a Design Statement ("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 Aberdeenshire Council, Moray Council, the Highland Council, SNH, 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.*

14. Environmental Management Plan

The Company must, no later than six months prior to the Commencement of the Development, submit an Environmental Management Plan ("EMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. Commencement of the Development cannot take place until such approval is granted.

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-

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construction monitoring or data collection, and include reference to relevant parts of the CMS (refer to condition 10);

- b) Marine Pollution and Contingency Plan (“MPCP”);
- 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 the way in which these have been addressed.

The EMP must be regularly reviewed by the Company and the Scottish Ministers or Moray Firth Regional Advisory Group (“MFRAG”), 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 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.*

15. **Vessel Management Plan**

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

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; and

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

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

Reason: To mitigate the impact of vessels.

16. **Operation and Maintenance Programme**

The Company must, no later than three months prior to the Commissioning of the first WTG, 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 SNH, Aberdeenshire 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 WTG's, substructures, and inter-array cable network 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 EMP, the PEMP, the VMP, the NSP, the CaP and the LMP.

The final OMP must be sent to MCA and the Highland Council for information only.

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

17. **Navigational Safety Plan**

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

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; and
- f) Buoyage.

The Company must confirm within the NSP that they have taken into account and adequately addressed all of the recommendations of the MCA in the current Marine

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Guidance Note (“MGN”) 543, and its annexes that may be appropriate to the Development, or any other relevant document which may supersede this guidance prior to approval of the NSP.

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

18. **Emergency Response Co-operation Plan**

The Company must, no later than six months prior to the Commencement of the Development, submit an Emergency Response Co-operation Plan (“ERCoP”) for the construction, operation, maintenance and decommissioning phases of the Development, 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 and any other navigational advisors or organisations as may be required at the discretion of the Scottish Ministers. Commencement of the Development cannot take place until such approval is granted. The ERCoP should follow the MCA [template and guidance](#). The ERCoP must be developed in discussion with the MCA.

Reason: *For emergency response planning relating to the Development and requirements for Search And Rescue (“SAR”) helicopter operations.*

19. **Inter Array Cable Plan**

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

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

- a) The vessel types, location, duration and cable laying techniques for the inter array cables;
- b) The results of monitoring or data collection work (including geophysical, geotechnical and benthic surveys) which will help inform inter array cable routing;
- c) Technical specification of inter array 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 inter array cables where mechanical protection of cables laid on the sea bed is deployed; and
- f) Methodologies for inter array cable inspection with measures to address and report to the Scottish Ministers any exposure of inter array cables.

Any consented cable protection works must ensure existing and future safe navigation is not compromised. The Scottish Ministers 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 Scottish Ministers.

Reason: *To ensure all environmental and navigational issues are considered for the location and construction of the inter array cables.*

20. Lighting and Marking Plan

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

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. The LMP must also detail the navigational lighting requirements detailed in the International Association of Marine Aids to Navigation and Lighthouse Authorities (“IALA”) Recommendation O-139 or any other documents that may supersede this guidance prior to approval of the LMP.

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

21. Aviation Radar

The Company must, prior to the Commencement of the Development, submit an Air Traffic Control Radar Mitigation Scheme (“ATC Scheme”), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation on the ATC Scheme with the Ministry of Defence (“MOD”). Commencement of the Development cannot take place until such approval is granted.

The ATC Scheme is a scheme designed to mitigate the impact of the Development upon the operation of the Primary Surveillance Radar at RAF Lossiemouth (“the Radar”) and the air traffic control operations of the MOD, which is reliant upon the Radar. The approved ATC Scheme must be in place for the operational life of the Development provided the Radar remains in operation.

No WTGs forming part of the Development may become operational, unless and until all those measures required by the approved ATC Scheme to be implemented prior to the operation of the turbines, have been implemented, and the Scottish Ministers have confirmed this in writing. The Development must thereafter be operated fully in accordance with the approved ATC Scheme.

Reason: *To mitigate the adverse impacts of the Development on the Air Traffic Control Radar.*

22. MOD Notification

The Company must notify MOD, at least 14 days prior to the Commencement of the Development, in writing of the following information:

- a) the earliest date of the Commencement of the Development;

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- b) the earliest date any WTGs are brought into use;
- c) the maximum height of any construction equipment 50 metres or greater in height above mean sea level, to be used; and
- d) the maximum heights of any WTG, offshore platforms or other, temporary or permanent, offshore structures 50 metres or greater in height, above mean sea level, to be deployed or constructed.

Reason: *For aviation safety.*

23. Primary Radar Mitigation Scheme

No part of any WTG shall be erected above mean sea level until a Primary Radar Mitigation Scheme (“PRMS”) has been submitted to and approved in writing by the Scottish Ministers following consultation with NATS (En Route) Public Limited Company (“NERL”). Commencement of the Development cannot take place until such approval is granted.

No blades shall be fitted to any WTG until the technical mitigation measures set out in the approved PRMS have been implemented in accordance with its terms and the Development must thereafter be operated fully in accordance with such approved Primary Radar Mitigation Scheme.

Reason: *To mitigate adverse impact to the Allanshill radar and associated air traffic operations.*

24. Charting requirements

The Company must, prior to the Commencement of the Development, and following confirmation of the approved DSLP by the Scottish Ministers (refer to condition **12**), provide the positions and maximum heights of the WTGs, and construction equipment to the United Kingdom Hydrographic Office (“UKHO”), MOD and Defence Geographic Centre for aviation and nautical charting purposes. The Company must, within one month of the Final Commissioning of the Development, provide the coordinates accurate to three decimal places of minutes of arc for each WTG, position and maximum height of the WTGs to UKHO, MOD and Defence Geographic Centre for aviation and nautical charting purposes.

Reason: *For aviation and navigational safety.*

25. Project Environmental Monitoring Programme

The Company must, no later than six months prior to the Commencement of the Development, submit a Project Environmental Monitoring Programme (“PEMP”), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, SFF, the Highland Council and any other environmental advisors or organisations as required at the discretion of the Scottish Ministers. Commencement of the Development cannot take place until such approval is granted. 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.

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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 the Highland Council for the socio-economic receptor and MFRAG referred to in condition **26** of this consent in respect to all the other receptors listed in point a).

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, but not be limited to, the following matters:

- a) Pre-construction, construction and post-construction (if considered appropriate by the Scottish Ministers) monitoring or data collection as relevant in terms of the Application, and any subsequent monitoring or data collection for impacts on the following receptors:
 - 1. Birds, including the pre-construction monitoring of the great black-backed gull of the East Caithness SPA;
 - 2. Marine Mammals;
 - 3. Commercial Fisheries;
 - 4. Socio-economic; and
 - 5. Benthic communities.
- b) The participation by the Company to contribute to data collection or monitoring of wider strategic relevance, identified and 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, in consultation with the MFRAG 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 the MFRAG 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

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reporting and be to Marine Environmental Data and Information Network (“MEDIN”) standards.

Subject to any legal restrictions regarding the treatment of the information, the results are to be made publicly available by the Scottish Ministers, or by such other party appointed at their discretion.

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.*

26. **Regional Advisory Group**

The Company must participate in the Moray Firth Regional Advisory Group (“MFRAG”) or any successor group, established by the Scottish Ministers for the purpose of advising the Scottish Ministers on research, monitoring and mitigation programmes for, but not limited to, ornithology, marine mammals, and commercial fish. The extent and nature of the Company’s participation in the Regional Advisory Group is to be agreed by the Scottish Ministers.

Reason: *To ensure effective environmental monitoring and mitigation is undertaken at a regional scale.*

27. **Fisheries Management and Mitigation Strategy**

The Company must no later than six months prior to the Commencement of the Development, submit a Fisheries Management and Mitigation Strategy (“FMMS”), in writing, to the Scottish Ministers for their written approval, in consultation with SFF and other fisheries representatives. Commencement of the Development cannot take place until such approval is granted. The FMMS must be defined and finalised in consultation with the Moray Firth Commercial Fisheries Working Group (“MFCFWG”).

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

The FMMS must include a transit plan, which must lay out guidelines to address potential interactions with fishing activity, for vessels operating in and around the Development and transiting to the Development.

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 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. The Company must participate in and remain a member of the MFCFWG or any successor group formed to facilitate commercial fisheries dialogue.

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

28. **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 SNH,

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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 Scottish Ministers, in sufficient time for any pre-construction monitoring requirements, and remain in post until agreed by the Scottish Ministers. The terms of appointment must also be approved by the Scottish Ministers in consultation with SNH.

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 consent;
- b) Responsible for the monitoring and reporting of compliance with the consent 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 consent conditions, including but not limited to the conditions relating to and the implementation of the CMS, the EMP, the PEMP, the PS, 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.*

29. **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 and the MFCFWG). 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 14). 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, but not be limited to:

- 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 CMS and site environmental procedures;

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- 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 facilitate engagement with the commercial fishing industry.*

30. **Protocol for Archaeological Discoveries**

The Company must, no later than six months prior to the Commencement of the Development, submit a Protocol for Archaeological Discoveries (“PAD”) and a 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. 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. Commencement of the Development cannot take place until such approval is granted. The Reporting Protocol must be implemented in full, at all times, by the Company.

The final PAD and WSI must be sent to Aberdeenshire Council for information only.

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

31. **Construction Traffic Management Plan**

In the event that major offshore components require onshore abnormal load transport, the Company must, no later than six months prior to the Commencement of the Development, submit a Construction Traffic Management Plan (“CTMP”) in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with Transport Scotland 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 CTMP must include:

- a) A mitigation strategy for the abnormal loads on the trunk road network including any accommodation measures required, incorporating the removal of street furniture, junction widening, or traffic management of road based traffic and transportation associated with the construction of the Development. All construction traffic associated with the Development must conform to the approved CTMP; and
- b) Any additional signing or temporary traffic control measures deemed necessary due to the size or length of loads being delivered as a result of the Development.

Reason: *To maintain the free flow and safety of the trunk road network.*

DEFINITIONS AND GLOSSARY OF TERMS

- “AA” means the Appropriate Assessment;
- “ADD” means Acoustic Deterrent Devices;
- “Application” means the EIA Report, HRA Report and supporting documents submitted by the Company on 5 July 2018 to construct and operate an offshore generating station and transmission works, it also includes the PVA Report submitted on 31 August 2018, the EIA Addendum Report submitted on 23 November 2018 and the GBBG Report submitted on 18 March 2019;
- “ATC” means Air Traffic Control;
- “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 5 July 2018;
- “the Company” means Moray Offshore Windfarm (West) Limited (Company Number 10515140) registered at Condor House, 10 St. Paul’s Churchyard, London EC4M 8AL;
- “CRM” means collision risk modelling;
- “dSPA” means draft Special Protection Area;
- “Development” means the Moray West Offshore Wind Farm, approximately 22.5km southeast off the Caithness coastline;
- “ECOW” means Environmental Clerk of Works;
- “EIA” means Environmental Impact Assessment;
- “EIA Addendum Report” means the Environmental Impact Assessment Addendum Report submitted by the Company on 23 November 2018;
- “the EIA Addendum Consultation” mean the consultation on the EIA Addendum Report;
- “EIA Report” means Environmental Impact Assessment Report;
- “EPS” means European Protected Species;
- “Final Commissioning of the Development” means the date on which the last wind turbine generator constructed forming the Development has supplied electricity on a commercial basis to the National Grid, or such earlier date as the Scottish Ministers deem the Development to be complete;
- “First Commissioning of the Development” means the date on which the first wind turbine generator constructed forming the Development has supplied electricity on a commercial basis to the National Grid;
- “FLO” means Fisheries Liaison Officer;
- “Moray Firth Developments” means combinations of existing consents for the Moray East Offshore Wind Farm (granted in March 2014 and varied in March 2018) and the Beatrice Offshore Wind Farm (granted in March 2014);
- “FTE” means full-time equivalent;
- “GBBG” means great black-backed gulls;
- “GBBG Report” means the Information to Inform HRA – Great Black-backed Gull Report submitted on 18 March 2019;
- “the GBBG Report Consultation” means consultation on the GBBG Report;
- “GHG” means greenhouse gas;
- “GVA” means Gross Value Added;

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- “HAT” means Highest Astronomical Tide;
- “HDD” means Horizontal Directional Drilling;
- “HRA” means Habitats Regulations Appraisal;
- “HRA Report” means Habitats Regulations Appraisal Report;
- “IALA” means International Association of Marine Aids to Navigation and Lighthouse Authorities;
- “Local Study Area” means the combined local authorities of Highlands, Moray, Aberdeenshire & Aberdeen City;
- “LSE” means Likely Significant Effect;
- “MMO” means Marine Mammal Observer;
- “MW” means megawatt;
- “OEC” means Offshore Export Cable;
- “OfTI” means Offshore Transmission Infrastructure;
- “the Original Consultation” means consultation on the Application for s.36 consent, EIA Report and RIAA;
- “PAM” means passive acoustic monitoring;
- “pMPA” means Proposed Marine Protected Area;
- “pSPA” means Proposed Special Protection Areas;
- “PLI” means Public Local Inquiry;
- “PSR” means Primary Surveillance Radar;
- “PVA” means Population Viability Analysis;
- “PVA Report” means the Population Viability Analysis Report submitted on 31 August 2018;
- “the Radar” means the Primary Surveillance Radar at Leuchars Airfield;
- “RIAA” means Report to Inform the Appropriate Assessment;
- “SAC” means Special Area of Conservation;
- “SAR” means Search and Rescue;
- “ScotMER” means Scottish Marine Energy Research Programme;
- “SIDS” means Standard Instrument Departures;
- “SLVIA” means Seascape, Landscape and Visual Impact Assessment;
- “SLA” means Special Landscape Area;
- “SNCBs” means the Statutory Nature Conservation Bodies;
- “SPA” means Special Protection Area;
- “s.36” means section 36 of the Electricity Act 1989 (as amended);
- “SSC” means Suspended Sediment Concentration;
- “SSSI” means Site of Special Scientific Interest; and
- “WTG” means wind turbine generators.

Organisations and Companies

- “BT” means BT Radio Network Protection;
- “CAA” means the Civil Aviation Authority;
- “CFWG” means Commercial Fisheries Working Group;
- “FMS” means Fisheries Management Scotland;
- “FSDCC” means Fordyce, Sandend and District Community Council;

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- “MFCFWG” means the Moray Firth Commercial Fisheries Working Group;
- “MFRAG” means Moray Firth Regional Advisory Group;
- “HES” means Historic Environment Scotland;
- “HIE” means Highlands and Islands Enterprise;
- “IHO” means International Hydrographic Office;
- “JNCC” means Joint Nature Conservation Committee;
- “JRC” means Joint Radio Company Limited;
- “MAU” means Marine Scotland Marine Analytical Unit;
- “MS-LOT” means Marine Scotland Licensing Operations Team;
- “MSS” means Marine Scotland Science;
- “MCA” means the Maritime and Coastguard Agency;
- “MOD” means the Ministry of Defence;
- “Moray East” means Moray Offshore Windfarm (East) Limited;
- “Moray West” means Moray Offshore Windfarm (West) Limited;
- “NATS” means National Air Traffic Service Safeguarding;
- “NERL” means NATS (En Route) Public Limited Company;
- “NLB” means the Northern Lighthouse Board;
- “RAF” means the Royal Air Force;
- “RYA” means the Royal Yachting Association Scotland;
- “RAG” means Regional Advisory Group;
- “RTC” means River Tweed Commission;
- “RSPB Scotland” means the Royal Society for the Protection of Birds Scotland;
- “SEPA” means the Scottish Environment Protection Agency;
- “SFF” means the Scottish Fishermen’s Federation;
- “SNH” means Scottish Natural Heritage; and
- “UKHO” means United Kingdom Hydrographic Office.

Plans and Programmes

- “ATC Scheme” means Air Traffic Control Radar Mitigation Scheme;
- “CaP” means Inter Array Cable Plan;
- “CBRA” means Cable Burial Risk Assessment;
- “CMS” means Construction Method Statement;
- “CoP” means Construction Programme;
- “CTMP” means Construction Traffic Management Plan;
- “DP” means Decommissioning Programme;
- “DS” means the Design Statement;
- “DSL P” means Development Specification and Layout Plan;
- “EMP” means Environmental Management Plan;
- “ERCoP” means Emergency Response Co-operation Plan;
- “FMMS” means Fisheries Management and Mitigation Strategy;
- “LMP” means Lighting and Marking Plan;
- “MGN” means Marine Guidance Note;
- “MPCP” means Marine Pollution Contingency Plan;
- “NMP” means the National Marine Plan;

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- “NPF3” means Scotland’s National Planning Framework 3;
- “NRA” means Navigation Risk Assessment;
- “NRIP” means National Renewables Infrastructure Plan;
- “NSP” means Navigational Safety Plan;
- “OMP” means Operation and Maintenance Programme;
- “PAD” means Protocol for Archaeological Discoveries;
- “PEMP” means Project Environmental Monitoring Programme;
- “PRMS” means Primary Radar Mitigation Scheme;
- “PS” means Piling Strategy;
- “SPP” means Scottish Planning Policy 2014;
- “Transit Plan” means a plan which sets out measures to be taken to avoid or reduce the impact of vessel movement on the local fishing industry and to promote a sustainable coexistence. It will include indicative transit routes for vessels operating in and around the Development and transiting to the site from relevant ports;
- “VMP” means Vessel Management Plan; and
- “WSI” means Written Scheme of Investigation.

Legislation

- “the Birds Directive” means Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds, as amended and as codified by Directive 2009/147/EC of the European Parliament and of the Council of 30th November 2009;
- “the Electricity Act” means the Electricity Act 1989 (as amended);
- “the Habitats Regulations” means the Conservation of Offshore Marine Habitats and Species Regulations 2017 and the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended);
- “the Habitats Directive” means Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and wild fauna and flora (as amended);
- “the 1994 Habitats Regulations” means the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended);
- “the 2017 EW Regulations” means the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended);
- “the 2010 Act” means the Marine (Scotland) Act 2010; and
- “the 2009 Act” means the Marine and Coastal Access Act 2009.