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The Scottish Government
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Moray Offshore Renewables Limited
Western Development Area

Scoping Opinion

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2000 (as amended)

THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2007 (as amended)

SCOPING OPINION FOR THE PROPOSED

SECTION 36 CONSENT AND ASSOCIATED MARINE LICENCE(S) APPLICATION FOR

Moray Offshore Renewables Ltd. – Western Development Area, Outer Moray Firth

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1. Introduction

I refer to your correspondence of 12th May 2016 and follow up letter of 26th May 2016 requesting a scoping opinion from Marine Scotland Licensing Operations Team ("MS-LOT") under Regulation 7 of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (as amended) and Regulation 13 and Schedule 4 of the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (herein referred to as "the EIA Regulations"). The request was accompanied by a Scoping Report containing a plan sufficient to identify the site, which is the subject of the proposed Development and a brief description of the nature and purpose of the proposed Development and of its possible effects on the environment. The Scoping Report was accepted on 26th May 2016.

Under the EIA Regulations, Scottish Ministers are required to consider whether any proposal for an offshore renewable energy development is likely to have a significant effect on the environment. Scottish Ministers have considered your request for an opinion on the proposed content of the Environmental Statement ("ES") in accordance with regulations, and in formulating this opinion Scottish Ministers have consulted with the relevant organisations.

Any proposal to construct or operate an offshore power generation scheme with a capacity in **excess of 1 megawatt and within 12 nm** requires Scottish Ministers' consent under section 36 of The Electricity Act 1989 ("the Act").

Schedule 9 of the Act places on the developer a duty 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". In addition, the developer is required to give consideration to the UK Marine Policy Statement, Scotland's National Marine Plan ("NMP"), Scottish Planning Policy ("SPP"), other relevant Policy and National Policy Planning Guidance, Planning Advice Notes ("PANs"), the relevant planning authority's Development Plans and any relevant supplementary guidance.

Please note that the Environmental Impact Assessment ("EIA") process is vital in generating an understanding of the biological and physical processes that operate in the area and those that may be impacted by the proposed offshore wind farm. We would however state that references made within the scoping document with regard to the significance of impacts should not prejudice the outcome of the EIA process.

It is important that any development to exploit renewable energy sources should be accompanied by a robust assessment of the potential environmental impacts. Any assessment should also consider how potential negative environmental impacts could be avoided or minimised, through the use of mitigating technologies or regulatory safeguards, in order to ensure that the quality and diversity of Scotland's wildlife and natural features are maintained or enhanced. Scottish Ministers welcome the commitment given in the report that the EIA process will identify mitigation measures in order to avoid, minimise or reduce any adverse impacts. MS-LOT would suggest that the range of options considered should be informed by the EIA process in order that these objectives can be achieved. You are advised

to consult with relevant nature conservation bodies in order to discuss this.

2. Aim of this Scoping Opinion

Scottish Ministers are obliged under the EIA Regulations to respond to requests from developers for a Scoping Opinion on outline design proposals.

Scoping provides the first identification and likely significance of the environmental effects and the information needed to enable their assessment. The Scoping process is designed to identify which issues will or will not need to be addressed in the forthcoming EIA. This includes the scope of issues to be addressed and the method of assessment to be used. The Scoping process also allows consultees to have early input into the EIA process, to specify what may be required to be addressed and to supply information that could be pertinent to the EIA process. In association with any comments herein, full regard has been given to the information presented in the Scoping Report submitted.

3. Description of development

Moray Offshore Renewables Limited ("MORL" or "the Company") is proposing to construct and operate an offshore windfarm in the outer Moray Firth. The Company was awarded Zone 1 ("the MORL Zone") of the nine UK Offshore Round 3 zones. Due to the size of the site, the Company decided to develop the MORL Zone in two phases. First, the Eastern Development Area ("EDA") for which necessary consents were awarded in 2014 for three offshore wind farms with a total capacity of 1,116 MW and associated transmission infrastructure. The second phase of offshore wind development in the MORL Zone is located in the Western Development Area ("WDA").

The WDA is located in the North-East of Scotland on the Smith Bank in the Outer Moray Firth, approximately 22.5 km from Caithness on the Scottish coast at its closest point and covers an area of 225 km^2. The Company intends to install within the WDA up to 90 wind turbine generators ("WTG") of a minimum 8 MW and maximum 15 MW capacity each, that will produce a potential generation capacity of up to 750 MW.

The Scoping Report submitted relates to the wind turbines, their substructures and foundations and inter-array cables and any potential meteorological masts for the WDA. The Company currently anticipates to also consent the associated transmission infrastructure (including offshore and onshore export cable circuits, offshore substation platform(s), onshore substation, ancillary onshore works and works in the inter-tidal zone). These were not discussed in detail within the submitted Scoping Report. A separate Scoping Report will be prepared for these offshore and onshore transmission works at a later date, when more details of the export cable routes and onshore substation location are known.

4. Consultation

On receipt of the Scoping Opinion request, the Scottish Ministers initiated a consultation on the contents of the Scoping Report. This commenced on 31st May 2016 and requests for consultations were sent to the Joint Nature Conservation Committee ("the JNCC"), Scottish Natural Heritage ("SNH"), Scottish Environment Protection Agency ("SEPA"), the Northern Lighthouse Board ("NLB"), the Maritime and Coastguard Agency ("MCA"), Aberdeenshire Council ("ASC"), Moray Council ("MC"), the Highland Council ("THC") and various other bodies whom the Scottish Ministers consider are likely to have an interest in the proposed development. The Scottish Ministers, in accordance with Legislation, stated that the end date for the consultation would be 28th June 2016. Extensions to this period were granted by request to Marine Scotland Science ("MSS"), the JNCC and SNH (the Statutory Nature Conservation Bodies ("SNCB")) and the Defence Infrastructure Organisation ("MoD"). Not including individual departments within bodies who were consulted, 40 consultees were contacted and a total of 22 responses were received.

The Scottish Ministers are satisfied that the requirements for consultation have been met in accordance with the EIA Regulations.

The purpose of the consultation was to obtain advice and guidance from each consultee in respect of the information which each of them believe should be scoped in or out of the EIA.

The sections below highlight several points raised in consultation responses and issues which are of particular importance with regards to any subsequent application and the Environmental Statement.

Full consultation responses are attached in Annex 1 and each should be read in full for detailed requirements from individual consultees.

5. Marine Planning

Offshore Renewable Energy development should be in accordance with the UK Marine Policy Statement and Scotland's National Marine Plan.

The UK Marine Policy Statement 2011 – The UK Administrations share a common vision of having clean, healthy, safe, productive and biologically diverse oceans and seas. Joint adoption of a UK-wide Marine Policy Statement provides a consistent high-level policy context for the development of marine plans across the UK to achieve this vision. It also sets out the interrelationship between marine and terrestrial planning regimes. It requires that when Scottish Ministers take authorisation decisions that affect, or might affect, the marine area they must do so in accordance with the Statement.

Scotland's National Marine Plan – developed in accordance with the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009 (as amended), provides a comprehensive statutory planning framework for all activities out to 200 nautical miles. This includes policies for the sustainable management of a wide range of marine industries,

including offshore wind and marine renewable energy (in chapter 11).

Scottish Ministers must make authorisation and enforcement decisions, or any other decision that affects the marine environment, in accordance with the NMP.

The NMP sets out a presumption in favour of sustainable development and use of the marine environment when consistent with the policies and objectives of the Plan.

Another potentially relevant marine planning document to be aware of, due to proximity to the development, is **The (non-statutory) Pilot Pentland Firth and Orkney Waters Marine Spatial Plan**. The final Pilot Pentland Firth and Orkney Waters Marine Spatial Plan will be a material consideration in the determination of marine licensing and Section 36 consent applications within the Pentland Firth and Orkney Waters area. Highland Council and Orkney Islands Council will be provided with the option to adopt the final pilot Plan as non-statutory planning guidance, acknowledging the status of the Plan as a material consideration in the determination of relevant planning applications. Orkney Islands Council will also be provided with the option to approve the Final Plan as a material consideration in the determination of works licence applications.

6. Land Use Planning

The Scottish Government's planning policies are set out in the National Planning Framework, Scottish Planning Policy, Designing Places and Circulars.

The National Planning Framework is the Scottish Government's Strategy for Scotland's long term spatial development.

Scottish Planning Policy ("SPP") is a statement of Scottish Government policy on land use planning and contains:

- The Scottish Government's view of the purpose of planning,
- the core principles for the operation of the system and the objectives for key parts of the system,
- statutory guidance on sustainable development and planning under Section 3E of the Planning etc. (Scotland) Act 2006,
- concise subject planning policies, including the implications for development planning and development management, and
- The Scottish Government's expectations of the intended outcomes of the planning system.

Other land use planning documents which may be relevant to this proposal include:

- Aberdeenshire Local Development Plan 2016

- Planning Advice Note ("PAN") 2/2011: Archaeology – Planning Process and Scheduled Monument Procedures
- PAN 50: Controlling the Environmental Effects of Surface Mineral Workings
- PAN 51: Planning, Environmental Protection and Regulation
- PAN 1/2011: Planning and Noise
- PAN 1/2013: Environmental Impact Assessment
- PAN 60: Planning for Natural Heritage
- PAN 62: Radio Telecommunications
- PAN 68: Design Statements
- PAN 75: Planning for Transport
- PAN 79: Water and Drainage
- Marine Guidance Note ("MGN") 543 (M+F) Safety of Navigation: Offshore Renewable Energy Installations (OREIs) – UK Navigational Practice, Safety and Emergency Response
- Moray Local Development Plan
- Moray Offshore Renewables – Buckie Harbour Development Plan
- Moray Structure Plan
- Moray Wind Energy Policy Guidance
- Online Planning Advice on Flood Risk, http://www.gov.scot/Resource/0047/00479774.pdf
- Highland Renewable Energy Strategy and Planning Guidelines
- Highland Coastal Development Strategy
- Highland-wide Local Development Plan
- Scottish Planning Policy ("SPP")
- National Planning Framework 3

7. Content of the Environmental Statement

Information on what must be included in an Environmental Statement can be found in The Marine Works (Environmental Impact Assessment) Regulations 2007, Schedule 3, and The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000, Schedule 4.

Format

Developers should be aware that the ES should in addition to a hard copy, be submitted in a user-friendly PDF format, which can be placed on The Scottish Government website. A description of the methodology used in assessing all impacts should be included.

It is considered good practice to set out within the ES the qualifications and experience of all those involved in collating, assessing or presenting technical information.

Non-Technical Summary

This should be written in simple non-technical terms to describe the various options for the proposed development and the mitigation measures against the potential adverse impacts, which could result from the proposed development. Under the EIA Regulations, the non-technical summary should include:

- a description of the project and of the regulated activity;
- a description of the aspects of the environment likely to be significantly affected;
- a description of the likely significant effects;
- the forecasting methods used to assess the main effects that the project and the regulated activity are likely to have on the environment;
- a description of the measures envisaged to prevent, reduce and offset any significant adverse effects, and;
- an outline of the main alternatives studied, including an indication of the main reasons for the primary choice of the project, taking into account the environmental effects of those alternatives and the project as proposed.

Mitigation

Within an ES it is important that all mitigating measures should be:

- clearly stated;
- fully described with accuracy;
- assessed for their environmental effects;
- assessed for their effectiveness;
- their implementation should be fully described;
- how commitments will be monitored; and
- if necessary, how they relate to any consents or conditions.

Refer to Annex 1 for consultee comments on specific baseline assessment and mitigation.

Where potential environmental impacts have been fully investigated but found to be of little or no significance, it is sufficient to validate that part of the assessment by stating in the report:

- the work that has been undertaken;
- what this has shown, i.e. what impact if any has been identified, and

- why it is not significant.

8. Archaeology and Cultural Heritage

General Principles

The ES should address the predicted impacts on the marine historic environment. It should also describe the mitigation proposed to avoid or reduce impacts to a level where they are not significant. Historic environment issues should be taken into consideration from the start of the site selection process and as part of the alternatives considered.

Codes of practice relating to heritage and seabed development:

- JNAPC Code of Practice for seabed development http://www.jnapc.org.uk/jnapc_brochure_may_2006.pdf
- COWRIE guidelines for offshore renewables and the historic environment http://www.thecrownestate.co.uk/media/5876/km-ex-pc-historic-012007-historic-environment-guidance-for-the-offshore-renewable-energy-sector.pdf
- Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector, January 2011 http://www.thecrownestate.co.uk/media/5901/km-ex-pc-historic-012011-offshore-geotechnical-investigations-and-historic-environment-analysis-guidance-for-the-renewable-energy-sector.pdf
- Model Clauses for Archaeological Written Schemes of Investigation: Offshore Renewables Projects http://www.wessexarch.co.uk/system/files/WSI%20Renewables_low%20res.pdf
- British Marine Aggregates Producers Association protocols for archaeological discoveries http://www.wessexarch.co.uk/projects/marine/bmapa/index.html
- Protocol for Archaeological Discoveries: Offshore Renewables Projects http://www.thecrownestate.co.uk/media/148964/ei-protocol-for-archaeological-discoveries-offshore-renewables-projects.pdf

National policy and advice for the historic environment is set out in:

- The NMP http://www.gov.scot/Publications/2015/03/6517
- SPP http://www.gov.scot/Topics/Built-Environment/planning/Policy
- The Historic Environment Scotland Policy Statement June 2016 https://www.historicenvironment.scot/umbraco/advice-and-support/planning-and-guidance/legislation-and-guidance/historic-environment-scotland-policy-statement/
- Planning Advice Note 02/2011 Planning and Archaeology (PAN 02/2011) http://www.scotland.gov.uk/Resource/Doc/355385/0120020.pdf

The Scottish Minister's policies for the historic environment are set out in paragraphs 110 – 124 of SPP and paragraphs 4.20 – 4.25 of the NMP. Amongst other things, SPP stresses that scheduled monuments should be preserved *in situ* and within an appropriate setting and states that developments must be managed carefully to preserve listed buildings and their settings to retain and enhance any special architectural or historic features of interest. Further information on setting can be found in the following document: Managing Change in the Historic Environment: Guidance notes https://www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes/ . Impacts on undesignated aspects of the historic environment should also be taken into account as part of any EIA.

Historic Environment Scotland recommend that you engage a suitably qualified archaeological/historic environment consultant to advise on, and undertake, the detailed assessment of impacts on the historic environment and advise on appropriate mitigation strategies.

Baseline Information

Information on the location of all archaeological/historic sites held in the National Monuments Record of Scotland, including the locations and, where appropriate, the extent of scheduled monuments, listed buildings and gardens and designed landscapes can be obtained from www.PASTMAP.org.uk

Data on scheduled monuments, listed buildings, Inventory gardens and designed landscapes, historic battlefields and properties in the care of Scottish Ministers can also be downloaded from Historic Environment Scotland Heritage Portal following the link http://portal.historicenvironment.scot/ .

Information about undesignated marine heritage assets is available from the NMP Interactive website https://marinescotland.atkinsgeospatial.com/nmpi/default.aspx?availablelayer=118

Guidance on setting is available at: https://www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes/

9. Ecology, Biodiversity and Nature Conservation

Refer to Annex 1 for specific comments from advisors on ecology, biodiversity and nature conservation.

Species

The ES should show that the applicants have taken account of the relevant wildlife legislation and guidance, namely:

- Marine (Scotland) Act 2010
- Marine and Coastal Access Act 2009 (as amended)
- Council Directive 92/43/EEC on The Conservation of Natural Habitats and of Wild Flora and Fauna
- Directive 2009/147/EC on the Conservation of Wild Birds Wildlife & Countryside Act 1981
- Nature Conservation (Scotland) Act 2004
- Wildlife and Natural Environment (Scotland) Act 2011
- Conservation (Natural Habitats, &c.) Regulations 1994
- Conservation of Habitats and Species Regulations 2010
- Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007
- Marine Scotland - The Protection of Marine European Protected Species from Injury and Disturbance - Guidance for Inshore Waters (2014)
- The Protection of Seals (Designation of Seal haul-Out Sites) (Scotland) Order 2014,
- Marine Protected Areas
- The Scottish Biodiversity Strategy and associated Implementation Plans

In terms of The Scottish Government European Protected Species ("EPS") Guidance, applicants must give serious consideration to/recognition of meeting the three fundamental tests set out in this Guidance. It may be worthwhile for applicants to give consideration to this immediately after the completion of the scoping exercise.

It needs to be categorically established which species are present on and near the site, and where, before the application is considered for consent. The presence of protected species, such as Schedule 1 Birds or European Protected Species, must be included and considered as part of the application process, not as an issue which can be considered at a later stage. The company should therefore undertake a full Habitat Regulations Appraisal Screening prior to the submission of any application. Any consent given without due consideration to these species may breach European Directives with the possibility of consequential delays or the project being refused by Scottish Ministers. Likewise, the presence of species on Schedules 5 (animals) and 8 (plants) of the Wildlife & Countryside Act 1981 should be considered where there is a potential need for a licence under Section 16 of that Act.

10. Water Environment

The Scottish Environment Protection Agency ("SEPA"), as a statutory consultee under the EIA Regulations, encourages pre-application engagement to help the development process and to minimise risk of modifications later in the application process and avoidable delays or objections.

Information on energy proposals and issues that should be addressed in the ES can be found on the energy section of SEPA's website at http://www.sepa.org.uk/environment/energy/renewable/. The webpage also contains a link to SEPA Guidance Note 17, which provides more specific guidance for marine development and marine aquaculture planning.

If the proposal includes both onshore and offshore components the applicant should be aware that the development may be subject to a range of different consenting regimes. SEPA is the regulatory body responsible for the implementation of The Controlled Activities Regulations (CAR). Further information specifically in relation to the water environment and SEPA's water related regulations can be found at http://www.sepa.org.uk/regulations/water/.

Developers are strongly advised at an early stage to consult with SEPA to identify 1) if a CAR licence is necessary and 2) clarify the extent of the information required by SEPA to assess fully any licence application.

Construction contractors may be unaware of the potential for impacts such as those listed below but, when proper consultation with the local fishery board is carried out at an early stage, many of these issues can be averted or overcome:

- increases in silt and sediment loads resulting from construction works.
- point source pollution incidents during construction.
- obstruction to upstream and downstream migration both during and after construction.
- disturbance of spawning beds during construction – timing of works is critical.
- drainage issues.
- sea bed and land contamination

The Water Framework Directive ("WFD") was introduced in 2000 to establish systems to manage Europe's water environment – rivers, lochs, estuaries and coastal waters. This should be taken into account within the ES. Further information on the directive can be found at
http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32000L0060&from=EN

The ES should identify the location of, and protective/mitigation measures in relation to, all private water supplies within the catchments impacted by the scheme, including modifications to site design and layout.

Developers should also be aware of available Construction Industry Research and Information ("CIRIA") guidance on the control of water pollution from construction sites and environmental good practice (www.ciria.org). Design guidance is also available on river crossings and migratory fish (The Scottish Executive consultation paper, 2000) at http://www.gov.scot/Topics/marine/science/Publications/publicationslatest/rivercrossings.

11. Other Material Issues

Traffic Management

The ES should provide information relating to the preferred route options for delivering equipment etc. via the trunk road network. The EIA should also address access issues, particularly those impacting upon the trunk road network; in particular, potential stress points at junctions, approach roads, borrow pits, bridges, site compound and batching areas etc.

Economic Benefit

The concept of economic benefit as a material consideration is explicitly confirmed in the NMP and in SPP. Policies GEN 2 and GEN 3 of the NMP encourage economic and social benefit (respectively) to Scottish communities when consistent with the objectives and policies of the Plan. Renewable Energy Objective 2 of the Plan also relates to economic benefits. This fits with the priority of The Scottish Government to grow the Scottish economy. The application should include relevant economic information connected with the project, including the potential number of jobs, and economic activity associated with the procurement, construction, operation and decommissioning of the development.

Navigation

The ES should include the following details on the possible impact on navigation for both commercial and recreational craft.

- Collision Risk
- Navigational Safety
- Visual intrusion and noise
- Risk Management and Emergency Response
- Marking and lighting of the site and information to mariners
- Effect on small craft navigational and communication equipment
- Weather and risk to recreational craft which lose power and are drifting in adverse conditions
- Evaluation of likely squeeze of small craft into routes of larger commercial vessels.

12. General ES Issues

Requirement for Public Pre-Application Consultation

From 6th April 2014, applications received for certain activities will be subject to a public pre-application consultation requirement. Activities affected will be large projects with the potential for significant impacts on the environment, local communities and other legitimate

uses of the sea. The new requirement will allow those local communities, environmental groups and other interested parties to comment on a proposed development in its early stages – before an application for a marine licence is submitted.

Guidance on public pre-application consultation can be found at the following link: http://www.scotland.gov.uk/Resource/0043/00439649.pdf

Consent Timescale and Application Quality

In December 2007, Scottish Ministers announced an aspirational target to process new Section 36 applications within a 9 month period, provided a Public Local Inquiry ("PLI") is not held. This scoping opinion is specifically designed to improve the quality of advice provided to developers and thus reduce the risk of further information being requested and subject to further publicity and consultation cycles.

Developers are advised to consider all aspects of this scoping opinion when preparing a formal application, to reduce the need to submit further information in support of the application. The consultee comments presented in this opinion are designed to offer an opportunity to consider all material issues relating to the development proposals.

Given that the layout and design are still developing and evolving, the exact nature of the work that is required to inform the EIA may vary depending on the design choices. The EIA must address this uncertainty so that there is a clear explanation of the potential impact of each of the different scenarios. It should be noted that any changes produced after the ES is submitted may result in the requirement of further environmental assessment and public consultation, if deemed to be significant by the licensing authority

In assessing the quality and suitability of applications, the licensing authority will use the enclosed checklist and scoping opinion in assessment of the application. Developers are encouraged to seek advice on the contents of the ES prior to applications being submitted, although this process does not involve a full analysis of the proposals. In the event of an application being void of essential information, the licensing authority reserves the right not to accept the application. Developers are advised not to publicise applications in the local or national press, until their application has been accepted by the licensing authority and the date of consultation has been agreed.

Application and ES

A developer checklist is enclosed with this scoping opinion (Annex 2) to assist developers in consideration and collation of the relevant ES information to support their application. In advance of publicising the application, developers should be aware this checklist will be used by the licensing authority to carry out a gate check before the application is officially accepted. An EIA audit will also be carried out as part of that gate check. If information requested at scoping stage is found not to have been provided, then the applicant may be asked to provide that information before the application can be accepted. Further information is provided below.

Ordinance Survey ("OS") Mapping Records

Developers are requested at application stage to submit a detailed OS plan showing the site boundary and location of all turbines, access tracks and onshore supporting infrastructure in a format compatible with The Scottish Governments Spatial Data Management Environment ("SDME"), along with appropriate metadata. The SDME is based around Oracle RDBMS and ESRI ArcSDE and all incoming data should be supplied in ESRI shapefile format. The SDME also contains a metadata recording system based on the ISO template within ESRI ArcCatalog (agreed standard used by The Scottish Government); all metadata should be provided in this format.

Consultation

Where the developer has provided Scottish Ministers with an ES, the developer must publish their proposals in accordance with part IV of The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (as amended) and Regulation 16 of The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended). Licensing information and guidance, including the specific details of the adverts to be placed in the press, can be obtained from Marine Scotland. In addition, requirements under The Electricity (Applications for Consent) Regulations 1990 must be met.

Developers are asked to issue the ES directly to consultees, dates to be agreed with Marine Scotland in advance of consultation. Consultee address lists can be obtained from Marine Scotland, the final consultee list will be agreed with Marine Scotland prior to consultation. Marine Scotland also requires 2 hardcopies to be submitted for onward distribution.

Applicants must, when the first statutory consultee response is received by MS-LOT, publish a notice in the Edinburgh Gazette and one or more local newspapers to say that additional information has been received by Scottish Ministers and has been placed on the Planning Register of the planning authority closest to the development. This allows the public and other stakeholders a further 28 calendar days from the date of the second advert to make a representation in light of the additional information. Subsequent statutory consultee responses also go to the closest planning authority for the register, and to the applicant, but no further press notices are required.
Scottish Natural Heritage ("SNH") has produced a Service Level Statement ("SLS") for renewable energy consultation. This statement provides information regarding the level of input that can be expected from SNH at various stages of the EIA process. Annex A of the SLS details a list of references, which should be fully considered as part of the EIA process. A copy of the SLS and other vital information can be found on the renewable energy section of their website – www.snh.org.uk

Gaelic Language

Where Section 36 applications are located in areas where Gaelic is spoken, developers are encouraged to adopt best practice by publicising the project details in both English and Gaelic.

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Judicial review

All cases may be subject to judicial review. A judicial review statement should be made available to the public.

Signed

Nicola Bain
15/08/2016

Authorised by the Scottish Ministers to sign on their behalf

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Annex 1

Marine Scotland – Licensing Operations Team Scoping Opinion

Consultee Comments Relating to Moray Offshore Renewables Ltd. – Western Development Area, Outer Moray Firth

The following organisations provided a scoping opinion in relation to Moray Offshore Renewables Ltd. – Western Development Area, Outer Moray Firth.

Statutory Consultees

Aberdeenshire Council ("ASC")
Joint Nature Conservation Committee ("JNCC")
Maritime and Coastguard Agency ("MCA")
Moray Council ("MC")
Northern Lighthouse Board ("NLB")
Scottish Environmental Protection Agency ("SEPA")
Scottish Natural Heritage ("SNH")

Non Statutory Consultees

Civil Aviation Authority ("CAA")
Chamber of Shipping ("CoS")
Historic Environment Scotland ("HES")
Joint Radio Company ("JRC")
Marine Scotland Science ("MSS")
Moray Firth Partnership ("MFP")
Defence Infrastructure Organisation ("MOD")
NATS En-Route PLC ("NERL")
Royal Society for the Protection of Birds, Scotland ("RSPB Scotland")
Royal Yachting Association ("RYA")
Scottish Fisherman's Federation ("SFF")
Sport Scotland ("SS")
Scottish Wildlife Trust ("SWT")
Transport Scotland ("TS")
Whale & Dolphin Conservation ("WDC")

The following organisations were also consulted, but did not provide a scoping opinion in relation to the proposal

Association of Salmon Fishery Boards ("ASFB")
British Telecom, Radio Network Protection Team ("BT")

Cromarty Firth Port Authority (“CFPA”)
Marine Scotland Compliance, Buckie Fisheries Office (“FO-BCK”)
Marine Scotland Compliance, Fraserburgh Fisheries Office (“FO-FR”)
Marine Scotland Compliance, Scrabster Fisheries Office (“FO-SCR”)
Marine Scotland Compliance, Ullapool Fisheries Office (“FO-UL”)
Marine Safety Forum (“MSF”)
North & East Coast Inshore Fisheries Groups (“NEC-IFG”)
Surfers Against Sewage (“SAS”)
Scottish Canoe Association (“SCA”)
Scottish Fisherman's Organisation (“SFO”)
Scottish Government Planning (“SG-Planning”)
Scottish Surfing Federation (“SSF”)
The Crown Estate (“TCE”)
The Highland Council (“THC”)
Transport Scotland – Ports & Harbours (“TS-P&H”)
Visit Scotland (“VS”)

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SCOPING OPINION

Marine Scotland – Licensing Operations Team

MS-LOT notes that Moray Offshore Renewables Limited ("MORL" or "the Company") is proposing to construct and operate an offshore windfarm in the outer Moray Firth. The Company was awarded Zone 1 ("the MORL Zone") of the nine UK Offshore Round 3 zones. Due to the size of the site, the Company decided to develop the MORL Zone in two phases. First, the Eastern Development Area ("EDA") for which necessary consents were awarded in 2014 for three offshore wind farms with a total capacity of 1,116 MW and associated transmission infrastructure. The second phase of offshore wind development in the MORL Zone is located in the Western Development Area ("WDA").

The WDA is located in the North-East of Scotland on the Smith Bank in the Outer Moray Firth, approximately 22.5 km from Caithness on the Scottish coast at its closest point and covers an area of 225 km^2. The Company intends to install within the WDA up to 90 wind turbine generators ("WTG") of a minimum 8 MW and maximum 15 MW capacity each, that will produce a potential generation capacity of up to 750 MW.

MS-LOT is issuing this Scoping Opinion under The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (as amended) and The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended).

The scope of the Environmental Impact Assessment ("EIA") is defined in this Scoping Opinion through the opinions and comments provided by MS-LOT and all consultees that responded with advice/recommendations to the scoping opinion request.

The Environmental Statement ("ES") and application letter must detail how many consents/licences are being sought and what legislation the application is being made under. The Company should also confirm whether they intend to apply for a safety zone around the turbines under Section 95 of the Energy Act 2005; and whether a declaration under Section 36A will be applied for. The exact duration of the Marine Licence(s) and Section 36 Consent(s) ("S36") being sought must be confirmed by the Company and made clear within the ES and cover letter.

The opportunity to apply for deemed planning as part of the application process for S36 consent is now available to applicants seeking to construct and operate marine renewable energy developments. The Growth and Infrastructure Act 2013, through sections 4, 5 and 6, amend section 57 of The Town and Country Planning (Scotland) Act 1997 permitting Scottish Ministers, on granting or varying a consent under Section 36 of The Electricity Act 1989, to give a discretion for planning permission to be deemed to be granted, subject to such conditions as may be specified in the direction, for any development ancillary to the operation or change of use to which the consent relates. Should the Company decide to seek deemed planning permission, then this intention must be clear within the application letter and the ES, and the Company must ensure the ES submitted in support of any application has considered both the impacts on the marine and the terrestrial environment.

The Scoping Report submitted relates to the wind turbines, their substructures and foundations and inter-array cables and any potential meteorological masts for the WDA. The Company currently anticipates to also consent the associated transmission infrastructure (including offshore and onshore export cable circuits, offshore substation platform(s), onshore substation, ancillary onshore works and works in the inter-tidal zone). MS-LOT notes that these were not discussed in detail within the submitted Scoping Report, and that the Company intends to prepare and submit a separate Scoping Report for these offshore and onshore transmission works at a later date, when more details of the export cable routes and onshore substation location are known.

MS-LOT advises and recommends that a single ES is submitted to cover both the marine and terrestrial aspects of the development. This ES should be concise and clear without the need for superfluous or erroneous detail.

The "Good Practice Guidance" issued by the Scottish Government Energy Consents and Deployment Unit in January 2013, provides a good summary: "*In structuring the ES, proper consideration should be given to the usefulness of the document to the reader. For example, instead of separate sections detailing waste arising, it is more useful to the reader for the ES to include a specific section relating to waste, providing details of different types of waste generated at both construction and operation, and including a Site Waste Management Plan or waste section of a Construction Environmental Management Document setting out how that waste material will be managed."* In addition the same document states that *'it is good practice to have a section directly addressing the scoping opinion in the ES, referring to each issue raised in the scoping opinion and referencing where this has been addressed'.*

Further information on what the works and infrastructure comprise, including the on and offshore elements, must be detailed in the ES. Information about timings for operation, maintenance and decommissioning, as these may have environmental impacts; along with information about the number and type of vessels to be used, must also be included.

MS-LOT recommends the use of a Design Envelope (or Rochdale Envelope) for flexibility both in the EIA process and in the final ES. It is the Company's responsibility to give due consideration to what changes might be necessary, and to provide details as to what might be required. Where flexibility is required the Company should define either the alternatives or ranges within which parameters might fall. The ES should clearly state the reasoning for requiring such flexibility, the criteria for selecting the worst case scenario and the impacts which would arise from such a scenario.

Failure to give such consideration, or a major change to a parameter outside those considered, may invalidate the ES provided at consent, requiring the consent process to be repeated. It is expected that the EIA will reduce the degree of design flexibility required and that the ES provided for consent will be further refined in a Construction Method Statement ("CMS") to be provided before works commence. Information regarding the impacts from construction of the infrastructure and the types of vessels to be used will be required in the CMS. The CMS provided will freeze the design of the project and will be reassessed by MS-LOT to ensure that its parameters fall within the range granted at consent.

The Scoping Report presents a range of options for the foundation and support structures. MS-LOT notes that there is no final decision with respect to the foundation and substructure type for the development and therefore there is also no definite information regarding the footprint of the chosen foundation type. The Company, once again, must consider not only the likely scenario of impacts, but also the worst case scenario for the foundations and substructure options.

As recommended by the Maritime and Coastguard Agency ("MCA"), a Navigational Risk Assessment ("NRA") will need to be submitted in accordance with Marine Guidance Notices ("MGN") 543 (and 372) and the MCA Methodology for Assessing the Marine Navigational Safety & Emergency Response Risks of Offshore Renewable Energy Installations ("OREI"), which is available at www.gov.uk/mca.

MGN 543 Section 2 'Traffic Survey' states that *'an up to date traffic survey of the area concerned should be undertaken within 12 months prior to the submission of the Environmental Statement. This should include all the vessel types found in the area and total at least 28 days duration but also take account of seasonal variations in traffic patterns and fishing operations.'* The Company must undertake up to date surveys, and studies must be carried out in relation to shipping and navigation channels for inclusion in the ES.

Ships should carry and implement a ballast water management plan and further guidance can be found at the MCA or the IMO website.

Any antifoulants used on the devices or cables will impact encrusting communities at a highly localised (i.e. device-only) level. However, antifouling paint can be dispersed at distances greater than predicted (along tidal / main current directions). Effects on invertebrates may be detectable at these distances depending on the antifouling type and strength. The ES should specify a list of all antifouling paints to be used, their type, quantities and toxicity levels.

An Habitats Regulations Appraisal ("HRA") process will be required for this development as it has the potential to affect the site integrity and/or the qualifying features of nearby Natura (European) sites. The range of interests and potential impacts on these sites will need to be considered in relation to the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) (applying to the offshore zone beyond 12 nautical miles) and to the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) (applying to Scottish territorial waters). These regulations protect Natura sites – a network of designated sites across Europe which are internationally important for threatened habitats and species – encompassing Special Protection Areas (SPAs) designated for a range of important bird species, and Special Areas of Conservation (SACs) which include a variety of sensitive or rare marine habitats.

Under the above regulations, HRA is the process whereby potential impacts to Natura sites – SPAs and SACs – are considered. Please refer to the joint response from the JNCC and SNH in this Annex, which provides a detailed explanation of the HRA process. The responses from MSS and RSPB Scotland also provide further advice to the HRA process.

MS-LOT recommends that the Company submits an HRA screening report taking into account the scoping advice provided by the consultees, further guidance can be provided on this iterative process. The HRA screening report will be required for review and comment by the SNCBs and MSS at the earliest opportunity and in advance of the ES, i.e., prior to applying.

It should be noted that any application should incorporate a full HRA and applications for other relevant licencing requirements, such as European Protected Species ("EPS") and basking shark, should they be required.

The Company should be aware of the definition of 'disturbance' and the legal provisions on European Protected Species and that an EPS Licence may be required, to allow possible disturbance to marine mammals and basking sharks during construction and operation. MS-LOT notes that piling activities have been detailed within the Scoping Report. Therefore, MS-LOT recommends that an EPS risk assessment is submitted well in advance of any planned surveys or construction activities.

Furthermore, we recommend that the potential impacts on marine mammals from noise are carefully assessed in the ES. Mitigation for this impact may well be required and measures to reduce the effects of noise should also be set out in the ES. MS-LOT may require that JNCC accredited Marine Mammal Observers ("MMOs") are present during noisy construction activities, particularly during potentially noisy activities such as piling should this be a chosen method.

The Company must also be aware of the Marine Protected Areas ("MPA") located near to the proposed development area, and must assess and address the possible impacts of the project on these sites during the EIA process. The most important nature conservation sites requiring to be addressed in the ES are the Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) contributing to the Natura 2000 network. MS-LOT strongly recommend that the "draft" Moray Firth marine SPA should also be included in this assessment. More information can be found at:
http://www.scotland.gov.uk/Topics/marine/marine-environment/mpanetwork

MS-LOT expects any displacement of fishing opportunity to be recognised by the Company. The Company then must resolve any possible potential impacts by early and continued engagement and collaboration with fishing industry representatives. MS-LOT strongly recommends that early engagement with the fishing communities is undertaken and that surveys based upon commercial fishing are also undertaken and data is contained within the ES.

It is essential that this project is assessed alone and in combination with other plans and projects (renewable developments and other types of industry and activities which occur in the vicinity). All projects which have been scoped must be included. This applies not only to marine wildlife and birds, but also to marine navigation, shipping and location for maintenance and operations. Further discussion on cumulative effects will take place throughout the EIA process. MS-LOT will engage with the SNCBs, MSS and the Company to discuss a final list of projects and plans to take into consideration in the cumulative impacts

assessment.

MS-LOT vehemently recommends early engagement with the Civil Aviation Authority ("CAA"), the NATS En-Route PLC ("NERL"), and the Ministry of Defence ("MoD") to resolve potential operational problems with radar detection of aircraft traffic, otherwise the consenting timeline may be at risk.

The description of the development's components and equipment in the ES must be accompanied by figures that allow their correct visualisation, with a scale for visual aid comparison. This will allow members of the public, as well as consultees, to put the development into context. When figures are not possible to produce, a comprehensive description should be presented. This would apply for, amongst other components, the turbines and the sub-structure.

A Seascape, Landscape and Visual Impact Assessment ("SLVIA") will be required as part of the EIA and will need to include the cumulative visual impacts of current and proposed developments in the area. Recommendations from SNH must be taken into account and attention carefully paid to their guidelines, suggestions and viewpoints. The visual impact assessment of the proposal must be carried out in close co-operation with MS-LOT, the Local Authorities and the SNCBs, in particular when deciding photo-montage viewpoints. The list of viewpoints agreed with the Local Authorities and the SNCBs should be submitted to MS-LOT once completed. MS-LOT encourages the Company to carry out SLVIA in accordance with the Institute of Environmental Management and Assessment Guidelines for Landscape and Visual Impact Assessment, SNH guidelines and guidance given in response to the consultation by the Local Authorities. The Company must be aware of the wildlife habitats and protected areas surrounding the site, and this must be taken account of within the ES.

The Company must include in the ES a Reporting Protocol which sets out what the Company must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the proposed transmission infrastructure.

The Crown Estate intends to launch in England and Wales a new cultural heritage reporting scheme for the seabed and intertidal zones. This scheme will be responsible for, and assist with, enhancing the environmental stewardship of underwater cultural heritage. The Marine Antiquities Scheme ("MAS") will closely mirror the Portable Antiquities Scheme ("PAS"). The MAS will fit in with, and is designed to enhance and compliment, statutory reporting mechanisms that already exist, principally the Merchant Shipping Act 1995. It is important to note that reporting through the scheme does not devolve the finder from any other legal requirements that apply. It is designed to effectively capture data about the historic marine environment, return information to the finder and make that data available to the public for research in an accessible way – in much the same way that the PAS has been doing for some time. Although this is a document produced for England and Wales, the Company should be aware of this document and, as a matter of best practice, should be guided by the information contained therein.

With regard to the contents of the ES, a section regarding waste is mandatory as set out in

Article 1(c) and Article 4(c) of Annex IV of the Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011, on the assessment of the effects of certain public and private projects on the environment; Article 3(1) of Schedule 3 of The Marine Works (Environmental Impact Assessment) Regulations 2007, regarding information to be included in an environmental statement; Article 1(c) of the Schedule 4 of The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000, regarding Content of an Environmental Statement; and according to the EIA (Scotland) Regulations 1999.

A section regarding water quality must be included on the onshore section of the ES, considering potential onshore impacts from the cable laying activities.

The decommissioning operation will be regulated by The Department of Business, Energy and Industry Strategy ("DBEIS") (formerly The Department of Energy and Climate Change ("DECC")). A Decommissioning Plan is to be presented to and agreed with DBEIS. It is also important to remember that a marine licence will be required for the removal of the devices and infrastructure as part of the decommissioning operation. This should be applied for at least six months prior to the removal of the devices.

Health and Safety Executive ("HSE") is the national independent watchdog for work-related health, safety and illness. They have a dedicated team that regulates occupational health and safety standards for the offshore renewable energies industry. You are advised to contact this team to discuss how you will manage health and safety during the planning, construction and operation of your offshore renewable project.

They are contactable at:

Health and Safety Executive
Belford House
59 Belford Road
Edinburgh
EH4 3UE
Trevor.johnson@hse.gsi.gov.uk
offshore.renewables@hse.gsi.gov.uk

MS-LOT advises and recommends that the structure and content of the ES is discussed with Marine Scotland at an early stage. The following are a number of points to aid early consideration of content and it is important that they are included for each topic.

- Methodology – some information to be provided on assessment methodologies.
- Legislation – brief description of the main pieces of legislation applicable to the topic
- Comments from Scoping Stage – individual comments from consultees
- Baseline – description of baseline environmental position.
- Data Gaps
- Impacts/effects – assessment of effects at each stage of development.
- Cumulative and in combination impacts/effects – assessment of these effects.

- Mitigation – measures proposed.
- Residual impacts/effects – description of impacts/effects after mitigation.
- Monitoring – an indication of the proposed monitoring.

The Non-Technical Summary ("NTS") should be written in simple non-technical terms to describe the various options for the proposed development and the mitigation measures against the potential adverse impacts, which could result.

Given that the layout and design are still developing and evolving, the exact nature of the work that is needed to inform the EIA may vary depending on the design choices. The EIA must address this uncertainty so that there is a clear explanation of the potential impact of each of the different scenarios. It should be noted that any changes produced after the ES is submitted may result in the requirement of further environmental assessment and public consultation if deemed to be significant by the licensing authority.

The EIA Directive includes the requirement for an assessment of alternatives and so it is necessary to clearly document the project's decision-making process. As set out in Scottish Planning Policy 6: Renewable Energy "*Applicants should use the assessment process to demonstrate the appropriateness of the chosen location for accommodating development. This will be particularly important where development is proposed out with broad areas of search identified in development plans*." Additionally, it is stated in the EIA (Scotland) Regulations 1999 Regulation 2(1) & Schedule 4, Part II, that "*an outline of the main alternatives studied by the applicant or appellant and an indication of the main reasons for his choice, taking into account the environmental effects*" must be present in the Environmental Statement. References to alternatives can also be found in article 3 (1) of Schedule 3 in The Marine Works (Environmental Impact Assessment) Regulations 2007.

The Environmental Statement should clearly identify the reasons for the options chosen, as well as the reasons why other options were discarded or considered unfeasible - Planning Advice Note 1/2013 – Environmental Impact Assessment: *"The ES must [also] give an indication of the main reasons for the choice made, taking into account the environmental effects*. (…) *4.8. The nature of certain developments and their location may make the consideration of alternative sites a material consideration. In such cases, the ES should record this consideration. More generally, the consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice, resulting in a more robust application for planning permission."*

Further advice can be found in Planning Advice Note 1/2013: Environmental Impact Assessment and in SNH's Environmental Assessment Handbook.

When evaluating impacts, their effects may be predictable or unpredictable; direct or indirect; positive (beneficial) or negative (harmful); temporary or permanent: short, medium or long-term; immediate or delayed; one-off, intermittent or continuous; certain or uncertain; avoidable or unavoidable; reversible or irreversible; localised or widespread; small or large; individual or cumulative; and therefore may be significant or of no consequence. In the ES these types of criteria must be unambiguous to avoid misevaluations. Concepts like magnitude, significance, extension, nature or duration, or others, should be clearly defined.

The ES will have to go through the Gatecheck process, as it has to be considered in proportion to other projects of a similar type. MS-LOT undertakes a Gatecheck prior to formal submission of applications and advises the Company to take full advantage of this service. The Gatecheck is not designed as an in depth evaluation of the content of an ES. However, it will provide MS-LOT with the confidence that minimum legislative requirements have been met prior to formal submission of the ES.

To assist the Gatecheck process, a thorough gap analysis of the issues listed here by MS-LOT and the consultees' comments that follow, should be provided by the Company for submission with the ES. It should be noted that Gatecheck will only take place when the final version of the ES is submitted. This process will take up to three months to complete.

It is critical that the Company sets up post-scoping meetings to engage with stakeholders that responded to the scoping request in order to discuss any issues with the planned project.

We have provided you with our impressions on the Scoping Report and we trust this information is useful. Should you wish to discuss any aspect of this response please do not hesitate to contact MS-LOT.

A post-scoping meeting could be productive in order to discuss the issues mentioned in this document and to discuss the next steps in the consenting process.

Statutory Consultees

STATUTORY NATURE CONSERVATION BODIES
Joint Nature Conservation Committee ("JNCC")
Scottish Natural Heritage ("SNH")

Thank you for consulting JNCC and SNH on natural heritage interests to be addressed under Environmental Impact Assessment (EIA) and Habitats Regulations Appraisal (HRA) for the MORL offshore wind Round 3 western development area (WDA). This is a joint response as the proposed works are planned for areas within both of our jurisdictions. The location of the WDA is presented in Figure 1.1-2 (p17) of MORL's scoping report. Note the current consultation relates to the wind farm only; the transmission infrastructure and cable routes will be subject to a separate scoping exercise at a later date.

Three wind farms (Telford, Stevenson and MacColl) are consented in the eastern development area (EDA) of the MORL Round 3 zone. The work done for the EDA gives us a good starting point to consider this further proposed development in the WDA. However, there have been a number of changes to assessment processes and methodologies since the time of the EDA consents and these will need to be considered for the WDA. In particular, many of the recommendations for seabird impact assessments are currently under review, and there have been updates to our advice on marine mammal interests, particularly in relation to methods for underwater noise modelling.

We therefore think it would be helpful to **establish a timetable for pre-application discussions** in order to confirm the over-arching principles for the receptor-specific impact assessments as well as to agree the detail of relevant methodologies.

We note that potential impacts from the WDA will need to be considered in combination with those predicted from the EDA and Beatrice wind farm. There are a number of complexities around this matter and these will need to be discussed between the relevant parties. While the focus of cumulative impact assessment for the WDA is likely to be in relation to the consented wind farms, we will confirm as part of pre-application dialogue which other projects will need to be taken account of for HRA and for wider EIA and CIA scale assessments. We also note the scoping report makes reference to the cumulative impact discussion document produced by MORL and BOWL in 2011, provided as Appendix 1. While this was very useful at the time, we advise that much of the discussion has since been superseded.

The WDA scoping report makes repeated reference to the information submitted by MORL for the EDA (the environmental statement and supplementary environmental information). While this informed determination for the EDA, it was not the only information used by Marine Scotland in coming to a decision. In particular, we identify that Marine Scotland's appropriate assessment[1] gives a key summary of the approach taken to impact assessments (under HRA) for the qualifying interests of Special Protection Areas (SPAs) and Special Areas of Conservation (SACs), making reference to the full range of information that was considered.

[1] The appropriate assessment undertaken by Marine Scotland for wind farms in the MORL EDA and Beatrice is available from: http://www.gov.scot/Topics/marine/Licensing/marine/scoping/Moray3

At present, it is not possible to confirm a number of key approaches and methodologies in this scoping advice, therefore **we strongly recommend** that consideration is given as to how the ensuing receptor-specific discussions and agreements are to be formally captured for the public record. We note that this information will need to be referred to in addition to the scoping opinion issued by Marine Scotland.

NATURAL HERITAGE INTERESTS TO BE CONSIDERED

In principle, JNCC & SNH support the development of marine renewable energy where it's sensitively sited and designed. Below, we provide a summary of our scoping advice for WDA in relation to key natural heritage interests, supported (where indicated) by more detailed receptor-specific appendices.

- **Marine mammals**

Key species to address for the WDA are harbour seal, bottlenose dolphin, harbour porpoise, minke whale and grey seal. **Appendix A** provides our advice on the reference population for each species and the relevant assessments to consider (not all of which apply to every species): HRA, EIA and licensing requirements for European Protected Species (EPS).

Our key concern remains the potential disturbance of marine mammals due to construction noise (particularly from pile-driving the turbine foundations). We understand methods for noise modelling to inform assessment is likely to be updated and, at the appropriate time, we seek a meeting with Marine Scotland and MORL to discuss and agree requirements.

We also seek a meeting with Marine Scotland and MORL to discuss and agree any requirements for population modelling in respect of key marine mammal species. In this regard, we support the use of the harbour seal framework assessment and PCoD approach to address the population consequences of disturbance to relevant species.

We note the focus of cumulative impact assessment (CIA) for HRA species will relate predominantly to potential impacts from the WDA in combination with those predicted from the EDA and Beatrice wind farms. During pre-application dialogue, it should be established whether other projects need to be taken into consideration for this and wider EIA and EPS licensing requirements.

- **Ornithology**

In **Appendix B** we provide advice on scoping the ornithological interests which may need to be considered going forward. We attach the 'long-list' produced for pre-application discussion of EDA and Beatrice (spreadsheet, 11th February 2011) which provides a useful starting point. This long-list can be iterated for the WDA through pre-application dialogue, in light of the outputs from MORL's aerial survey and with regard to any potential cumulative impacts that could arise from WDA.

We also list the SPA breeding colonies identified as being within foraging range of EDA (Table 1). This information can be used to help consider which species need to be addressed under HRA. Currently, for HRA the assessment has focused on the breeding season as the period of key concern where there could be significant impacts on SPA breeding colonies. While the consequences of impacts outwith the breeding season on SPA breeding colonies are less clearly understood, further discussions are required on ornithological interests to be scoped in or out, reference populations and assessment approaches for both HRA, EIA and CIA processes as part of the pre-application discussions.

On the 4th July 2016, Scottish Government announced a public consultation on a suite of marine SPAs which are intended to provide protection for birds at sea including divers, seaducks and seabirds[2]. In **Appendix B** we provide advice in relation to the draft proposal for the Moray Firth dSPA, relevant to consider in respect of WDA.

Besides these SPA seabirds, there may be other bird interests to consider from the 'long-list' (including those previously scoped out for the EDA) and we wish to discuss this with Marine Scotland and MORL during pre-application dialogue.

Key impacts on bird interests are predicted to occur during wind farm operation and can arise due to displacement of birds and/or the risk of collision with turbines. Methods to quantify these impacts have changed since our previous advice to EDA and Beatrice. This can be addressed as part of the recommended pre-application discussions.

Once impacts on individual seabirds have been quantified through the technical assessments (such as numbers of birds displaced, numbers of birds killed through collision), they need to be considered in relation to agreed reference populations. Potential impacts from WDA will need to be considered in combination with those from other appropriate plans and projects and we will need to agree the approach during pre-application discussions. Please see **Appendix B** for further detail.

- **Seascape, landscape and visual impact assessment**

We provide our advice on seascape landscape and visual impact assessment (SLVIA) in **Appendix C**. We recommend that assessment focuses on the impacts of the WDA in combination with EDA and Beatrice and provide the relevant guidance to consider.

- **Benthic interests**

We provide our advice on benthic interests in **Appendix D**, noting that MORL intend to survey the WDA as there is only limited data currently available for this area. At the appropriate time, once the outputs from benthic survey are available, we suggest a meeting between the relevant parties in order to agree the appropriate assessment methodologies.

- **Fish of Conservation Concern**

We have discussed marine fish with Marine Scotland Science and they will provide advice on these interests, particularly in relation to cod, herring and sandeel.

SNH has reviewed the advice given at application stage for the EDA in relation to diadromous fish and freshwater pearl mussels as qualifying interests of Special Areas of Conservation (please see response to MORL, 8th July 2013). On the basis of this advice, and because MORL have committed to an extensive monitoring programme in support of the National Research and Monitoring Strategy for Diadromous Fish, we wish to discuss whether SAC fish interests can be scoped out of assessment for the WDA.

[2] Announcement on the public consultation for marine SPAs:
http://scottishgovernment.presscentre.com/News/Sea-change-25eb.aspx
Further information available from: http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/proposed-marine-spas/

We therefore request a meeting with Marine Scotland and MORL in order to discuss this further.

- **Physical processes**

We provide our advice on physical processes in **Appendix E** and seek a pre-application meeting in order to agree how to use any available information for WDA and how best to update previous modelling work and assessments.

FURTHER INFORMATION AND ADVICE

JNCC and SNH can provide further advice on natural heritage interests, at appropriate stages, as work is undertaken by the applicant in support of their formal submission. We would be grateful if you could copy us into the formal scoping opinion in due course. In the meantime, if further information or advice is required in respect of this scoping response then please contact Sarah Canning at JNCC or Catriona Gall at SNH.

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MORL ROUND 3 OFFSHORE WIND FARM ZONE – WESTERN DEVELOPMENT AREA

APPENDIX A: MARINE MAMMALS

Marine mammal interests are addressed in Section 3.5 (p109-127) of MORL's scoping report. JNCC and SNH have reviewed this information in order to provide the following advice.

Key species

The frequency of marine mammal recordings in the Moray Firth are provided in Table 3.5-2 (p111) of the scoping report. Based on previous discussion and advice to the Moray Firth offshore wind developers' group (MFOWDG), we advise that harbour seal, bottlenose dolphin, harbour porpoise, minke whale and grey seal are the priority species for assessment in relation to the WDA.

At the appropriate time, we request a pre-application meeting with Marine Scotland and MORL in order to agree the current population estimates to be used as reference populations for each species under impact assessment.

- **Harbour seal**

Harbour seal are a qualifying interest of the Dornoch Firth SAC and we advise connectivity between the WDA and this designated site. As previously advised, the population of the Moray Firth seal management unit[3] should be used as the reference population for HRA and we take this as equivalent to the SAC population. The most up-to-date population estimate at time of assessment should be used for HRA licensing assessments.

- **Bottlenose dolphin**

Bottlenose dolphin are a qualifying interest of the Moray Firth SAC and we advise connectivity between the WDA and this designated site. We advise that the reference population for assessment should be that given in the SNCB guidance on management units for cetaceans in UK waters (2015)[4]. For bottlenose dolphin, this is the coastal east Scotland population. The most up-to-date population estimate at time of assessment should be used for HRA and EPS licensing assessments.

- **Harbour porpoise**

On the basis of the data collected so far, harbour porpoise are likely to be the most abundant marine mammal species recorded in the WDA. We advise that the reference population for the EPS licensing assessment should be that given in the SNCB guidance on management units for cetaceans in UK waters[4] and the most up-to-date population estimate at time of assessment be used.

- **Minke whale**

Although the consultation is delayed, SNH has submitted advice to Marine Scotland on the designation of four further Marine Protected Areas (MPAs) in Scottish territorial waters

[3] Seal management areas are determined by the Special Committee on Seals (SCOS): http://www.smru.st-andrews.ac.uk/documents/SCOS.pdf

[4] Guidance on cetacean management units from: http://jncc.defra.gov.uk/pdf/Report_547_webv2.pdf

including the Moray Firth Southern Trench where minke whales are one of the interests[5]. We advise that the reference population for any MPA assessment and for EPS licensing should be that given in the SNCB guidance[4] and the most up-to-date population estimate at time of assessment be used.

- **Grey seal**

There are no SAC designations for this species in the Moray Firth and, for the purpose of assessment, we do not advise connectivity between the WDA and any grey seal SACs. As previously advised, the current population of the Moray Firth seal management unit should be used as the reference population for EIA, using the most up-to-date estimate at time of assessment.

- **European Protected Species (EPS)**

All cetacean species are EPS. As well as bottlenose dolphin, harbour porpoise and minke whale, Table 3.5-2 (p111) lists the other cetaceans which have been recorded within the Moray Firth and will need to be considered in relation to EPS licensing requirements. For this 'long-list' of species, relevant reference populations will be determined with reference to the SNCB guidance on management units for cetaceans in UK waters[4], and the most up-to-date estimates at time of assessment should be used.

Baseline surveys

As stated in the WDA scoping document (Section 3.5.1), extensive data is available on marine mammal abundance and distribution within the Moray Firth. This includes the passive acoustic monitoring array funded by Marine Scotland, as well as the programme of post-consent monitoring that has been agreed via the MFRAG marine mammal sub-group. We support this regional approach to monitoring which ensures as much co-ordination as possible in the data-gathering.

In addition to this, MORL indicate marine mammal data will be collected during digital aerial surveys currently underway for seabirds (Section 3.5.5).

We would like to highlight the Small Cetaceans in the European Atlantic and North Sea (SCANS) surveys, which have been used to estimate cetacean abundances in European Atlantic waters. The last surveys were conducted in 2005; new surveys are underway (summer 2016), with updated abundance estimates anticipated for release mid 2017.

Key impacts to consider

Section 3.5.3 of the scoping report (pp120 – 124) clearly summarises the range of potential effects to consider. In respect of the WDA EIA, we agree the probability of risk to marine mammals from toxic contaminants, operational noise or electromagnetic fields is low and these potential effects can be scoped out of assessment as indicated in Table 3.5.3.1.

We advise that the greatest potential effect to marine mammals is likely to be disturbance related to construction noise, particularly as a result of pile-driving turbine foundations. We therefore request underwater noise modelling is carried out for the five key species of

[5] Further information on the draft Southern Trench MPA is available from: http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/marine-protected-areas-%28mpa%29/scottish-mpa-network-advice/

concern: harbour seal, bottlenose dolphin, harbour porpoise, minke whale and grey seal, in order to ascertain the number of individuals which could be disturbed by pile-driving activity.

We note that MORL intend to use the National Oceanic and Atmospheric Administration (NOAA) (2015) draft guidance for assessing the effects of anthropogenic sound on marine mammal hearing, rather than Southall *et al*. (2007). While we agree with the direction the NOAA work is taking, we would highlight this work is still at the draft stage. Current criteria require the use of sound pressure levels and cumulative sound exposure levels to assess injury. Models investigating disturbance are currently based on sound levels, however, it is now acknowledged the extent and duration of disturbance is influenced by several factors, not just the sound level.

As part of the pre-application discussions, we'll seek a meeting with Marine Scotland and MORL to discuss and agree the assumptions, parameters and methods to adopt for underwater noise modelling and, in particular, how cumulative impacts are to be addressed. We would note that while it was useful at the time, the discussion document produced by MORL and BOWL (referred to in Section 1.3.2.6 of the scoping report and provided in Appendix 1) is now largely superseded.

Assessing significance of impacts

As indicated above, HRA applies to harbour seal and bottlenose dolphin; EPS licensing requirements to bottlenose dolphin, harbour porpoise and the other cetacean species listed in Table 3.5-2 (p111). We advise that grey seal should be addressed under EIA, however, such assessment is **not** required for any of the other marine mammal species in addition to HRA or EPS licensing.

In order to consider the significance of underwater noise disturbance to marine mammals and the consequences of this on relevant populations, we remain supportive of the approaches that have been developed by MORL as part of MFOWDG. This includes the harbour seal assessment framework and application of the PCoD approach (population consequences of disturbance) to bottlenose dolphin.

Any requirements for population modelling will be determined by the outputs from underwater noise modelling, and will only apply to key species. Therefore, at the appropriate time, we seek a pre-application meeting with Marine Scotland and MORL to discuss and agree any requirements for population modelling, and to agree the approach to cumulative impact assessment for marine mammal interests for HRA, EIA and EPS licensing requirements.

Potential mitigation / monitoring

We recommend that the applicant considers and discusses the full range of mitigation techniques and guidance available for the proposed WDA.

Extensive discussions have been held by the MFRAG marine mammal sub-group regarding potential mitigation and monitoring methods in relation to underwater noise disturbance (as a result of pile-driving activity). We will continue discussion of these issues via MFRAG and, over time, the approach to noise mitigation for the WDA will be informed by best available evidence including any outputs from work undertaken on-the-ground during construction at Beatrice and EDA wind farms.

APPENDIX B: ORNITHOLOGY

Ornithological interests are addressed in Section 3.6 (p127-159) of MORL's scoping report. JNCC and SNH have reviewed this information in order to provide the following advice.

Key species

During pre-application discussion for EDA and Beatrice, the developers provided a 'long-list' of bird interests for consideration (received 11th February 2011). We attach this original list (which includes those subsequently scoped out for the EDA) as this provides a starting point to consider the full range of species which may potentially be affected by wind farm development in the Moray Firth and to inform scoping judgements for the WDA going forward.

During pre-application dialogue with Marine Scotland and MORL, the 'long-list' can be discussed and iterated in light of outputs from MORL's digital aerial survey and in relation to potential assessment requirements under both EIA and HRA. Further to this discussion there may be other bird interests to address, but in the meantime we are able to provide advice on the following aspects:

(i) Advice on seabird interests at SPA breeding colonies

In **Table 1** (see overleaf) we list the SPA breeding colonies identified as being within foraging range of the consented wind farm development (EDA and Beatrice). This list was based on the most up-to-date foraging information available at the time and it provides a good starting point for considering those SPA seabird interests which may also have connectivity to WDA.

While the process for identifying this connectivity will remain the same, there may now be updated information on seabird foraging ranges available from Birdlife International's seabird database[6] and/or from tracking projects such as FAME (Future of the Atlantic Marine Environment)[7]. We therefore advise that **Table 1** is reviewed in light of any more recent information and distance from the project to the developments sites clearly detailed in any future communication.

Currently, in respect of SPA breeding colonies, the HRA assessment has focused on the breeding season as the period of key concern where there could be significant impacts on SPA breeding populations. The consequences of impacts outwith the breeding season are less clearly understood and further discussions with Marine Scotland are required on ornithological interests to be scoped in or out, reference populations and assessment approaches for HRA, EIA and CIA processes as part of the pre-application discussions.

Advice on draft marine SPAs

On 4th July 2016, Scottish government announced a public consultation on proposals for a new suite of marine SPAs which are intended to provide protection for birds at sea including divers, seaducks and seabirds (see footnote 2 of the cover letter for further information). In this regard, we advise that further consideration will need to be given to the Moray Firth

[6] http://seabird.wikispaces.com/
[7] http://www.rspb.org.uk/ourwork/projects/details/255106-future-of-the-atlantic-marine-environment-fame-

dSPA as discussed below. We have also considered the Scapa Flow dSPA and we can advise that there is no connectivity between the MORL WDA and this protected area.
Moray Firth dSPA is being proposed for the following interests:

- **Wintering** – great northern diver, red throated diver, Slavonian grebe, scaup, common eider, long-tailed duck, common scoter, velvet scoter, common goldeneye, red-breasted merganser, European shag.
- **Breeding** – European shag.

We have considered the range of potential impacts that could occur from WDA on the Moray Firth dSPA and we have the following advice to provide in relation to disturbance, collision risk and displacement:

Moray Firth dSPA – advice on disturbance

While it is possible that qualifying interests of the dSPA may be recorded during wind farm survey, we advise that any disturbance (during construction, operation or decommissioning) is only a concern if it affects birds when they are within the dSPA itself. As there is some distance between the closest boundary of the WDA and the dSPA we consider this to be highly unlikely. It is possible that disturbance of birds within the dSPA may need to be considered in relation to vessel movements and/or placement of the export cable. These issues should be further considered, if necessary, as part of any HRA and/or in relation to any subsequent scoping consultation for the offshore transmission works.

Moray Firth dSPA – advice on collision risk

We advise that the strategic collision risk assessment undertaken by Marine Scotland can be used to inform consideration of any such impacts in relation to the wintering interests of the dSPA (see next section). In this regard, we would advise that potential collision risk is scoped in to any HRA for the dSPA, however, it will be addressed on the basis of existing information. The area of the dSPA has been determined to include the key foraging habitats of the species for which it's been designated, which is why we think only migratory movements need to be considered in respect of collision risk, rather than day-to-day foraging activity. We note that if there is any risk of collision to European shag during the breeding season then this will be assessed in relation to the breeding colony at East Caithness Cliffs SPA so that we do not require any additional work in relation to the dSPA.

Moray Firth dSPA – advice on displacement

While it is possible that qualifying interests of the dSPA may be recorded during wind farm survey, we do not consider that displacement of birds from the wind farm foot print is a key concern in respect of the dSPA. This is because the area of the dSPA has been determined to include the key foraging habitats of the species for which it's been designated. Displacement from the wind farm footprint is therefore unlikely to give rise to any key impacts on populations of the dSPA interests (either breeding or wintering).

(ii) Advice on migratory (non-seabird) interests

We advise that for non-seabird migratory interests on the 'long-list', information presented in Marine Scotland's strategic collision risk assessment can be utilised[8]. No additional work is

[8] Marine Scotland strategic CRM, report available from: http://www.gov.scot/Resource/0046/00461026.pdf

required by MORL in this regard, including with respect to wintering wildfowl interests of the Moray Firth dSPA (see preceding section).

The strategic assessment provides an overall estimate of collision risk that Scottish offshore wind farms may present to birds on migration, and we have confidence in the outputs for non-seabird migratory interests such as wildfowl and waders. While WDA is not explicitly addressed in this assessment (see Table 1 of the report, p19), we note that the modelling was done on a "worst case" basis.

Since the time of the report, a number of the wind farms included for assessment have now been withdrawn, and the design envelopes for consented schemes have been substantially refined reducing the levels of predicted collision risk. We therefore feel that there is sufficient "flex" in the report to indicate that any potential impacts from WDA lie well within the level of strategic collision risk that's been advised for migratory (non-seabird) interests.

Reference populations

As discussed above, we identify that the reference population for HRA in respect of current SPAs is the **breeding population**. SNH has recently published a report of the 2015 counts for East Caithness Cliffs SPA and this year (2016) carried out counts at North Caithness Cliffs SPA, which will be published in due course. For the qualifying interests of these SPAs, this is the most up-to-date information which should be used, except for Atlantic puffin where the counts are still under discussion.

Reference populations for other possible ornithology assessments (i.e. non-breeding, EIA or CIA) are yet to be agreed and will be discussed as part of the pre-application dialogue.

Baseline survey

The methods for digital aerial survey of the WDA (April 2016 to March 2017) were discussed and agreed at a meeting held 24th March 2016 and in ensuing correspondence.
Currently, MORL intend to undertake a single year of survey work to cover the WDA, and will also undertake environmental co-variate modelling in order to make predictions about seabird abundance in the WDA, based on all available seabird data collected for the Moray Firth (see Section 3.6.5 of the scoping report). JNCC and SNH have confirmed that we think there is merit in this approach (email, 27th April 2016) and we have agreed to meet to discuss it further once the survey data has been analysed and the initial literature review completed.

Key impacts to consider

As discussed in Section 3.6.3 of the scoping report, we agree that displacement (including barrier effects) and collision risk are likely to be the key impacts to seabird species during the operational phase of wind farm development. Displacement during wind farm construction or decommissioning may also be a concern. We advise that potential habitat loss and effects on prey species should also be scoped in to assessment and included in Table 3.6.3.1 (p147). Further advice on the way to consider impacts to SPA seabirds beyond SPA site boundaries is given in our original scoping advice to MORL EDA, letter dated 28th October 2010, Annex D.

Following our application advice to EDA and Beatrice (letters dated 8th July 2013) we had extensive discussion with Marine Scotland and the developers to agree a common approach to the impact assessments for seabird interests. Agreement was reached with regard to the following approaches for quantifying the levels of impact:

- the method to apportion impacts between breeding colonies (SPA and other),
- the approach to displacement assessment and associated assumptions,
- the approach to collision risk modelling and associated assumptions.

This agreement fed through into the appropriate assessment undertaken by Marine Scotland and issued in support of the Section 36 consents, 19th March 2014.

Since this time, there have been further updates to these assessment methods with a number of research projects commissioned to help inform the approach. Not all of the updates are final and not all of the projects have reported, so we think it's essential to **establish a timetable for pre-application discussions** going forward in order that we can agree the methods to use for WDA.

In the meantime, we provide a short summary of current work in relation to these issues:

- **Seabird sensitivity scores**

There have been some updates in relation to guidance on seabird sensitivity to offshore wind development, Wade *et al*. (2016) is the most up-to-date reference to use[9].

Much of the discussion in the WDA scoping report relating to seabird sensitivity and estimates of impact is based on information submitted by MORL for the EDA. We note that much of this was superseded by post-application dialogue so that it is Marine Scotland's appropriate assessment which should be referred to for the final list of seabirds potentially at risk of impact, and the amounts of collision mortality and displacement that were predicted (see footnote 1 of the cover letter).

- **Apportioning**

For breeding season HRA, we can advise that predicted impacts will need to be apportioned between the breeding colonies (SPA and other) within foraging range. At present, the recommended method for apportioning is set out in SNH guidance[10] and this is the approach that was used for EDA and Beatrice. As noted above, new information may become available on foraging ranges so that this should be discussed with Marine Scotland and ourselves as part of pre-application dialogue.

We are also aware that Marine Scotland has commissioned a project on apportioning[11] which is currently underway. Depending on timescales and outputs, this may need further discussion in respect of the assessments for WDA.

- **Seabird collision risk**

We welcome the approaches to collision risk modelling outlined in Section 3.6.3.3 of the scoping report, which proposes to use Band (2012) guidance[12] alongside R code developed

[9] Wade, H.M., Masden, E.A., Jackson, A.C. and Furness, R.W. 2016. Incorporating data uncertainity when estimating potential vulnerability of Scottish seabirds to marine renewable energy developments. Marine Policy, 70: 108-113. http://www.sciencedirect.com/science/article/pii/S0308597X1630241X

[10] SNH guidance on apportioning: http://www.snh.gov.uk/docs/A1355703.pdf

[11] Attributing Seabirds at Sea to Appropriate Breeding Colonies and Populations, CR 2015 19.

by Masden (2015)[13], and will consider any updates to avoidance rates should results from the Offshore Joint Industries Project (ORJIP)[14] become available in time. We recommend these aspects are discussed as part of the pre-application dialogue.

- **Seabird displacement**

There has been extensive discussion of methods to address seabird displacement, particularly at the workshop held 6 & 7 May 2015. Following this, the SNCBs have been working together to produce joint guidance on assessing seabird displacement, due to be published shortly. We recommend that the approach to assessing seabird displacement is also discussed as part of the pre-application dialogue.

Assessing significance of impacts

Any requirements for population modelling will be determined by the predicted levels of impact for WDA on seabird interests, particularly in the context of impacts predicted for the EDA and Beatrice. Therefore, at the appropriate time, we seek a pre-application meeting with Marine Scotland and MORL to discuss and agree any requirements for population modelling and to agree an approach to cumulative impact assessment for seabird interests. In the meantime, the review of seabird demographic rates commissioned by JNCC has been published and can be used to inform the construction of any necessary population models[15].

Potential mitigation / monitoring

Potential mitigation can be discussed at the appropriate time, if it appears that significant impacts are likely. In respect of consented development (EDA and Beatrice), there has been extensive discussion of post-consent monitoring requirements via the Moray Firth Regional Advisory Group and a programme of work has been agreed. At the appropriate time, any monitoring requirements for WDA can be considered in light of this work.

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[12] Collision risk guidance (2012) available from: http://www.bto.org/science/wetland-and-marine/soss/projects

[13] R code available from: http://marinedata.scotland.gov.uk/dataset/developing-avian-collision-risk-model-incorporate-variability-and-uncertainty-r-code

[14] ORJIP seabird avoidance study: http://www.bou.org.uk/bouproc-net/marine-renewables/davies-et-al-b.pdf

[15] Horswill, C. & Robinson R. A. 2015. Review of seabird demographic rates and density dependence. *JNCC Report No. 552*. Joint Nature Conservation Committee, Peterborough. http://jncc.defra.gov.uk/pdf/JNCC_Report_552_March_2015.web.pdf

TABLE 1 – SPA seabird interests to consider for WDA, based on previous advice

Seabird Species	SPAs within foraging range of EDA
Northern fulmar	East Caithness Cliffs Troup, Pennan & Lion's Head North Caithness Cliffs Hoy, Orkney Copinsay, Orkney Calf of Eday, Orkney Rousay, Orkney West Westray, Orkney
Cormorant	East Caithness Cliffs Inner Moray Firth
Black-legged kittiwake	East Caithness Cliffs Troup, Pennan & Lion's Head North Caithness Cliffs Hoy, Orkney Copinsay, Orkney
Great black- backed gull	East Caithness Cliffs Hoy, Orkney
Herring gull	East Caithness Cliffs Troup, Pennan & Lion's Head
Common guillemot	East Caithness Cliffs Troup, Pennan & Lion's Head North Caithness Cliffs Hoy, Orkney
Razorbill	East Caithness Cliffs Troup, Pennan & Lion's Head North Caithness Cliffs
Atlantic puffin	East Caithness Cliffs North Caithness Cliffs Hoy, Orkney
European shag Gannet	East Caithness Cliffs Sule Skerry and Sule Stack Fair Isle North Rona and Sula Sgier Noss Forth Islands Hermaness, Saxa Vord & Vala

Arctic skua	Hoy, Orkney West Westray, Orkney Fair Isle
Great skua	Hoy, Orkney Noss Hermaness, Saxa Vord & Vala

APPENDIX C: SEASCAPE, LANDSCAPE & VISUAL IMPACT ASSESSMENT

Seascape, landscape and visual interests are addressed in Section 4.5 (p191-200) of MORL's scoping report. SNH has reviewed this information in order to provide the following advice.

Approach to assessment and available guidance

For seascape, landscape and visual interests, it will be key to focus on any additional impacts from proposed development in the WDA in combination with the consented wind farms – Telford, Stevenson and MacColl in the MORL Round 3 zone and Beatrice in Scottish territorial waters.

SNH has published the following guidance that should inform seascape, landscape and visual impact assessment (SLVIA), all of which are available from our website:

- *Offshore renewables – guidance on assessing the impact on coastal landscape and seascape.* SNH (2012).
  www.snh.gov.uk/docs/A702206.pdf
  This guidance is the primary point of reference for SLVIA at scoping stage.
  It includes our advice on use of 'design envelopes' for offshore wind development and how this aspect might be addressed under SLVIA (see Annex 2).

- *Visual Representation of Wind Farms*. SNH (2014).
  www.snh.gov.uk/planning-and-development/renewable-energy/visual-representation/
  This guidance provides advice on the production of visual material and illustrations in support of the assessment. It updates the 2006 guidance referenced in MORL's scoping report (see Section 4.5.1, p192 and Section 4.5.4, p196). The recommendations apply to offshore wind as well as those onshore.

- *Siting and designing wind farms in the landscape*. SNH (2014).
  www.snh.org.uk/pdfs/strategy/renewables/Guidance_Siting_Designing_wind_farms.pdf
  While this guidance applies to onshore wind farm development there may be some aspects that are relevant to consider in respect of offshore proposals.

- *SNH advice on offshore wind design statements*. SNH (2016).
  Applications for offshore wind development in Scotland have usually been made on the basis of a 'design envelope' so that wind farm layout, choice of turbine and other aspects are not finalised until after consent is granted for the project. With this background, SNH's advice note considers the design process for offshore wind, focusing on the purpose and content of design statements. We circulated this to Marine Scotland on 11th February 2016 and can provide a copy on request.

While the scoping report doesn't mention the above guidance, it does make reference to SNH's forthcoming guidance on coastal character assessment (currently being finalised).
In light of the discussion in Section 4.5.4 (see p198), we advise that MORL do not need to carry out any further studies on baseline coastal character (see next section) as the previous work they commissioned adopts good practice and can be used to inform assessment for the WDA. We're surprised that this information is not included as one of the relevant datasets in Table 4.5.1.

We highlight that we are concerned by the discussion of Scott *et al*. (2005) given on p193 as it misinterprets the outputs from this commissioned study. In the first instance, please refer to our current guidance on undertaking SLVIA, as noted above (SNH, 2012).

Coastal character – baseline information

We advise that MORL can utilise the baseline assessment they commissioned from OPEN to define the coastal character units in the study area for the EDA (see Section 4.5.1). We do not anticipate a significantly different study area for the WDA so that this existing information can be used to inform the SLVIA. Where necessary these existing coastal character units should be reviewed to ensure they take account of all operational (or in-construction) terrestrial wind farms to ensure currency of the baseline.

Note that SNH advises use of the term "coastal character" in preference to "seascape character".

Visibility and zones of theoretical visibility

We note that it will be key to determine those areas where the WDA may potentially extend the zone of wind farm visibility when considered in combination with EDA and Beatrice.
Comparative ZTV modelling is typically helpful in informing any changes or extensions to patterns of cumulative visibility and in turn viewpoint selection (discussed in the next section). We anticipate that the consented development (EDA and Beatrice) will be built, so that in most instances the WDA would be seen together with these wind farms.

Viewpoint Selection and Assessment

The viewpoint selection that was agreed for the EDA provides the starting point for discussion in respect of the WDA. As a first step we advise reviewing the viewpoints agreed for cumulative impact assessment between EDA and Beatrice to focus on those where the WDA might expand the extent of development, and / or increase the density of turbines seen on the horizon. Then if the zone of theoretical visibility indicates any areas where the WDA is likely to introduce turbines into views that are not currently affected by either the EDA or Beatrice, these should also be considered.

Further guidance on visual impact assessment is provided in *Offshore Renewables – guidance on assessing the impact on coastal landscape and seascape.* SNH (2012). As set out in this guidance, there should be a consultation meeting to discuss viewpoint selection between Marine Scotland, the relevant planning authorities, the developer and SNH. This meeting should also agree the "worst case" design and layout that will be illustrated on the visualisations (see next section). If any examples of initial visualisations are to be discussed, then these should be supplied as hard copy prior to meeting.

Visualisations

We recommend that visualisations are produced in accordance with SNH's guidance on *Visual Representation of Wind Farms,* available from our website as indicated above. This aspect can be discussed as part of the consultation meeting recommended above.
We note that it may be possible to utilise the existing baseline photography for those viewpoints previously assessed in relation to EDA. This photography should be checked on-site to ensure that there have been no significant changes to the baseline, particularly in respect of inland viewpoints, where changes such as tree growth, new power lines or other new development may alter the foreground of the view.

Potential Mitigation and Monitoring

MORL should clearly articulate the design principles for the WDA particularly its relationship with the consented development (Beatrice and the EDA). From experience, we understand that much of the detailed design will take place post-consent, however, at application stage it should still be possible to set out the design principles and the key constraints which may affect turbine siting and design. In this regard, please refer to the SNH guidance listed above, particularly that in relation to offshore wind design statements.

APPENDIX D: BENTHIC INTERESTS

Benthic interests are addressed in Section 3.3 (p71-89) of MORL's scoping report. JNCC and SNH have reviewed this information in order to provide the following advice.

Baseline survey

Most of the available datasets are focused on the EDA and cable route, and there is only limited information for the WDA. Site-specific surveys are therefore proposed for the WDA, and we agree that this is necessary. Survey will include seabed sampling, video surveillance and scientific trawling. The modelled geophysical data from the coarse grid survey (2010) will be used to identify the target areas for this survey and it will be designed to supplement the existing data. We consider that the proposed approach is reasonable, and it builds on previous experience. The methodology is informed by Cefas guidance, and methods are described in Section 3.3.5. In respect of survey methods, we also highlight the recent guidance provided in Hitchin *et al*. (2015)[16].

We recommend that the ES presents clear information on, and identification of, the main biotopes found on-site. The occurrence of any priority marine features[17] (which may include Annex I habitats) should be recorded. We Note that Ocean Quahog (*Arctica islandica*), a Scottish PMF and listed on the OSPAR list of threatened/declining species is known to be present in the Moray Firth and a small number of juveniles were recorded in the EDA (MORL, 2012). JNCC advice regarding this feature is currently being updated and will be available shortly.

The biotopes/habitat map should be used by the applicant to inform their finalised wind farm layout, considering any potential use of scour protection. We note that MORL are including

[16] Hitchin et. al. (2015) Epibiota remote monitoring from digital imagery: operational guidelines. http://www.nmbaqcs.org/media/1591/epibiota_operational_guidelines_final.pdf
[17] Hitchin et. al. (2015) Epibiota remote monitoring from digital imagery: operational guidelines. http://www.nmbaqcs.org/media/1591/epibiota_operational_guidelines_final.pdf

gravity base foundations within their intended design envelope (Section 1.2.4.4, Table 1.2-2, p29-31) and we seek further discussion with the relevant parties to agree how to account for this in any "worst case" assessment for benthic interests.

Key impacts to consider

A summary of potential effects on benthic interests is given in Table 3.3.3.1 and discussed in detail in the following sections. We consider the list to be comprehensive and we have no additional suggestions.

We would, however, highlight that disturbance to seabed habitats as a result of jack-up placement and the installation of cables (as described in Section 3.3.3.2) is not always temporary, for example if rock dump is left after being used to stabilise jack-up vessels. We recommend discussing this further during the pre-application dialogue and, if necessary, dealing with these potential effects as temporary/permanent.

The approach to impact assessment for benthic interests is discussed in Section 3.3.4. The intention is to use best practice available at the time of the assessment along with experience gained from the EDA and BOWL assessments. At the appropriate time, following completion of the benthic survey work, we suggest that there's a meeting between the relevant parties in order to agree the assessment methodologies.

Potential Mitigation

Potential mitigation can be discussed at the appropriate time, if it appears that significant impacts are likely.

APPENDIX E: PHYSICAL PROCESSES

Physical processes are addressed in Section 2.2 (p46-62) of MORL's scoping report. JNCC and SNH have reviewed this information in order to provide the following advice. As noted in Section 1.1 of the scoping report the current consultation is in relation to the wind farm only, so that we are not providing any advice on the transmission infrastructure and cable routes as these will be subject to a separate scoping exercise at a later date.

Available information

We recommend a meeting to discuss available information in respect of bathymetry (Section 2.2.1), metocean conditions (Section 2.2.2), geology, sedimentary environment & water quality (Section 2.2.3). On the basis of the scoping report, we are not yet in a position to confirm that this information is sufficient to characterise the baseline conditions for the WDA, or to say that these conditions are the same as for the EDA. In particular, we would highlight the following points as needing further consideration:

- Bathymetry survey work was undertaken in 2010 and covered 20% of the WDA in a varying sample design (four different grid patterns were used). We seek confirmation of the level of confidence in this data, and further discussion of how the seabed bedform may relate to hydrodynamics.
- In respect of tidal regime, there in an observation in Section 2.2.2.1 (p53) that current speeds are ca.0.3m/s, apparently 33% lower than in the EDA.
- In the sections on wave and wind climate (p53 – 55), there needs to be further discussion and explanation of the similarities or differences between the WDA and EDA.

- The only bedforms mentioned in Section 2.2.3 are 0.3m high ripples in gravelly areas, despite larger sandwaves being noted in Section 2.2.1. We recommend further synthesis across the available information on bathymetry, geology and sedimentary environment in order to characterise baseline conditions at WDA.

As noted, we recommend a meeting to further discuss these issues to ensure that the available data is sufficient to inform the baseline for physical processes assessment.

Key impacts to consider

Potential effects are discussed in Section 2.2.4 of the scoping report, however, we do not agree with scoping out these effects at this initial stage in the process (as seems to be suggested by Table 2.2.4.1). We advise that these potential effects are considered in the physical processes assessment for WDA. We agree with the suggestion (under 2.2.5) that modelling undertaken for EDA will be updated in light of any more recent data. We advise that this modelling (sediment transport modelling as well as hydrodynamic modelling) is reviewed and any required updates are discussed and agreed at the meeting we recommend above.

As part of this discussion we will need to agree which receptors are a focus for assessment. As well as priority marine features (see discussion under Appendix D on benthic interests) we advise including the marine and coastal habitats of the Moray Firth, the Dornoch Firth and Culbin Bar Special Areas of Conservation.

We note that MORL are including gravity base foundations within their intended design envelope (Section 1.2.4.4, Table 1.2-2, p29-31) and we seek further discussion with the relevant parties to agree how to account for this in respect of physical processes.

Cumulative impacts are mentioned in Section 2.2.6 where reference is made to the discussion document produced by MORL and BOWL. While this was very useful at the time, much of the contents have since been superseded so that we recommend any pre-application meeting also determines the scope of cumulative impact assessment for WDA in respect of physical processes.

ABERDEENSHIRE COUNCIL ("ASC")

Aberdeenshire Council consider that Marine Scotland are generally well placed to provide the expertise required to determine if the offshore elements of the Scoping Report are acceptable and if the proposals can be adequately managed with low risk to the marine environment. Officers from the Planning Service are working closely with the applicants in relation to the onshore elements of the wider project.

Having appraised the offshore elements of the project, the following issues should be considered: In terms of mitigation of any potential adverse effects associated with this proposed development, Aberdeenshire Council would suggest that following known industry best practice in terms of constructing and erecting offshore wind turbines, would be appropriate.

Landscape and Seascape visual impacts are of primary interest to Aberdeenshire Council. The scope and methodology outlined within the Scoping Report generally appears to be acceptable, particularly as this draws on experience and the approach taken with the 2012 ES prepared in relation to a related MORL project.

In the seascape, landscape and visual impact assessment for the proposed development, information should be primarily graphic, based on ZTV information for hub height and tip height of an appropriate wind energy development layout. Panoramas, photomontages and wireline models should be produced of the proposal with accompanying assessment of seascape, landscape and visual effects. Any proposed wind monitoring masts, maintenance platforms etc. should also be included in the seascape, landscape and visual impact assessment.

A detailed ZTV should be produced as a basis for the viewpoint selection process when the final development layout and wind turbine specification is confirmed. Cognisance should be made to onshore visual receptors throughout this part of the process.

The applicant needs to fully address the issue of cumulative impact as part of the seascape, landscape and visual impact assessment to fully address the potential combined visual affects between the MORL West proposed development and the onshore wind energy projects that fall within the agreed extent of a cumulative ZTV.

The proposed MORL West development will potentially be seen in combination with other onshore wind energy developments in Aberdeenshire, and potentially in Moray and Highland Council areas, and this issue needs to be fully assessed. For the cumulative impact assessment, appropriate common viewpoints and sensitive receptors that may have been used for other wind energy applications should be identified. The cumulative seascape, landscape and visual impact assessment should be primarily graphic based, with ZTV information, panoramas, photomontages and wireline models etc. An assessment of cumulative visual affects should be supplied in accordance with up to date SNH guidance etc. The appropriate extent of the base map and related ZTV for the cumulative assessment of all publicly known wind energy development should be confirmed with SNH.

Aberdeenshire Council would also welcome and request further consultation on viewpoint selection for all visual, land and seascape assessments.

The environmental statement (ES) accompanying any application should fully assess any impacts of the works on the interests of all the protected areas. This should include, but not be limited to, potential impacts on habitats as a result of any pollution event and disturbance to relevant species as a result of noise, vibration and other construction activities. Offshore Archaeology should also be considered as outlined within the Scoping Report.

MARITIME AND COASTGUARD AGENCY ("MCA")

I have now had an opportunity to review the Scoping Report provided by EDP Renewables UK Ltd for the proposed MORL Western Development Area in the outer Moray Firth and would comment as follows:

The Environmental Statement should supply detail on the possible the impact on navigational issues for both commercial and recreational craft, viz.

Collision Risk

Navigational Safety

Visual intrusion and noise

Risk Management and Emergency response

Marking and lighting of site and information to mariners

Effect on small craft navigational and communication equipment

The risk to drifting recreational craft in adverse weather or tidal conditions

The likely squeeze of small craft into the routes of larger commercial vessels.

A Navigational Risk Assessment will need to be submitted in accordance with MGN 543 (and MGN 372) and the MCA Methodology for Assessing the Marine Navigation Safety & Emergency Response Risks of Offshore Renewable Energy Installations (OREI).

Particular attention should be paid to cabling routes and where appropriate burial depth for which a Burial Protection Index study should be completed and, subject to the traffic volumes, an anchor penetration study may be necessary. If cable protection are required e.g. rock bags, concrete mattresses, the MCA would be willing to accept a 5% reduction in surrounding depths referenced to Chart Datum.

The cumulative and in combination effects require serious consideration, particularly with the adjacent MORL Eastern Development Area and Beatrice wind farm projects. Although layout plans will be decided at a much later stage, due consideration must be given for either lines of orientation that allow a continuous passage of vessels and/or SAR helicopters through the sites, or for sufficient air space between sites to allow SAR helicopters to safely manoeuver outside the turbine boundaries when conducting SAR operations.

Given that neither the capacity nor structures of the individual wind turbine generators have been decided, the principles of the Rochdale envelope should be used in the EIA.

The shipping and navigation study should include radar and manual observations in addition to AIS data to ensure commercial vessels of less than 300GT, fishing vessels less than 15m and recreation craft are captured. Given the potential to displace current traffic routes, full consideration of the implications to all identified marine users will need to be assessed.

Particular consideration will need to be given to the implications of the site size and location on SAR resources and Emergency Response Co-operation Plans (ERCOP) for both construction and operation phases.

Reference to the Maritime Accident Investigation Branch should be amended to the Marine Accident Investigation Branch.

References to Exclusion Zones during construction activities should be amended to Safety Zones. It should not be assumed Safety Zones will be automatically applied. These are subject to successful applications made to DECC.

References to MCA Marine Rescue Coordination Centres (MRCC) should be replaced with Coastguard Operations Centres (CGOC). The nearest CGOC is Aberdeen.

MORAY COUNCIL (“MC”)

A formal Scoping Opinion has been requested from Moray Offshore Renewables Limited regarding the content of an Environmental Statement which is to be submitted at a later date to the Moray Council for consideration as part of the any planning application for the above proposed development. Apologies for the delay in responding to the scoping request.

We note the content of the Environmental Impact Assessment Scoping Report, and would make the following comments.

1. The Seascape, Landscape and Visual Impact Assessment relating to the Moray coast line should have several key viewpoints within settlements along the coastline, and Moray Council would wish to be party to the selection process of such viewpoints and the form and content of photos, wirelines and photomontage figures provided. Agreement with stakeholders in with para 4.5.5 suggests such involvement.

2. As suggested, figures showing the visual impact of any nautical or aviation lighting on the turbines from the Moray coast would also be beneficial.

3. Moray Council is also the harbour authority and would wish early engagement about what facilities are available to MORL and on any likely impact if Moray harbours are to be used. If the anticipated use of harbours are known this would be relevant to assessing the infrastructure and socio economic impact of the proposal.

NORTHERN LIGHTHOUSE BOARD ("NLB")

With regard to the consultation and the scope of assessment, we would only comment on that part relating to Shipping and Navigational Safety contained within several sections of the consultation document.

We would advise that any marking and lighting recommendations required for the Western Area Development will be made in a formal response through the Marine Licence consultation process, and will be based on IALA Recommendation O-139 with a continuity of Marking and Lighting relative to the previously constructed Eastern Area. It may also be necessary to mark the landfall site of the export cable routes as previously stated in our response regarding the development of the MORL wind farm as a whole and depending on the location chosen after the OFTO process has been completed. All navigational marking and lighting of the site or its associated marine infrastructure will require the Statutory Sanction of the Northern Lighthouse Board prior to deployment.

We would require the Navigational Risk Assessment to be in accordance with the information given at sections 4.2.4 and 4.3.4, and in line with the requirement of MCA Marine Guidance Notice 543. We note that the vessel traffic analysis and data has been mostly derived from the MORL ES 2012 which may need to be updated to meet MCA guidance but that land observations, consultation with users at a local level and a desk top study will be conducted to ensure a more complete Navigational Risk Assessment.

We would welcome and encourage engagement with the Moray Firth Offshore Wind Developers Group to work together to minimise the cumulative impact of site development, including any developers within the Scottish Territorial Waters awards.

SCOTTISH ENVIRONMENT PROTECTION AGENCY ("SEPA")

We note that this Scoping Opinion is for the offshore components only of the Moray Offshore Renewables Ltd (MORL) Western Development Area Wind Farm Infrastructure, Moray Firth and have reviewed a copy of the Scoping Report 'Western Development Area Offshore Wind Farm Infrastructure: Offshore Wind Turbines, Foundations/Substructures and Inter-Array Cables' prepared by EDP renewables dated May 2016.

As we only now comment on proposals for works above MLWS which fall under the appropriate Town and Country Planning (Scotland) Act ,we have no comments to make on the Scoping Report for the offshore element of this proposal.

Please refer to our standing advice on marine consultations within guidance document SEPA standing advice for The Department of Energy and Climate Change and Marine Scotland on marine consultations.

If, after consulting this guidance, you consider that a particular part of this proposal is novel or raises a particular environmental issue relevant to our interests which is not addressed by the standing advice, then we would welcome the opportunity to be re-consulted. Please note that the site specific issue on which you are seeking our advice must be clearly indicated in the body of your consultation request.

We do note however that the proposed offshore wind farm will require transmission cabling and other associated infrastructure works and that a further Scoping Report will be prepared for these onshore works. We will welcome future engagement through the appropriate Town and Country Planning (Scotland) Acts in due course.

Non Statutory Consultees

MARINE SCOTLAND SCIENCE ("MSS")

Marine Scotland Science has reviewed the submitted scoping report and has provided the following comments.

Ornithology

Discussion with SNH, JNCC and MSS regarding how the Masden (2015) version of the Band Collision Risk Model will be used to estimate the number of collisions, and how these outputs will be used, is strongly advised. Similarly, discussion with SNH, JNCC and MSS on the PVA approaches to be used to assess population level consequences of estimated effects should take place. The analyses of the various seabird data sets available for the area have the potential to be complex and challenging due to the varying methods used, spatial and temporal scales of survey, and ages of data. Regular updates on progress made and challenges encountered, alongside discussions on how the outputs could/ will be used should therefore take place with SNH, JNCC and MSS.

Marine Mammals

MSS welcome the opportunity to provide comments on this scoping document. As this development is immediately adjacent to an already consented proposal, we anticipate that the EIA process will be informed by, and learn the lessons from the previous EIA process. This is evident from the scoping report, whereby the important receptors and potential impact pathways are identified. MSS would encourage the most recently available data to be used to inform the ES, including work undertaken as part of the MMMP for the currently consented development, which Marine Scotland has contributed to funding. Depending upon the respective timelines, this may also include data from the SCANS-III surveys.

Species for consideration

Harbour seal – *Phoca vitulina*

Since the MORL EDA ES (2012) more telemetry data have become available, and we welcome the updated modelling of harbour seal distribution. We would welcome the inclusion of data collected under the MMMP, particularly where this can help to inform the HRA.

Grey seal – *Halichoerus grypus*

We are content with the use of updated seal usage maps as per Jones et al. (2013) however we would like the developer to be aware that these maps are likely to be updated on the Marine Scotland website within the next few months. It is worth MORL remaining in contact with MSS regarding updated seal usage maps.

Harbour porpoise – *Phocoena phocoena*

Whilst recognising that the density map shown (Fig. 3.5-3) is the current best available porpoise distribution map, we encourage the updating of predicted density of harbour porpoise within the Moray Firth through the inclusion of new data from aerial surveys and potentially also from static passive acoustics, where this is appropriate. MSS are content that aerial survey data and passive acoustic data that are held by us can be requested by

MORL. However, in some cases, it may be easier for pre-processed outputs to be used and so we would welcome discussion about the most appropriate way in which to take this forward.

Bottlenose dolphin – *Tursiops truncates*

In paragraph 1, p. 117, it states that bottlenose dolphins are restricted to coastal waters. This is generally true of the east coast population, but not necessarily true of the species in general. However, the main concern around bottlenose dolphins is in relation to the potential for an effect on the conservation status of the Moray Firth SAC. We would again welcome the inclusion of data collected under the MMMP on the population size and any information that may be useful on demography, for use within the HRA.

Minke whale – *Balaenoptera acutorostrata*

We recognise that SCANS II density estimates are currently the best available and most conservative estimates of minke whale abundance available. If the data are available in time, we would welcome the inclusion of SCANS-III data in the ES, which are being collected during summer 2016.

Pathways for impact

MORL has identified potential impact pathways from the construction, operation and decommissioning of the wind farm, and we believe has scoped in the potentially important effects. The most important impact in this context is the noise generated as a result of pile driving and we welcome the statement of intent to consider piling options that produce lower noise levels. We consider that there will be a requirement for noise propagation modelling to inform the assessment and that this should be carried out on the worst case scenario for impacts to marine mammals, in terms of the options in the Rochdale Envelope. These results will then be required to feed into impact assessments for marine mammal species. MSS are content that the seal assessment framework (Thompson et al. 2013) is used for this, but would also point out that other frameworks have been developed more recently (e.g. interim PCOD and DEPONS) and that these may useful in this assessment process. There will also be a need to assess the cumulative impacts to these populations (also see comments below).

If gravity bases, or other bases that require substantial seabed preparation works, are scoped into the project, then we would consider that loss of foraging habitat for marine mammals will require assessment, and that this should be coordinated with the assessments for fish ecology.

Refinement of the Rochdale envelope will reduce the extent of the assessment that requires to be undertaken and we would encourage MORL to consider areas where this may be appropriate.

Cumulative effects

MSS considers that there is potential for cumulative effects with the MORL EDA project and the BOWL project. MSS would welcome further discussion about other developments that should be included in the cumulative impact assessment; we consider that any licensed or consented project that may impact upon the same populations should be included, as well as other projects that are further along in the planning process. MS-LOT should be included in further discussion of this and will be able to provide lists of projects that are currently in the planning process.

HRA

MSS welcome the stated intention to discuss the SACs that require HRA with us and the SNCBs. We would add auditory injury (PTS) to the list of assessment criteria. Mitigation options are likely to mean that this does not occur, but at this stage in the assessment process we would like to ensure that this is considered.

References

Thompson PM, Hastie GD, Nedwell J, Barham R, Brookes KL, Cordes LS, Bailey H, McLean N (2013) Framework for assessing impacts of pile-driving noise from offshore wind farm construction on a harbour seal population. Environmental Impact Assessment Review, 43:73–85.

Marine Fish Ecology

The scoping report outlines proposed datasets to identify baseline characteristics for the fish and shellfish ecology EIA in table 3.4-1. MSS is content with this aspect and welcomes inclusion of such up to date information within the EIA.

Table 3.4.1.1 identifies the potential effects of development in the WDA on fish and shellfish ecology. MSS agrees with the scoping report that each should be scoped into the EIA and is content with the identified associated phases.

The scoping report provides a good and comprehensive list of marine fish species for consideration however, whilst it identifies those potential effects of development in the WDA on fish and shellfish ecology, it does not seem to clearly identify whether these species are to be scoped in or out of the EIA. For example, table 3.4-5 provides the conservation status of fish species recorded in landings data (2000 – 2009) within the regional study area. This list, for completeness, includes black scabbardfish, blue ling and Greenland halibut however given that these are generally associated with deep-water, it would be expected that they are scoped out of the EIA. The scoping report highlights assessments for the MORL EDA, including the species considered and, whilst it is not expected that there would be much, if any, deviation from this within the WDA EIA, clarification from the applicant on species to be scoped into the WDA assessments would be welcome. MSS are happy to engage with the applicant to discuss, should it be of benefit.

Commercial Fisheries

MSS has reviewed MORL Western Development Area EIA Scoping Report with an emphasis on commercial fisheries and has provided the following comments:

Section 4.2.1 provides the commercial fisheries baseline characterisation and list potential effects associated with the Western Development Area. Most information have been derived from the MORL ES in 2012. It is advised that more recent data should be used to describe the baseline (5 most recent years' worth of data 2011-2015). This will be possible with MMO landings data by ICES rectangles as listed in Table 4.2-1.

Table 4.2-1 listing 'Datasets for the Commercial Fisheries EIA' should expand to cover landings and numbers of active fishing vessels broken down by length classes, by adjacent fishing ports, and ICES rectangle level (see Scottish Sea Fisheries Statistics). Information should be put in context (e.g. percentage share of the national landings etc.) to highlight importance.

It is stated that MORL EDA assessment predicted moderate effects on the scallop fishery and minor effects on the whitefish fishery. In order to reduce these effects, MORL agreed a draft Commercial Fisheries Mitigation Strategy with the Scottish Fishermen's Federation and established the Moray Firth Commercial Fisheries Working Group to discuss concerns and mitigation measures. No reference to either the proposed function of the MFCFWG in relation to the WDA is made or the cumulative impacts. It should be noted that combined effects from EDA and WDA might not simply be additive. It is stated that "the extent of displacement will be a function of the temporary loss or restricted access to traditional fishing grounds during the construction phase". It should be added that the significance of displacement will also be a function of the available fishing space (availability of target species in sufficient amounts and commercial sizes as well as remaining suitable habitat e.g. for scallops) over time. Most effects from the EDA are discussed and mitigated through a Commercial Fisheries Mitigation Strategy and the Moray Firth Commercial Fisheries Working Group. There has been no reflection on how the effects from the WDA will be mitigated e.g. as part of the MFCFWG. Therefore, MSS cannot comment on the potential effectiveness of proposed mitigations measures.

Scallop dredge gear modification trials study developed by Bangor University is referenced. However, no statement surrounding plans to undertake the trials are mentioned in the report. The applicants should provide more information about their plans.

BERR guidance (2008) reference has been update to FLOWW in 2014. Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Liaison (FLOWW, 2014). Other best practice guidance documents include:

- Best Practice Guidance for Fishing Industry Financial and Economic Impact Assessments (Seafish, 2009);
- Guidance on overlaps with fishing (Subsea Cables UK, 2012);
- Emergency procedures for fouling gear (Subsea Cables UK, 2015); and
- SeaPlan. Options for Cooperation between Commercial Fishing and Offshore Wind Energy Industries. A Review of Relevant Tools and Best Practices. 2015

Section 4.2.6 refers to the 'Moray Firth Offshore Wind Developers Group Cumulative Impact Assessment Discussion Document'. The document dates since 2011 and is advised to be listed as an agenda item in the next appropriate MFCFWG meeting. This will give the opportunity to fisheries stakeholders to consider the document, and updates to be undertaken on datasets and relevant projects to be considered, as well as available methodologies after 5 years.

- Section 4.2.7 states that one of the proposed mitigation measures will be the establishment of a Moray Firth Commercial Fisheries Working Group. Rather than plain establishment of the group, mitigation measure should be explicit on the proposed function of the group.

Benthic Ecology

MSS is generally in agreement with the statements and approaches discussed and described in the Scoping Report. However, a couple points need to be made.

Page 29. Foundations and Substructures. The type of foundation to be used needs to be clarified as soon as practicable as the design options described have varying degrees of

impact on seabed and benthic ecology. Gravity bases in particular will have a significant impact on the benthos.

Page 59. Sediment changes as a result of foundation activities. The document states that the dredging required to prepare the seabed would result in increases in suspended sediment levels which would be within the natural range of variability. Some data to support this statement is required. Data on local sediment types, locations and their silt content (PSA data) would be useful here. Information on potential particle suspension levels expected from dredging operations are also needed as will modelling of dispersion plumes. Estimates on accumulation rates and depths would be useful to support the statement "reworked and dispersed to background concentrations on short to medium term time scales". A discussion on impacts of smothering on sessile, slow-moving and burrowing organisms needs to be assessed.

Page 80. Potential Effects**.** The table indicates that all potential effects of development in the WDA on benthic features have been scoped out. MSS suggest that topics 3,6 and 7 are scoped in as these are important effects which may have significant impacts on the benthic community.

Diadromous Fish

The main potential impact mechanisms during the construction and operation phases are correctly identified.

Section 4.2.2 Data Gaps correctly recognises the need to update the information in the MORL ES 2012. This will need to include an updated authoritative view on the likely distribution of the various life stages of the diadromous fish species, including salmon, sea trout and eels, in the development locality, whether they are likely to be close to the coast or offshore, and the extent to which they are likely to be in the immediate vicinity of the development, and swimming depths, based as far as possible on real information for the locality or elsewhere. In the case of salmon and sea trout this should include updated information on the likely origin / destination of fish using the area.

Updated information, bringing in the latest knowledge, on the likely impacts of underwater noise on diadromous fish and their behaviour, and appropriate mitigation to minimise impacts of pile driving noise during construction.

Section 4.2.2 Data Gaps refers to MORL's existing commitment for the presently approved phase of the development for smolt tagging studies which will contribute to the National Research and Monitoring Strategy for Diadromous Fish. There will need to be consideration of what further research and monitoring relating to diadromous fish with respect to this new phase of the work will be appropriate.

Table 3.2-3 and elsewhere in the document only list nearby salmon SACs as ones which could potentially be affected. Because of the long range movements of salmon, developments could have the potential to impact on salmon populations associated with rivers substantial distances from the development site. Logically the ES should review first what information is available on where salmon in the area are likely to be from, or destined for, before the selection is made.

Table 3.4-3 includes a wide range of diadromous species as potentially present in the Moray Firth area. I would note that there are few records of shad or smelt in the area.

MSS notes that the consultees include District Salmon Fishery Boards and Trusts, MSS and SNH/JNCC. The Moray Firth Trout Group should also be included.

Reasonably frequent contact during assembly of the material will be helpful.

Aquaculture

MSS aquaculture planning has no specific comments to make on the Offshore Wind Farm, Moray Firth – Environmental Impact Assessment – Scoping Report. There are no further comments to add to those made on 24/02/2016 in response to the Project 1 Piling.

Socio Economics

MSS is content with the proposals for the Human Environment part of the assessment for WDA. We welcome the commitment to update the baseline information from MORL ES 2012

CIVIL AVIATION AUTHORITY ("CAA")

Having reviewed the Scoping Report provided, the appropriate aviation consultees (NATS, the MoD, the Maritime and Coastguard Agency, and Highlands and Islands Airport Ltd) have been identified although the positions of each consultee regarding the proposed development should be established by consultation.

We also note comments made in the Scoping Report concerning the potential mitigation of radar effects through utilisation of a Transponder Mandatory Zone (TMZ). While the CAA have previously approved the use of TMZs for other wind turbine developments in this area, TMZs should not be assumed to be approved in all cases. Should a TMZ be proposed by the developer, it would be subject to a separate application under the airspace change process: we would be happy to discuss this requirement with the developer if necessary.

In terms of aviation lighting, any wind turbine generator the height of which is 60 metres or more above the level of the sea at the highest astronomical tide and which is situated in waters within or adjacent to the United Kingdom must be lit in accordance with the Air Navigation Order and should be appropriately marked. Further information concerning the lighting of offshore wind turbines is contained within CAPs 764 and 437.

In terms of charting, there is an international civil aviation requirement for all structures of 300 feet (91.4 metres) or more to be charted on aeronautical charts. Accordingly such structures should be reported to the Defence Geographic Centre (DGC) which maintains the UK's database of tall structures (the Digital Vertical Obstruction File) at least 10 weeks prior to the start of construction. The point of contact is Nigel Whittle (0208 818 2702, mail to dvof@mod.uk). The DGC will require the accurate location of the turbines/meteorological masts, accurate maximum heights, the lighting status of the turbines and / or meteorological masts and the estimated start / end dates for construction together with the estimate of when the turbines are scheduled to be removed. Please note, maximum height is to the blade tips, not just the hub or nacelle.

In order to ensure that aviation stakeholders are aware of the turbines and / or meteorological masts while aviation charts are in the process of being updated, developments should be notified through the means of a **Not**ice to **A**ir**m**en (NOTAM). To arrange an associated NOTAM, a developer should contact CAA Airspace Regulation (AROps@caa.co.uk / 0207 453 6599); providing the same information as required by the DGC at least 14 days prior to the start of construction.

CHAMBER OF SHIPPING (“CoS”)

Thank you for the opportunity to comment on the Scoping Report for the Outer Moray Firth Western Development Area. The traffic data used was for the Eastern Development area and will need to be updated and will need to take account of the development of the EDA to inform a full navigational risk assessment. In addition to routine movements tracked using AIS, routing options take during bad weather, as well as anchorages must be considered. Many vessels are not equipped with AIS and thus radar or other means may need to be used to gain a full picture of the shipping activity. When considering turbine layout and boundaries, the guidelines given in MGN543 should be followed.

DEFENCE INFRASTRUCTURE ORGANISATION ("MOD")

I am writing to advise you that the MOD objects to the proposal. Our assessment has been carried out on the basis that there will be 90 turbines, 272 metres in height from ground level to blade tip, this assessment has been based on the boundary outline for the development at the grid references below as stated in the planning application or provided by the developer:

Turbine	100km Square letter	Easting	Northing
1		328204	902286
2		328204	905456
3		328204	906265
4		328204	906701
5		328248	906747
6		328282	906783
7		328311	906815
8		328511	907032
9		328769	907320
10		329023	907614
11		329270	907912
12		329514	908215
13		329751	908521
14		329793	908577
15		329822	908614
16		330054	908924
17		330280	909239
18		330501	909557
19		330717	909880
20		330909	910178
21		331058	910371
22		331290	910682
23		331516	910996
24		331701	911262
25		331801	911407
26		332016	911728
27		332226	912055
28		332429	912385
29		332628	912718
30		332820	913055
31		333007	913394
32		333166	913696
33		333336	913747
34		333705	913863
35		334073	913986
36		334439	914115
37		334802	914250
38		335164	914392
39		335522	914540
40		335530	914543
41		335530	914543

42		335639	914589
43		335995	914743
44		336347	914904
45		336457	914955
46		336509	914975
47		336870	915116
48		337229	915265
49		337585	915419
50		337937	915580
51		338287	915747
52		338354	915780
53		338419	915811
54		338767	915984
55		339110	916163
56		339215	916220
57		339393	916316
58		339452	916348
59		339789	916538
60		340123	916735
61		340454	916937
62		340781	917146
63		341104	917359
64		341424	917579
65		341740	917804
66		342052	918034
67		342360	918270
68		342663	918511
69		342963	918758
70		343257	919009
71		343463	919189
72		343469	919195
73		343764	919446
74		344055	919703
75		344341	919965
76		344622	920232
77		344898	920503
78		345170	920779
79		345437	921061
80		345699	921347
81		345957	921637
82		346208	921931
83		346455	922230
84		346697	922534
85		346933	922842
86		347164	923153
87		347390	923469
88		347408	923497
89		347428	923524
90		347445	923548

91		347513	923632
92		347755	923936
93		347991	924243
94		348002	924258
95		348206	924421
96		348505	924668
97		348728	924859
98		349404	923891
99		349952	922874
100		350362	921904
101		350487	921515
102		350487	921515
103		350648	921017
104		350828	920169
105		350986	919306
106		351055	918099
107		351006	916957
108		350878	916156
109		350757	915543
110		350533	914672
111		350533	914672
112		350164	913727
113		349594	912546
114		348932	911516
115		348163	910588
116		347428	909846
117		346215	908884

Air Traffic Control (ATC) Radar

The turbines will be 33.6km – 61.9 km from, detectable by, and will cause unacceptable interference to the ATC radar used by RAF Lossiemouth.

Wind turbines have been shown to have detrimental effects on the performance of Primary Surveillance Radars. These effects include the desensitisation of radar in the vicinity of the turbines, and the creation of "unwanted" aircraft returns which air traffic controllers must treat as aircraft returns. The desensitisation of radar could result in aircraft not being detected by the radar and therefore not presented to air traffic controllers. Controllers use the radar to separate and sequence both military and civilian aircraft, and in busy uncontrolled airspace radar is the only sure way to do this safely. Maintaining situational awareness of all aircraft movements within the airspace is crucial to achieving a safe and efficient air traffic service, and the integrity of radar data is central to this process. The creation of "unwanted" returns displayed on the radar leads to increased workload for both controllers and aircrews, and may have a significant operational impact. Furthermore, real aircraft returns can be obscured by a turbine's radar return, making the tracking of both conflicting unknown aircraft and the controllers' own traffic much more difficult.

An operational assessment of this proposal has been conducted by an ATC subject Matter Expert (SME) who considered the position of the turbines weighed against a number of operational factors. Close examination of the proposal has indicated that the proposed

turbines would have a significant and detrimental effect on operations and on the provision of air traffic services at RAF Lossiemouth. MOD therefore objects to the development at Moray Offshore Renewables LTD Western Development Area Windfarm. The reasons for this objection include, but are not limited to:

a. Restrictions the development would impose upon departure routes including Standard Instrument Departures (SIDS)
b. Restrictions the development would impose upon approach and arrival procedures
c. Restrictions the development would impose upon traffic patterns, in particular the Radar to Visual profile
d. Restrictions the development would impose upon LARS/ZONE traffic patterns
e. Restrictions the development would impose upon manoeuvring areas
f. Restrictions the development would impose upon Tactical Aid to Navigation (TACAN) procedures
g. Restrictions the development would impose upon holding areas
h. The position of the development in relation to controlled airspace
i. The position of the development in relation to restricted/danger areas
j. The position of the development in relation to entry/exit points to/from the Low Flying System
k. Air traffic density in the vicinity of the proposed windfarm
l. Existing clutter or windfarms in the vicinity of the proposed windfarm
m. The complexity of the ATC task
n. The workload of controllers

If the developer is able to overcome the issues stated above, the MOD will request that all turbines be fitted with aviation lighting in accordance with CAA direction and CAP 393 Air Navigation Order Section 1 part 28.

MOD Safeguarding wishes to be consulted and notified about the progress of planning applications and submissions relating to this proposal to verify that it will not adversely affect defence interests.

I hope this adequately explains our position on the matter. Further information about the effects of wind turbines on MOD interests can be obtained from the following website: https://www.gov.uk/government/publications/wind-farms-ministry-of-defence-safeguarding

HISTORIC ENVIRONMENT SCOTLAND ("HES")

We have reviewed the details in terms of our historic environment interests. This covers scheduled monuments and their settings, category A listed buildings and their settings, inventory gardens and designed landscapes, Inventory battlefields, world heritage sites and Historic Marine Protected Areas (HMPAs). In this case, our advice also includes matters relating to marine archaeology outwith the scope of the terrestrial planning system.

The relevant local authorities' archaeological and cultural heritage advisors will also be able to offer advice on the scope of the cultural heritage assessment. This may include heritage assets not covered by our interests, such as unscheduled archaeology, and category B and C listed buildings.

Proposed Development

I understand that the proposed development would consist of an offshore wind farm of up to 90 turbines, with a maximum height to tip of 272m. The development area is located in the north-east of Scotland, 22.5km from the Caithness coast on the Smith Bank in the Moray Firth.

The current consultation relates to the offshore wind farm infrastructure. A separate scoping consultation will take place in relation to the offshore and onshore transmission infrastructure. Our comments here therefore relate specifically to potential impacts within the identified development area (WDA) and its vicinity, and the impact of the turbines on the setting of terrestrial heritage assets.

Off-shore Impacts

There are no HMPAs in the vicinity of the site or the wider area. However, we welcome that the assessment will consider direct disturbance and loss to known and unknown assets of historic importance and indirect impacts and indirect potential for impacts relating to disturbance and changes to the physical environment and coastal sediment dynamics of the area.

We welcome the identification of the charted wreck of the vessel Sunbeam in the scoping report. We note that there are a number of other potential sites of archaeological value within the WDA that have been identified at this stage.

We consider the identified assessment methodologies and mitigation measures for these potential impacts to be adequate.

On-shore Impacts

In light of the fact that this scoping report does not cover the potential impacts from transmission infrastructure, we consider it unlikely that there will be any direct impacts on our terrestrial historic environment interests.

Our comments here therefore focus only on the potential setting impacts on terrestrial heritage assets from the offshore infrastructure. In light of the intervening distances (in excess of 20km) we are content that these are unlikely to be significant.

I note that section 4.6.4.2 refers to setting impacts on designated heritage receptors. The study proposed refers to establishing the baseline setting of assets in the cable route

corridor search area. However, it does not appear that the search area has been identified in this scoping report, and we therefore cannot comment on whether or not we consider this to be an adequate search area. We are content for this area to be identified in the scoping report for transmission infrastructure, and to provide comments at that stage.

If a study is to be undertaken to identify potential setting impacts from the wind farm infrastructure, we would recommend that this uses the ZTV data to identify sensitive receptors in the first instance. We would also recommend that the methodology uses our Managing Change guidance note on setting as a starting point. This has recently been updated, and as available to download from the following link:
https://www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes/

General Points

We welcome the inclusion of a comprehensive list of guidance which will inform the assessment. As above, we advise that our Managing Change guidance note on setting has recently been updated.

As the current scoping report does not cover the transmission infrastructure of the proposed development, we will be happy to comment on these details when they become available.

JOINT RADIO COMPANY LIMITED (“JRC”)

Name/Location: Moray Offshore - Western Development (SCOPING OPINION REQUEST FOR THE PROPOSED SECTION 36 AND MARINE LICENCE APPLICATION FOR THE MORAY OFFSHORE RENEWABLES LTD (“MORL”) WESTERN DEVELOPMENT AREA WIND FARM INFRASTRUCTURE, MORAY FIRTH)

Site Centre at NGR: ND 41066 13471

Development Radius: 10km

Hub Height: 90m Rotor Radius: 50m

This proposal ***CLEARED*** with respect to radio link infrastructure operated by:

The Local Electricity Utility & Scotia Gas Networks

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

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

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

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

MORAY FIRTH PARTNERSHIP (“MFP”)

The Moray Firth Partnership continue to remain a neutral body and as such do not respond to license applications. We do however keep a record of such applications on file and appreciate being kept on the circulation list submissions for information purposes.

NATS En-Route PLC (“NERL”)

NERL are pleased to note that the developer intends to undertake a study into the impacts of the development on the Allanshill radar. A number of Specialist Advisors are listed in 4.9 and NERL will work with the identified parties in order to quantify the impact, at both a technical and operational level, and develop the proposed regional approach to mitigation if required.

ROYAL SOCIETY FOR THE PROTECTION OF BIRDS ("RSPB") Scotland

Our principal areas of interest fall under the following proposed headings for the Environmental Statement ("the ES"): 4.1 Designated Sites; 4.5 Ornithology; and 6.1 Habitats Regulations Appraisal (HRA). Our detailed comments are set out under those headings below.

Overall, the scoping report proposes a sensible structure and range of issues for the ES. We note that cumulative and in-combination assessments will be presented within each discipline section. The proposed structure of the ES appears to allow all of the pertinent issues to be addressed; we are unable to identify at this stage any new discipline sections that might require to be added in order to ensure that all of the relevant impacts are able to be addressed.

Designated sites

Currently, the most important nature conservation sites requiring to be addressed in the ES are the Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) contributing to the Natura 2000 network. Tables 3.2-2 and 3.2-3 appear to us to identify all of the SACs that could possibly be affected by the proposal. Table 3.2-1 appears to include all of the currently designated SPAs that could possibly be affected by the proposal. We strongly recommend that the "draft" Moray Firth marine SPA ("the dSPA") should also be included in this section, as there has been no announcement by the Scottish Ministers that this site will no longer be progressed in light of last week's referendum result. Therefore at present we recommend that the site be treated as if it were already classified, and that it should be subjected to a "shadow" HRA process, on the basis that the current timetable would see the site designated before the application and ES are submitted.

At this stage we consider that the sites with the potential to be most significantly affected, and thus meriting the greatest attention in the ES and HRA report are marine mammal SACs, and SPAs classified for breeding seabirds, with those closest to the project being those most likely to be affected, but with effects also possible to sites further afield, depending on the foraging range of qualifying species. This will in turn have a bearing on cumulative and in combination effects, in particular (but not only) for gannet as a qualifying feature of the Forth Islands SPA, as well as seabird colony SPAs around the Moray Firth itself, classified for a range of cliff-breeding seabirds. The RSPB is involved in bird tracking research with the potential to inform assessments based on foraging range and behaviour of seabird species; we would welcome the opportunity to be involved in the EIA process as the proposals progress towards application.

Marine mammals

We anticipate there being specialist and detailed comments and advice from Whale and Dolphin Conservation (WDC), and consequently have nothing to add under this subject heading at present.

Ornithology

Overall, the scoping report appears to have identified an appropriate range of species and issues, and to have referenced a reasonable range of guidance and published science. The methods proposed for survey and the assessment of impacts seem in general to be appropriate. We have a small number of specific suggestions for inclusion:

At section 3.6.1, where there is a list of guidance and published work, the following should be included:

- Cook, A.S.C.P. and Robinson, R.A. (2015). The Scientific Validity of Criticisms made by the RSPB of Metrics used to Assess Population Level Impacts of Offshore Wind Farms on Seabirds. BTO Report 665
- Cook, A.S.C.P. and Robinson, R.A. (2016). Testing sensitivity of metrics of seabird population response to offshore wind farm effects. JNCC Report 533
- Green, R.E., Langston, R.W.H., McCluskie, A., Sutherland, R. & Wilson, J.D. (in press) Lack of sound science in assessing wind-farm impacts on seabirds. *Journal of Applied Ecology*
- Wade, H. M., Masden, E. A., Jackson, A. C., & Furness, R. W. (2016). Incorporating data uncertainty when estimating potential vulnerability of Scottish seabirds to marine renewable energy developments. *Marine Policy* 70:108-113.

In addition, we have the following comments:

3.6.3.2. Disturbance, para 2: Consideration should also be given to Wade *et al*. (2016) – listed in our comment on section 3.6.1 above – as well as Furness *et al*. (2013) when assessing sensitivity to disturbance

3.6.3.3. Collision: We welcome use of the R code of Masden (2015).

3.6.3.3 Barrier effects: we note that Marine Scotland are currently investigating the application of CEH's Forth and Tay energetic model to the Moray Firth; we observe from our participation in the steering group for the Forth and Tay work that at that time CEH anticipated additional work being needed to identify and validate the parameters required when applying the Forth and Tay model to other sites. Nevertheless, we cautiously welcome this proposed approach as one of the more promising ways of assessing population-level impacts of barrier effects and displacement from foraging areas.

3.6.3.3. Final 2 paragraphs. Any PVA or similar model-based population-level assessment of impact should be interpreted in light of Cook *et al*. (2015, 2016) and Green *et al*. (2016), all listed in our comment on section 3.6.1 above.

3.6.5. If possible, data on flight speed should be collected during aerial survey.

3.6.8 Habitats Regulations Appraisal. We recommend redrafting the five bullet points in this section to reflect the fact that SPA integrity can be adversely affected if any one of the objectives is sufficiently compromised. This will need to take into account in-combination effects, in particular with other consented and proposed offshore wind farms also likely to have a significant effect on the SPAs identified in Table 3.2-1 of the scoping report.

Mitigation for ornithological impacts might include: removal, or relocation of turbines within the WDA (on the basis that collision, displacement and barrier effects are all likely to some extent to increase/decrease roughly in proportion to the number of turbines); temporary or seasonal shutdown of some or all turbines (depending on the availability of reliable technology to identify abnormal levels of risk, and implement shutdown and restart within appropriate timescales and with minimal impact on turbine durability). Measures to improve seabird survival and/or breeding performance might not meet the strict criteria necessary to

be classed as mitigation; however, their ability to offset survival and/or breeding performance impacts arising from collision, displacement and/or barrier effects would potentially merit consideration as compensatory measures in the event that those were required to maintain overall coherence of the SPA network, in the event that Scottish Ministers were minded to grant consent on the basis of there being imperative reasons of over-riding public interest and no alternative solutions.

ROYAL YACHTING ASSOCIATION ("RYA") SCOTLAND

Section 4.3.1.4 describes recreational vessel activity. Surveys by AIS and radar underestimate the number of recreational vessels on passage, only about 20% of which will have been transmitting an AIS signal. The Pentland Firth and Orkney Waters Shipping Study (http://www.gov.scot/Publications/2012/12/1868/1), which was published in 2012, includes and analysis of recreational vessel activity in Wick. The site is indeed intersected by a 'medium use' cruising route as decided by expert opinion. However, the RYA has been carrying out an update to the UK Atlas of Recreational Boating and when published this will provide a much better indication of routes taken by recreational vessels.

I agree with the statement in section 4.3.3.2 that there will be little disruption to recreational vessels during the construction phase. Mitigation measures will of course include widespread publicity about the timing and location of construction.

I also agree with the equivalent statement in 4.3.3.3. Note that it is RYA policy that there is no need for an operational safety zone for small vessels.

Table 4.7.1 should, for completeness, include the recently published Scottish Marine Tourism and Recreation Survey (http://www.gov.scot/Topics/marine/seamanagement/national/RecandTourism). Note, however, that the methodology used does not provide a comprehensive representation of cruising routes. I agree that the effects of the three phases of operation on those aspects of tourism relating to recreational boating can be scoped out.

SCOTTISH FISHERMEN'S FEDERATION ("SFF")

The Scottish Fishermen's Federation is pleased to respond to this scoping report on behalf of its constituents, the Anglo-Scottish Fishermen's Association, the Clyde Fishermen's Association, the Fife Fishermen's Association, the Fishing Vessel Agents & Owners Association (Scotland) Limited, the Mallaig and North-West Fishermen's Association Ltd, the Orkney Fishermen's Association, Scallop Association, the Scottish Pelagic Fishermen's Association Ltd, the Scottish Whitefish Producers' Association Ltd and the Shetland Fishermen's Association whose membership encompasses over 500 fishing vessels/businesses.

In the report on pages 32, 33 and 78 the export cables are discussed, which are not the subject of this scoping report but, since they are mentioned, the SFF would nevertheless express concern about the lack of detail on cable parameters, assertion of there being 3m burial and the problem of the many cable crossings to be considered.

On page 81 referring to seabed disturbance the SFF would like to see more information on the Anchor berms as we believe they cause another unique problem for our industry.

Referring to pages 91-94, the EIA should pay close attention to the latest advice from ICES on any development operations during spawning seasons for the species identified, and should also give more attention to the Squid and Scallop spawning and nursery grounds.

The table 3.4.3.1 on page 102 needs to be examined particularly the final line "Changes to Fishing Activity" which seems to be claiming Construction and Decommissioning will have no impact, and together with the statement on page 105 that fishing will continue, needs to be substantiated as the SFF remains sceptical of these claims.

Given that the Smith Bank is a major scallop fishery the SFF would seek clarity on the claim that the suspension of sediment during this development will only have a minor impact on Scallop survival rates.

And finally in the Section on Human Environment, table 4.2.1 on Datasets omits the UKFIM project which would undoubtedly help in this work.

SPORT SCOTLAND ("SS")

In relation to sports interests that may be affected, we note that the Scoping Report makes reference to potential impact on recreational vessels, and we welcome that this will be considered.

We note that the report does not identify other sports interests as being affected. **sport**scotland does not have detailed knowledge of the sport interests at or in the vicinity of the site in question and it will be important not to rely solely upon **sport**scotland for a view from the sport sector. We therefore advise the applicant to consult with relevant local clubs and sports groups, and with relevant Scottish Governing Bodies of Sport (SGBs), for both onshore and offshore interests. The Governing Bodies of Sport should be able to put the applicant in touch with relevant club interests in the area that it would be beneficial to consult with. Contact details for SGBs can be found on our website at the following link: http://www.sportscotland.org.uk/sport-a-z.aspx .

We also note the information available from the Scottish Marine Recreation and Tourism Survey 2015, please see below link. It should, however, be noted that this may not include all recreation and tourism interests.

http://www.gov.scot/Topics/marine/seamanagement/national/RecandTourism.

It will also be important for the land-based elements of the proposal not to impact negatively on access rights in the area – we would advise consultation with Council's Access Officers to address any potential impacts on access rights, and with the Local Access Forum, as well as with the Council's Sports Development and Outdoor Education staff.

SCOTTISH WILDLIFE TRUST ("SWT")

The Trust recognises that renewable energy production will play a key role in reducing Scotland's carbon emissions and believes large scale developments such as the MORL wind farm can, if appropriately planned and managed, play a key role in meeting these targets. The size and location of the proposed MORL wind farm will present challenges for ensuring all environmental impacts are kept to a minimum, in particular the impact of noise pollution on marine mammals during construction, seafloor disturbance and its impact on benthic species, and the impact on local seabird populations during operation. Therefore the Trust believes it is important to take an ecosystems approach during the decision-making process and when planning the deployment of the wind turbines.

Overall, the Trust would like to raise the following concerns with the scoping report:

1. When the options for turbine structure are discussed, we would like to see what implications their design has for decommissioning – for example, which has the least environmental impact, which is easiest to remove, which can be recycled and reused?
2. There has been no consideration to the use of floating wind turbines in the report. Although the use of floating wind is still only at the test stage, it would be of interest to see how floating structures would compare to the other designs discussed, particularly with respect to environmental impacts during construction.
3. The presence of ~90 wind turbines will have an ecological impact in the development area – the increased presence of hard surfaces and the reduction in fishing effort will lead to increases in local biodiversity. We would like to know whether any consideration was given to using turbine designs that encourages species recruitment, by providing various habitats, and increases biodiversity. For example, a steel lattice jacket would provide a more diverse range of habitats (e.g. shaded surfaces, surfaces of different orientation…) than a monopole design. When comparing possible turbine structure designs, we would like to see an assessment of what ecological impact each of them would have.
4. If drilling is required in construction, we would like to see a plan for removal and disposal of drill cuttings rather that leaving them on site.
5. We would like to see construction/decommissioning activities to occur outside of breeding periods for local marine mammals, when animals are more vulnerable to disturbance.
6. We believe the upcoming Hywind pilot floating wind farm and the proposed Kincardine floating wind farm off of the Aberdeenshire coast should also be included in the cumulative impact assessment.
7. We would like to see a strategic and detailed plan for surveying and monitoring the site prior to construction, during operation, and post decommissioning of the wind farm. This will provide a valuable overview of the total environmental impact throughout the entire life of the wind farm.

TRANSPORT SCOTLAND ("TS")

This information has been passed to JMP Consultants Limited for review in their capacity as Term Consultants to Transport Scotland – Trunk Road and Bus Operations (TRBO). Based on the review undertaken, we would provide the following comments.

Development Proposals & Site Location

We understand that the proposed development is for an offshore wind farm comprising up to ninety 8-15MW wind turbine generator units providing up to 750MW of power.

The Western Development Area (WDA) is located in the north-east of Scotland, 22.5 km from the Caithness coast in the Moray Firth. The nearest Trunk Road to the site is the A9(T) between Helmsdale and Lybster.

It is noted that the SR relates to the wind turbines, their substructures and foundations and inter-array cables and any potential meterological masts for the WDA. A separate SR will be prepared for offshore and onshore transmission works at a later date when more details of the export cable routes and onshore substation location are known. Transport Scotland will provide comment on these aspects of the proposal separately if consulted.

Construction/ Access

It is noted that only limited information is available at present on the nature of the construction process, since the major parameters of the development have not yet been defined in detail. The Assembly Port where the substructures will be assembled has yet to be confirmed. We accept that the majority of components are likely to come in by sea so we do not require an assessment of the increased traffic (or associated environmental impacts) on the trunk road network.

We would however, advise that if any abnormal loads associated with the offshore elements of the project are required to be transported on the Trunk Road network, then a separate report will require to be provided to assess the route to site in terms of its suitability for the transportation of these abnormal loads.

In addition, it is noted that dredging may be required for the installation of the foundations, the nature and volume of which will be determined through further ground investigation. It is understood that MORL will explore the possibility of disposing dredged material on-site or at an alternative appropriate licensed disposal site. In the event that the disposal material requires to be transported on the Trunk Road network, Transport Scotland would request an assessment of the number of construction/ dredging related HGVs and their potential impact on the Trunk Road network is undertaken and presented within the ES.

WHALE AND DOLPHIN CONSERVATION ("WDC")

We understand that MORL Western Development Area (WDA) Wind Farm will be located approximately 22.5 kilometres (km) from the Scottish coast on the Smith Bank in the Outer Moray Firth at a depth of 35 – 54 meters. The development is anticipated to consist of up to 90 wind turbines with a potential generation capacity of up to 750 MW.

Thank you for the opportunity to provide comments on the MORL Western Development Area Wind Farm Infrastructure Scoping Opinion Request. Given our area of interest, we have only focused on the marine mammal sections.

WDC are endeavouring to assist with the environmentally sustainable development of marine renewable energy in Scotland. Whilst welcoming the Scottish Governments' commitment to renewable energy generation, particularly noting the potential consequences of climate change for cetaceans, we have concerns about current levels of uncertainty and the possible negative impacts these developments, both individually and cumulatively, may have on cetaceans (whales, dolphins and porpoises) and seals in Scottish waters.

In summary

Overall, we are happy that the scoping document appears to have included all the information required for the Environmental Statement and HRA to be produced. We are content with what has been 'scoped in' for potential impacts in Table 3.5.3.1.

Pile driving

There is still considerable scientific uncertainty surrounding the impacts of pile driving during construction on all species, and in this region. As a result, our preference is that pile driving is not used at all during construction.

Alternatives to pile driving should be considered. Use of noise-reducing techniques could considerably reduce the radius of impacts of this development and those in the region, would reduce cumulative impacts and could mean that there is less dependence on mitigation and less risk to developers. Should pile driving be conducted, further information on the pile driving method and mitigation techniques to reduce the impact of underwater noise generated during pile driving needs to be covered significantly. Considerable uncertainty remains about the efficacy of active acoustic deterrent devices, and the impacts resulting from their use and we do not consider their use to be a suitable or adequate mitigation.

However, we understand that construction of the MORL WDA Wind Farm will begin after construction of MORL and BOWL. Therefore the data generated during and post construction will be vital to help inform on best practice.

Harbour seals

Recently, connectivity between harbour seals in the Moray Firth and Orkney has been shown from tagged data. Due to the significantly declining population in Orkney, harbour seals in the Moray Firth should be given the same level of protection from disturbance and displacement as harbour seals in Orkney. See http://synergy.st-andrews.ac.uk/harbourseals/ blog post on 3rd June 2016 for more information on the connectivity.

Annex 2

DEVELOPER APPLICATION AND ENVIRONMENTAL STATEMENT CHECKLIST

	Enclosed
1. Applicant cover letter and fee	☐
2. Copies of ES and associated OS maps	☐
3. Copies of Non-Technical Summary	☐
4. Confidential Bird Annexes	☐
5. Draft Adverts	☐
6. E Data – CDs, PDFs and SHAPE files	☐

Environmental Statement	Enclosed	ES Reference (Section & Page No.)
1. Development Description	☐	
2. Planning Policies, Guidance and	☐	
3. Economic Benefits	☐	
4. Site Selection and Alternatives	☐	
5. Baseline Assessment data – air emissions	☐	
6. Design, Landscape and Visual Amenity	☐	
7. Construction and Operations (outline	☐	
8. Archaeology	☐	
9. Designated Sites	☐	
10. Habitat Management	☐	
11. Species, Plants and Animals	☐	
12. Water Environment	☐	
13. Sub-tidal benthic ecology	☐	
14. Hydrology	☐	
15. Waste	☐	
16. Noise	☐	
17. Traffic Management	☐	
18. Navigation	☐	
19. Cumulative Impacts	☐	
20. Other Issues	☐	

N.B. Developers are encouraged to use this checklist when progressing towards application stage and formulating their Environmental Statements. The checklist will also be used by officials when considering acceptance of formal applications. Developers should not publicise applications in the local or national press, until their application has been checked and accepted by officials.