

## **Marine Works (Environmental Impact Assessment) Regulations 2007 (Regulation 22)**

### **Environmental Impact Assessment Consent Decision**

Project Title: the Moray Offshore Renewables Limited (“MORL”) development, consisting of the Telford Offshore Wind Farm, Stevenson Offshore Wind Farm, MacColl Offshore Wind Farm and Offshore Transmission Infrastructure (“OfTI”).

Applicants: MORL submitted applications on behalf of applicants; Telford Offshore Windfarm Limited (“TOWL”), Stevenson Offshore Windfarm Limited (“SOWL”) and MacColl Offshore Windfarm Limited (“MOWL”). MORL is the applicant for the OfTI.

Location: Outer Moray Firth and OfTI cable corridor to landfall at Fraserburgh beach.

### **1. Introduction**

This document constitutes an environmental impact assessment (“EIA”) consent decision under regulation 22 of The Marine Works (Environmental Impact assessment) Regulations 2007 (as amended) (“MWR”), in respect of applications which have been submitted by: MORL, TOWL, SOWL and MOWL, to Marine Scotland, the licensing authority on behalf of the Scottish Ministers, for:

- i. A marine licence to be considered under the Marine and Coastal Access Act 2009 (as amended) (“the 2009 Act”) by TOWL to deposit any substance or object and to construct, alter or improve any works in relation to the Telford Offshore Wind Farm;
- ii. A marine licence to be considered under the 2009 Act by SOWL to deposit any substance or object and to construct, alter or improve any works in relation to the Stevenson Offshore Wind Farm;
- iii. A marine licence to be considered under the 2009 Act by MOWL to deposit any substance or object and to construct, alter or improve any works in relation to the MacColl Offshore Wind Farm;

- iv. A marine licence to be considered under the Marine (Scotland) Act 2010 (“the 2010 Act”) and the 2009 Act by MORL to deposit any substance or object and to construct, alter or improve any works in relation to the OfTI within the Scottish marine area and Scottish offshore region;

The works described in the applications comprises a project listed at Annex II of the Directive 85/337/EEC (“the EIA Directive”) on the assessment of the effects of certain public and private projects on the environment. The EIA Directive has been transposed into UK law for marine works (including works requiring a marine licence) by the MWR. The project in this instance, comprises the marine elements of the Telford Offshore Wind Farm, Stevenson Offshore Wind Farm, MacColl Offshore Wind Farm and OfTI”, in the Outer Moray Firth.

The applications made to Marine Scotland were supported by an Environmental Statement (“ES”), as required by regulation 12 of the MWR and additional supporting information, as required by regulation 13 of The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (as amended) (“EWR”) (all applications were consulted under both the MWR and the EWR). MORL were required to produce additional information in support of their application and submitted Additional Ornithological Information.

## **2. Project Description**

Three, 372 megawatts (“MW”) offshore wind turbine generating stations (Telford + Stevenson + MacColl = “the Proposal”) located on the Smith Bank in the Outer Moray Firth, approximately 22 km from the Caithness coastline, with a gross electrical output capacity of up to 1,116 MW comprising:

1. not more than 186 three-bladed horizontal axis wind turbine generators (“WTGs”) each with:
  - a. a maximum blade tip height of 204 metres;
  - b. a rotor diameter of between 150 and 172 metres;
  - c. a minimum crosswind spacing of 1,050 metres; and
  - d. a minimum downwind spacing of 1,200 metres;
2. all foundations, substructures, fixtures, fittings, fixings, and protections;
3. inter-array cabling and cables up to and onto the Offshore Substation Platforms (“OSPs”); and
4. transition pieces including access ladders / fences and landing platforms.

Substructure and foundation design for the WTGs will consist of either a mixture of, or one design option of:

1. concrete gravity base foundation with ballast and a gravel/grout bed, or
2. steel lattice jackets with pin piles.

The OfTI contains 3-6 AC OSFs, 2 AC to DC convertor OSFs, cabling, DC export cable to shore and an offshore meteorological mast. Substructure and foundation design for the OSFs will be chosen from five possible concepts:

1. concrete gravity base foundation with ballast and a gravel/grout bed,
2. steel lattice jackets with pin piles,
3. steel lattice jackets with suction caissons,
4. steel lattice jack-up with pin piles, or
5. steel lattice jack-up with suction caissons.

The MORL site is adjacent to the Beatrice Offshore Wind Farm, applications for which, were submitted to Marine Scotland in April 2012 by Beatrice Offshore Windfarm Limited (“BOWL”).

### **3. The Environmental Statement**

The principal potential impacts identified and discussed in the ES were:

- physical processes
- benthic ecology
- fish and shellfish ecology
- marine mammals
- ornithology
- commercial fisheries
- shipping and navigation
- military and civil aviation
- seascape, landscape and visual receptors
- archaeology and visual receptors
- socio-economics, recreation and tourism
- traffic and transport

#### **3.1 Environmental sensitivities**

The Joint Nature Conservation Committee (“JNCC”) and Scottish Natural Heritage (“SNH”) advised that the Proposal has the potential to impact upon protected sites. On reviewing the original ES, the JNCC and SNH advised that the Proposal would impact on qualifying interests of various Special Protection Areas (“SPAs”) and Special Areas of Conservation (“SACs”). The JNCC and SNH also advised that, as the competent authority, Marine Scotland would be required to undertake an Appropriate Assessment (“AA”) in view of the conservation objectives for the European protected sites. Figure 1 below shows the protected sites which were subject to an AA.

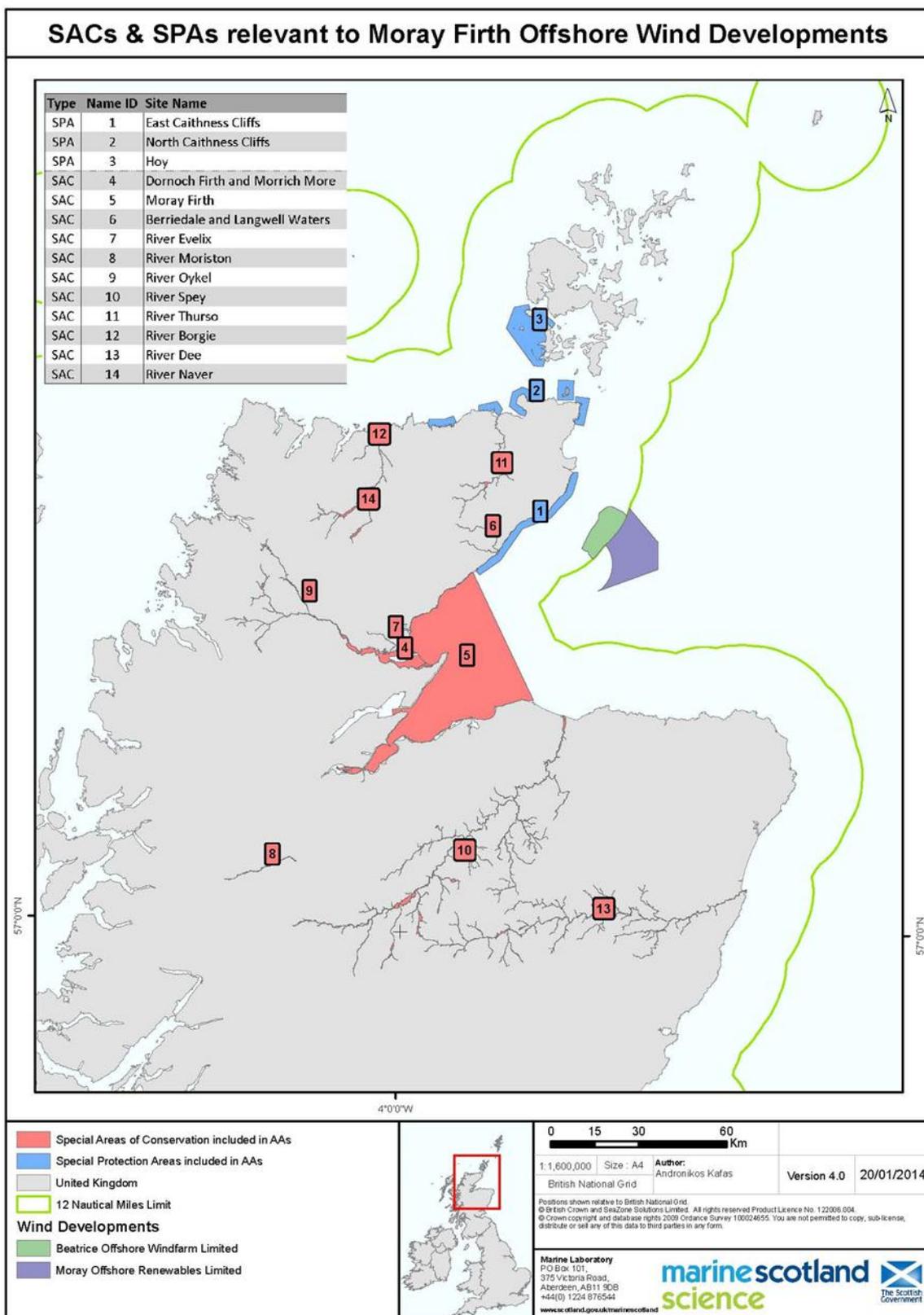


Figure 1. Location of the MORL and BOWL wind farm developments in the Moray Firth and the relevant SPAs and SACs.

### 3.2 The appropriate assessment

The proposed works did require a AA under Section 48 of the Conservation (Natural Habitats, & c.) Regulations 1994 and under Section 25 of the Offshore Marine Conservation (Natural Habitats, & c.) Regulations 2007 (“the Habitats Regulations”). As the three wind farms lie outwith 12 nautical miles (“nm”) and part of the OfTI cable route is within 12nm, and because the assessment is a cumulative assessment with the BOWL development, which is within 12 nm, both sets of regulations apply. The AA concluded, subject to appropriate conditions being attached to any consent, the Proposal alone, or in-combination with the BOWL development would not adversely affect site integrity of the Natura sites that could be potentially impacted by the developments.

## 4. Consultation

This section summaries the project consultation undertaken by Marine Scotland in 2012 on the applications and the ES, and in 2013 on the Additional Ornithology Information.

### 4.1 Public consultation

In accordance with Regulation 16 (1) (b) of the MWR, Marine Scotland instructed MORL to place a public notice in newspapers for two successive weeks. These public notices for the original application and ES, were “combined” with those required under the EWR. Public notices were placed for the Additional Ornithology Information under the EWR. The public notices contained details of:

- the applicant's names and addresses;
- that applications had been made under the MWR and Part 4 of the 2009 Act and the 2010 Act;
- a statement of the nature, size and location of the project;
- the address details of where the applications and ES could be inspected during office hours; and
- notice that parties could make such requests and representations within 42 days of the first notice date.

Notice of the application and ES appeared in the following publications:

Edinburgh Gazette	28.08.2012	&	04.09.2012
Press and Journal	28.08.2012	&	04.09.2012
The Scotsman	28.08.2012	&	04.09.2012

Notice of the Additional Ornithology Information appeared in the following publications:

Edinburgh Gazette	18.06.2013	&	25.06.2013
Press and Journal	18.06.2013	&	25.06.2013

The applications and the ES were made available for public inspection at the following locations:

The Highland Council Planning Office Glenurquhart Road Inverness IV3 5NX	Moray Council Planning Office High Street Elgin IV30 1BX
Caithness Planning Office The Highland Council Market Square Wick KW1 4AB	Peterhead Planning Office Aberdeenshire Council Arbuthnot House Peterhead AB42 1DA
Helmsdale Library and Service Point Dunrobin Street Helmsdale KW8 6JX	Buckie Library Cluny Place Buckie AB56 1HB
Golspie Service Point Olsen House Main Street Golspie KW10 6RA	Brora Library Gower Street Brora Highland KW9 6PD

Marine Scotland received five (5) public representations in support of the application and ten (10) public representations objecting to the application.

Representations which noted support for the project were of the belief that the Proposal would help to reduce Scotland's carbon footprint, allow Scotland to become a world leader in the (offshore) renewables sector and highlighted the potential for job creation and positive economic impact in the area, particularly through the opportunity for developing a local supply chain.

Objections to the Proposal cited concerns regarding: effects on marine life including birds and disturbance of marine mammals; effects on Atlantic salmon and sea trout; hazards to fishing; hazards to Defence Infrastructure Organisation nautical and aeronautical activities in the area; visual and aural pollution; cumulative presence in the Moray Firth with the BOWL development; alternative technologies to wind power being available; and the failure to meet the requirements of the Aarhus convention.

Other concerns raised included issues such as the repowering of the wind farms, the future cost of electricity, the sustainability of offshore renewable energy developments, concerns over safety of construction, lack of jobs being created and no establishment of localised manufacturing.

No public representations were received during the consultation exercise on the Additional Ornithology Information.

## 4.2 Consultees

As part of the consideration of the application and ES, Marine Scotland conducted a consultation with advisory and regulatory bodies for comment on the validity of the ES document and the conclusions of environmental impact drawn. The consultation on the ES opened on the 28<sup>th</sup> August 2012 and closed on the 9<sup>th</sup> October 2012, with Local Authorities permitted additional time in accordance with The Electricity (Applications For Consent) Regulations 1990 (as amended). A second consultation was undertaken on the Additional Ornithology Information, and opened on the 4<sup>th</sup> June 2013 and closed on the 23<sup>rd</sup> July 2013. Extensions to the consultation periods to provide comments were permitted to consultees if required.

### 4.2.1 Consultee List

The application, the ES, and later the Additional Ornithology Information were sent to:

Consultee	Consultee
Aberdeenshire Council	Marine Scotland Science
Association of Salmon Fishing Boards	Maritime and Coastguard Agency
Bond Offshore Helicopters	Moray Council
BOWL	Moray Firth Partnership
Bristows Helicopters	Moray Firth Sea Trout Project
British Telecom Network Radio Protection	National Air Traffic Services
Chamber of Shipping	Northern Lighthouse Board
Civil Aviation Authority	PA Resources UK Ltd.
CHC Helicopters	Royal Yachting Association (Scotland)
Cromarty Firth Port Authority	Royal Society for the Protection of Birds Scotland
The Crown Estate	Scallop Association
Defence Infrastructure Organisation (MOD)	Scottish Canoe Association
Health & Safety Executive	Scottish Environment Protection Agency
Highland Council	Scottish Fisherman's Federation
Highlands and Islands Airports Limited	Scottish Fisherman's Organisation
Historic Scotland	Scottish Natural Heritage
Inshore Fisheries Group	Scottish Wildlife Trust
Ithaca Energy	Surfers Against Sewage
The Joint Nature Conservation Committee	Transport Scotland (Including Ports & Harbours Branch)
Joint Radio Company	University of Aberdeen
Marine Safety Forum	Whale & Dolphin Conservation
Marine Scotland Compliance	

### 4.2.2 Consultee Responses

**Aberdeenshire Council (“AC”)** raised no objection to the Proposal, adopting a position of neither favouring nor opposing the project. If the Proposal were to be given consent, AC requested their comments be taken into consideration when determining the applications and appropriate conditions to be attached to any consent.

AC raised the following comments in their response:

- Queried what planning gain would be provided as a result of the Proposal;
- Reassurance required from the developer that cables be buried beneath the sea bed to ensure that the Proposal would not cause any safety issues for ships anchored in Fraserburgh bay; and
- The Proposal should not result in the harm or disturbance to marine species, particularly bottlenose dolphins; a very important species to the Moray Firth.

AC recommended that the following conditions be included on any consent:

- A programme of archaeological works in accordance with a written scheme of investigation must be submitted;
- Submission of a method statement setting out how the risks of introducing marine non-native species into the site shall be avoided during the construction, operation and decommissioning phases of the project;
- Submission of a site specific Construction Environmental Management Document (“CEMD”) (in this consent, called an Environmental Management Plan (“EMP”)) for pollution prevention and protection of amenity; and
- Requirements of the approach to horizontal directional drilling (“HDD”), if used, to be employed when installing the cable(s) from the Proposal to shore.

MORL discussed these requests with AC, who responded in agreement to the approaches being taken by MORL, and welcomed sight of appropriate documents to discharge any conditions. Conditions covering the cable laying strategy (Cable Plan), the monitoring of marine species (e.g. bottlenose dolphins) (the Project Environmental Monitoring Programme), archaeological works (Reporting Protocol), non-native species and CEMD (in this consent it is called an EMP) will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

As the wind farms are located outside the boundaries of AC, in relation to planning gain, MORL has announced it is committed to working with public agencies (e.g. Scottish Enterprise and Highlands and Islands Enterprise) to promote local economic development. This will in turn deliver an on-going engagement package aimed to allow enterprises in Aberdeenshire to maximise their opportunities to participate or compete in the new offshore wind market.

**Moray Council (“MC”)** raised no objection to the Proposal; however they requested that they be provided with the specific aviation and nautical lighting scheme of the final layout of the WTGs if it was approved by the Scottish Ministers. A condition covering this request (Lighting and Marking Plan) will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

**The Highland Council (“THC”)** raised no objection to the Proposal. If the Proposal were to be given consent, THC requested their comments be taken into consideration when determining the applications and recommended conditions for inclusion on any consent.

THC requested that it be consulted and its opinion be taken into account when designing the final layout and lighting requirements of the wind farms, alone and in combination with all neighbouring wind farms. As the Proposal is located out with the remit of THC, it was subsequently agreed with THC that the final layout and lighting scheme of the WTGs will be provided for information purposes only prior to commencement of the developments. Conditions covering this request (Design Statement and Lighting and Marking Plan) will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

THC raised concerns regarding potential impact on television and radio reception and requested that a Television and Radio Reception Mitigation Plan be provided to THC prior to any development commencing. A condition requiring the submission of a TV and Radio Reception Mitigation Plan will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

MORL wrote to THC to address other requests for conditions concerning Gross Value Added (“GVA”) in terms of potential employment gain to the Highlands, engagement with Highland’s renewable energy supply chain, maximising socio-economic returns from the Proposal, the potential for a turbine manufacturer to locate in the Highlands and a visitor centre within Caithness. These are matters that cannot be provided for within conditions to be attached to a section 36 consent or marine licence.

THC requested that a fishing industry liaison group be established to help address the concerns of the industry. The Moray Firth Commercial Fisheries Working Group has since been set up and has met to begin discussions on issues, concerns and mitigation measures. A condition relating to continued membership of this group will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

The THC responded to the consultation on the Additional Ornithology Information consultation indicating they had no further comments to make.

**The Joint Nature Conservation Committee (“the JNCC”) and Scottish Natural Heritage (“SNH”)** provided preliminary advice on 18<sup>th</sup> December 2012 on key natural heritage interests and the impacts to consider in respect of the Proposal. At this time, the JNCC and SNH indicated no further information would be required from the applicant for Seascape, Landscape and Visual Impact Assessment (“SLVIA”).

The JNCC and SNH highlighted the need for further discussion on impact assessments and Habitats Regulations Appraisal (“HRA”) for key bird species from a number of SPAs as the Proposal is located within foraging range of a number of SPA breeding seabird colonies (e.g. the mean-max foraging range of puffin is 105.4 km (Thaxter *et al.* 2012)) thus establishing connectivity. This advice was followed up by a series of meetings with MORL to determine what information was required. Following the submission of, and consultation on, the Additional Ornithology Information, the JNCC and SNH provided their formal advice on 8<sup>th</sup> July 2013.

The JNCC and SNH advised that the Proposal is likely to have a significant effect on the qualifying interests of a number of SACs and SPAs. The JNCC and SNH advised Marine Scotland to carry out an AA in view of the conservation objectives for these sites.

The JNCC and SNH undertook their own appraisal of the Proposal and concluded that the EIA and HRA showed that some SPA seabird species are the key natural heritage interest which would constrain the Proposal in combination with the BOWL development. Impacts on birds including collision risk and displacement will occur over the operational lifespan of the wind farms. The JNCC and SNH highlighted great black-backed gull as being of particular concern, followed by herring gull and three auk species (puffin, guillemot and razorbill). The JNCC and SNH used a method called PBR in their appraisal to determine whether levels of impact would be acceptable under the Habitats Regulations.

The JNCC and SNH advised that the **Proposal**:

- **would** give rise to an adverse effect on site integrity at the East Caithness Cliffs SPA in respect of great black-backed gull both alone and in combination with the BOWL development;
- **could** give rise to an adverse effect on site integrity at the East Caithness Cliffs SPA in respect of herring gull in combination with the BOWL development;
- **could** give rise to an adverse effect on site integrity at the East Caithness Cliffs SPA in respect of puffin in combination with the BOWL development;
- **could** give rise to an adverse effect on site integrity at the North Caithness Cliffs SPA in respect of puffin in combination with the BOWL development
- **could** give rise to an adverse effect on site integrity at the East Caithness Cliffs SPA in respect of guillemot in combination with the BOWL development;
- **could** give rise to an adverse effect on site integrity at the East Caithness Cliffs SPA in respect of razorbill in combination with the BOWL development.

In addition to the SPA species bulleted above, the JNCC and SNH advised that neither collision nor displacement (as a consequence of both the Proposal and BOWL development) would have a significant adverse effect on the gannet population of Gamrie and Pennan Coast Site of Special Scientific Interest (“SSSI”).

Following the advice on the SPA bird species likely to be affected, a series of meetings were held with the JNCC, SNH, Marine Scotland Science (“MSS”) and both MORL and BOWL to resolve “common currency” issues to support a more reliable cumulative impact assessment and comparison between the two development proposals. Following these discussions the JNCC and SNH provided updated ornithology advice on 29<sup>th</sup> October 2013 to Marine Scotland. The JNCC and SNH concluded the following for a cumulative assessment based on the MORL Proposal Worst Case Scenario (“WCS”) and the Most Likely Scenario (“MLS”) for BOWL:

- no adverse effect on site integrity at East Caithness Cliffs SPA for great black-backed gull, if cumulative collision risk mortality is no greater than 6 breeding birds per annum;
- no adverse effect on site integrity at East Caithness Cliffs SPA for herring gull;

- no adverse effect on site integrity at East Caithness Cliffs SPA for Puffin, if cumulative displacement amounts to no more than 24 pairs per annum;
- no adverse effect on site integrity for puffin at North Caithness Cliffs SPA;
- no adverse effect on site integrity for guillemot at East Caithness Cliffs SPA; and
- no adverse effect on site integrity for razorbill at East Caithness Cliffs SPA.

This advice was reviewed by MSS and their comments communicated to Marine Scotland on 31<sup>st</sup> October 2013 and clarification was sought on the great black-backed gull threshold of 6 birds during a teleconference on the 21<sup>st</sup> November 2013 between the JNCC, SNH, MSS and Marine Scotland. The JNCC and SNH confirmed that the figure of 6 great black-backed gull stipulated in the advice actually refers to breeding adult birds. The JNCC and SNH confirmed that the numbers of collisions predicted by the cumulative common currency would not result in an adverse effect on site integrity for great black-backed gull at East Caithness Cliffs SPA.

During the determination process for the MORL and BOWL applications, uncertainties about the population sizes of puffin at the time of designation, and subsequent trends, from the East Caithness Cliffs and North Caithness Cliffs SPAs arose. This resulted in the JNCC and SNH providing updated advice on puffin on the 17<sup>th</sup> January 2014. Due to the uncertainties over the population estimates, this advice was given on the combined populations of these two SPAs. The JNCC and SNH advised that there would be a cumulative total of 199 additional puffin mortalities from the two Moray Firth developments (28 from BOWL and 171 from MORL). In order to assess these impacts the JNCC and SNH used the PBR method to calculate revised limits of acceptable change for a joint SPA population of 7345 pairs of puffin – the total number of puffin at East and North Caithness Cliffs SPAs recorded during the Seabird 2000 survey. The JNCC and SNH advised that the current population trends are uncertain, so they used a range of  $f$  values from 0.3 – 0.5, making the precautionary assumption that overall trends are stable or declining. Using the PBR method, the limit of acceptable change for the overall population across both SPAs, falls within a range of 212 – 354 puffin mortalities. The JNCC and SNH conclude that the predicted level of puffin mortality across the MORL and BOWL wind farm sites is within limits of acceptable change and will not result in any long-term impacts on the viability of the puffin population across the East and North Caithness SPAs, therefore there would be no adverse effect on site integrity in respect of either the East or the North Caithness Cliffs SPAs. The JNCC and SNH also advised that this combined assessment addresses the requirements for HRA of this qualifying interest at both SPA sites.

With regards to marine mammals, the JNCC and SNH concluded that they were satisfied with the assessment methods presented in the ES and the conclusions reached, that there would be no long-term effects from underwater noise disturbance on the bottlenose dolphin population from the Moray Firth SAC, or the harbour seal population from the Dornoch Firth and Morrich More SAC, thus no adverse effect on site integrity of either SAC. The JNCC and SNH advised that it has not been established whether there is a link between the use of ducted propellers and the corkscrew injuries which have been recorded in seal species over the last couple of years. Research in this regard has been commissioned by Marine Scotland and SNH and is currently being undertaken by the Sea Mammal Research Unit (“SMRU”). A

condition requiring a Vessel Management Plan (“VMP”) will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland. The VMP will consider measures to mitigate potential corkscrew injuries to seals, and the JNCC and SNH will be consulted on this plan.

With regards to Atlantic salmon, freshwater pearl mussel and sea lamprey, the JNCC and SNH concluded that the Proposal would not result in any adverse effect on site integrity for any of the freshwater SACs considered to have connectivity with the Proposal.

With regards to habitat interests, the JNCC and SNH concluded that the Proposal would not result in any adverse effect on site integrity of the Moray Firth SAC, although this would require consideration should a further marine licence application be made for the dredging and disposal of sediment in connection with gravity bases, if used.

The AA carried out by Marine Scotland concluded that the Proposal and BOWL development will not adversely affect site integrity of any of the freshwater SACs, the Dornoch Firth and Morrich More SAC or the Moray Firth SAC. The JNCC and SNH agreed with these conclusions reached in the AA.

The JNCC and SNH advised that a European Protected Species (“EPS”) licence would be required due to the potential for disturbance to cetacean species. An EPS licence(s) will be applied for when the final wind farm layout, design and foundation options have been confirmed for the Proposal.

A key concern of the JNCC and SNH in respect of marine fish, relates to underwater noise impacts from pile-driving of the WTG foundations during construction on cod and herring. It is recommended that during pile driving events, a reduction in the blow force used to hammer in the pile, could mitigate noise impacts during peak spawning periods for these species. The JNCC and SNH also recommended post construction monitoring of sandeels is carried out.

For visual impacts, SNH advised that the key landscape, seascape and visual impacts of the Proposal in combination with BOWL will occur in a core area along a 39 km stretch of the Caithness coast from Noss Head in the North, to Dunbeath in the South. The Proposal lies a minimum of 22 km from the Caithness coast and BOWL a distance of 13.5 km at its closest point from the coast. SNH suggested that the Proposal and BOWL development are likely to be perceived as one single wind farm lying offshore, parallel to the coast. The wind farms will form a prominent new feature (some 19 km in length) on the skyline of the open sea. The visual impacts will primarily be caused by the BOWL wind farm, rather than the Proposal, due to BOWL having closer proximity to shore. Cumulatively, the Proposal will only marginally increase the visual impact as it lies further offshore behind BOWL, therefore more recessive in the views from the Caithness coast. The impacts on the Moray and Aberdeenshire coastline were considered to be negligible.

The JNCC and SNH requested that conditions be attached to any consent to mitigate their concerns. Where appropriate, enforceable conditions will be included in

any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

The **Scottish Environment Protection Agency (“SEPA”)** raised no objection to the Proposal and stated they are generally supportive of renewable energy projects, provided they can be achieved with acceptable environmental impact. SEPA were satisfied with the proposals, insofar as they fall within their remit, provided conditions to protect the environment are attached to any permission. Conditions relating to protection against the introduction of non-native species, the submission of a CEMD (in this consent it is called an EMP) and Construction Method Statement (“CMS”), to be approved prior to commencement of any works, will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland. SEPA provided advice on the Water Framework Directive, marine non-native species, environmental management and pollution prevention and regulatory requirements.

SEPA brought to the attention of MORL that, whilst they were satisfied the Proposal would not compromise the objectives of the Water Framework Directive; the assessment within the ES did not appear to refer specifically to coastal water bodies located in the vicinity of the Proposal. Although the WTGs will be located beyond the limit of River Basin Management Plans, produced by and implemented by SEPA under the Water Environment and Water Services (Scotland) Act 2003 (as amended), the near-shore and onshore elements will fall within the Scotland River Basin District. MORL wrote to SEPA (22<sup>nd</sup> February 2013) naming the water catchment areas with the potential to be affected by the Proposal, and which were considered in the onshore Hydrology, Geology and Hydrogeology impact assessment (referring to the appropriate section in the ES). SEPA responded (30<sup>th</sup> April 2013) to MORL stating they were content with the conclusions drawn from the assessments and had no further concerns or comments to raise with respect to impacts on coastal water bodies.

The **Association of Salmon Fishery Boards (“ASFB”)** raised an objection to the Proposal due to there being insufficient information to make an adequate assessment of the potential negative effects on salmonids. The concerns raised included the impacts from noise during construction, electro-magnetic fields (“EMF”) from cabling, impacts on prey species, and aggregation effects of the WTGs resulting in aggregations of predators. The ASFB recognises that these information gaps can only reasonably be filled by large scale strategic research and have requested the inclusion of a formal mitigation agreement on any consent.

The JNCC and SNH have concluded that the Proposal would not result in any adverse effect on site integrity of any freshwater SACs considered having connectivity with the Proposal. The JNCC and SNH state in their advice that they considered other SACs, but only gave their assessment on those SACs where there may be connectivity with the Proposal. Marine Scotland also concludes, after carrying out an AA, that the Proposal will not adversely affect site integrity of any freshwater SAC designated for Atlantic salmon, freshwater pearl mussel and sea lamprey considered to have connectivity with the Proposal.

Marine Scotland recognises that current scientific knowledge could be improved to better understand the migratory movements and behaviour of salmonids at sea and

any interaction they have with renewable energy devices. In anticipation of this, MSS prepared a report “The Scope of Research Requirements for Atlantic Salmon, Sea Trout and European Eel in the Context of Offshore Renewables” (Malcolm et al, 2013). From this scoping report MSS has identified the need for and commenced the preparation of a national strategy plan to address the research and monitoring requirements for diadromous fish in the context of possible interaction with the emerging marine renewable energy industry. In taking this process forward, two meetings were arranged with relevant stakeholder groups to identify their perspectives on research priorities. Proposals included: the development and analysis of Scotland’s national fish counter datasets and network, collation of datasets on salmon smolt populations in Scotland (to assess migration run times) and particle tracking model development, to name a few. Some of the above proposals such as the expansion of the fish counter network are already progressing as funding has been secured for the scoping stage.

The ASFB have met with MORL and recognise the willingness of MORL to contribute to and participate in strategic monitoring and potentially build mitigation options into the wind farm construction schedule.

The ASFB suggest that renewable developments be conditioned to provide that such developers participate in a national strategy at a local level, or by agreement, part fund larger projects. The yet to be formed “Moray Firth Regional Advisory Group” (“MFRAG”) will have a function in advising the Scottish Ministers on the suitability of any monitoring proposal for Atlantic salmon, sea trout and/or European eel that developers must undertake, however the Scottish Ministers will have final approval over any recommendations from the MFRAG. The requirement for developers to contribute at a local level (the Moray Firth) to a monitoring strategy being developed from “The Scope of Research Requirements for Atlantic Salmon, Sea Trout and European Eel in the Context of Offshore Renewables” will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

**Beatrice Offshore Wind Farm Ltd (“BOWL”)**, who have submitted applications to the Scottish Ministers in April 2012 for a separate offshore wind farm in the Moray Firth, immediately adjacent to the Proposal, did not raise any objections to the Proposal.

The **Chamber of Shipping (“CoS”)** raised no objection to the Proposal. The CoS requested that MORL consult with navigational stakeholders on final WTGs layouts for each of the three sites to identify optimal layouts that offer the best levels of mitigating navigational risk. The CoS indicated a preference for a standardised ‘grid’ layout for each of the three wind farms in the Proposal. They also requested further clarification on the likelihood of future applications for operational safety zones including information on their size. These safety zones will need to be applied for through Department of Energy and Climate Change (“DECC”).

MORL met with the CoS on 13<sup>th</sup> May 2013 to discuss and outline how they propose to address the comments above. The CoS did not provide any further correspondence to MORL or Marine Scotland post the meeting. Conditions ensuring that consultation with the CoS is undertaken prior to commencement of any

development will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

The **Civil Aviation Authority (“CAA”)** raised no objection to the Proposal; however the CAA highlighted relevant Policy Statements and guidance relating to standards for offshore helicopter landing areas, lighting of offshore WTGs and the failure of aviation warning lighting on WTGs which the developer should adhere to. The CAA stated that there was a requirement to notify the UK Hydrographic Office (“UKHO”) of final positions and maximum heights of the WTGs for aviation and maritime charting. A condition capturing this requirement will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

The CAA, responded to the consultation on the Additional Ornithology Information, indicating they had no further comments to make.

The **Defence Infrastructure Organisation (“DIO”) (Ministry of Defence)** initially objected to the Proposal as the WTGs in the Proposal would cause unacceptable interference to the Air Traffic Control Radar at Lossiemouth, and the WTGs in the Telford and MacColl wind farms specifically would cause unacceptable interference to the Air Defence Radar at Buchan.

Revised coordinates provided by MORL resulted in further operational assessments being carried out by the DIO. The results determined that none of the proposed WTGs locations within the Telford and MacColl wind farms would cause concerns with Radar Line of Sight or coverage to the Air Defence Radar at Buchan. Consequently, the DIO removed their objection concerning the Air Defence Radar at Buchan, confirmed in a letter dated 8<sup>th</sup> February 2013.

Further radar mitigation studies and a technical proposal to address the outstanding objections to Telford, Stevenson and MacColl wind farms concerning the Air Traffic Control Radar at Lossiemouth, were submitted by MORL to the DIO. The mitigation proposal was accepted by the DIO who confirmed they were content to remove their objections to Telford, Stevenson and MacColl wind farms subject to the appropriate conditions being included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland. This was confirmed by the DIO in a letter dated 3<sup>rd</sup> June 2013.

**Highlands & Islands Airports Ltd (“HIAL”)** raised no objection to the Proposal provided recommendations on aviation warning lights and requested that notifications of all proposed structures over ninety (90) metres in height should be provided to the CAA. Conditions capturing this requirement will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland. HIAL concluded that the position and heights of the proposed WTGs in the Proposal would not infringe the safeguarding surfaces for Inverness or Wick Airports. However, HIAL stated that the WTGs could possibly affect the performance of electronic aeronautical systems and the instrument approach procedures for Inverness or Wick Airports. HIAL noted that they were aware of the need to meet and reach an agreement with MORL to gain

assurance that the electronic systems and approach procedures would not be degraded. MORL have engaged with HIAL to address their concerns, and should a minor impact be identified, MORL will continue to consult with HIAL to ensure that the electronic systems and approach procedures will not be degraded.

**Historic Scotland (“HS”)** raised no objection to the Proposal as it considers there shall be no adverse direct, indirect or cumulative impacts on terrestrial or marine assets within their statutory remit that would warrant an objection. HS recommended a condition for inclusion on any consent requiring the implementation of the Protocol for Archaeological Discoveries (Offshore Renewables Projects). This will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

The HS responded to the consultation on the Additional Ornithology Information indicating they had no further comments to make.

**Ithaca Energy (“IE”)** raised no objection to the Proposal and requested that no WTGs, OSPs or meteorological mast be erected within 2.5 km, or export cables laid / positioned within 1.5 km of the Beatrice Alpha, Bravo, and Charlie or Jacky platforms. MORL has confirmed all infrastructure works concerning the Proposal will be out with these parameters.

The **Joint Radio Company (“JRC”)** raised no objection and cleared the Proposal with respect to radio link infrastructure operated by Scottish Hydro (Scottish & Southern Energy) and Scotia Gas Networks. JRC does not foresee any potential problems based on known interference scenarios from the data provided to them.

**Marine Scotland Science (“MSS”)** raised no objection to the Proposal, however requested further clarification of assessments carried out in the ES for certain receptors in order to allow a sufficient assessment of the potential impacts that may arise from the Proposal on each receptor. Discussion between MORL and MSS allowed advice to be given as detailed:

Ornithology - MSS have been involved in several meetings with MORL, BOWL, the JNCC and SNH to resolve “common currency” issues to enable more reliable cumulative impact assessment and comparison between the MORL and BOWL proposals. Following these meetings, MSS provided advice having considered the final advice from the JNCC and SNH. MSS noted that the JNCC and SNH had based their advice predominantly on the use of PBR and advised that this method did not use the best available evidence for establishing acceptable levels of change.

MSS applied the Acceptable Biological Change (“ABC”) tool to the population model outputs provided by MORL and BOWL to estimated acceptable levels of change. Potential Biological Removal (“PBR”) was used to “sense check” calculated thresholds.

MSS recognise that no method for assessing the significance of predicted effects is without its issues, however advised that the population model outputs with the precautionary application of the ABC tool (alongside sense checking against PBR) provides the best available information for undertaking the assessment.

MSS provided advice to Marine Scotland on 31<sup>st</sup> October 2013 having considered the advice provided by the JNCC and SNH on 29<sup>th</sup> October 2013. MSS advice is detailed below:

- Greater black-backed gull at East Caithness Cliffs SPA - no adverse effect on site integrity if cumulative mortality is approximately 10 birds of all ages per annum. The application of the ABC tool gave a threshold of 15 to 20, therefore 10 is precautionary (to align more closely with figure of 6 advised by the JNCC and SNH);
- Herring gull at East Caithness Cliffs SPA – agree with the JNCC and SNH that there will be no adverse effect on site integrity;
- Guillemot at East Caithness Cliffs SPA – agree with the JNCC and SNH that there will be no adverse effect on site integrity;
- Razorbill at East Caithness Cliffs SPA - agree with the JNCC and SNH that there will be no adverse effect on site integrity;
- Puffin at East Caithness Cliffs SPA, no adverse effect on site integrity. MSS do not agree with the assessment method used by the JNCC and SNH and consider that the displacement effects were overestimated and highly precautionary; and
- Puffin at North Caithness Cliffs SPA – agree with SNH and JNCC that there will be no adverse effect on site integrity.

Following the uncertainties over the population estimates cited for puffin from the East and North Caithness Cliffs SPAs, MSS completed a further assessment of the potential impacts, again applying the ABC tool to the population model outputs. MSS advised that there would be no adverse effect on site integrity of the East and North Caithness Cliffs SPAs with respects to puffin if they were considered independently or together.

A full explanation of the ornithology issues and justification for decisions regarding site integrity is provided in the AA completed, which will be made available on the Marine Scotland licensing page of the Scottish Government's website following determination of the applications.

Marine Mammals - For bottlenose dolphin, MSS advised that the most appropriate reference population to assess impacts against is the Coastal East Scotland ("CES") with a population of between 162 and 253 (median 195) animals. MSS advised that noise propagation modelling indicates that bottlenose dolphins may receive noise levels sufficient to cause disturbance in some areas of their range, and therefore an EPS licence will be required for bottlenose dolphins. However, evidence from the PVA modelling indicates that there will be no impact on the favourable conservation status of the population. MSS also provided advice for the Moray Firth wind farms in combination with the Moray Firth port developments (Nigg, Ardersier and Invergordon) and advised that these developments in combination would not result in an adverse effect on the integrity of the Moray Firth SAC.

For harbour porpoise, MSS advised that the appropriate management unit for harbour porpoise is the North Sea. This area is estimated to contain 227,298 animals, with 95% confidence intervals ranging from 176,360 to 292,948 animals. Evidence from studies of harbour porpoise responses to seismic surveys in the

Moray Firth suggests that animals were displaced by noise effects within 10 km, however return with a few hours. Based on the information provided in the ES, MSS advised that the Proposal in combination with BOWL will not have a significant adverse effect on the North Sea, or Moray Firth harbour porpoise population.

For minke whale, MSS advised that the management area for minke whale is British and Irish waters. This area is estimated to contain 23,163 animals, with 95% confidence intervals ranging from 13,772 to 38,958. MSS advised that disturbance from piling will not affect the favourable conservation status of the minke whale population. However, disturbance of individual animals is likely to occur, both inside and outside of Scottish Territorial Waters, from both the Proposal and BOWL, necessitating the requirement for an EPS licence.

For harbour (common) seal, MSS advised that the population effects were assessed through a seal assessment framework and were presented in the ES. The results demonstrated that for both the Proposal alone, and in combination with BOWL, there would be an effect on the population of harbour seals within the Moray Firth seal management area during the construction period, but that this would recover following the end of construction. Advice from the JNCC and SNH on this basis stated that there would be no adverse effect on site integrity of the Dornoch Firth and Morrich More SAC.

For grey seal, MSS advised that they are in agreement with the conclusions reached in the ES that the numbers of grey seals that may be affected by the Proposal do not pose a risk to their population status.

MSS expect the JNCC piling guidelines to be followed and would look to develop strategies that would minimise the impacts of disturbance to all marine mammal species. MSS have also requested that monitoring be carried out to validate predictions made in the ES regarding levels of disturbance and the effect of the Proposal on populations of marine mammals. MSS are aware that MORL and BOWL have been consulting with the University of Aberdeen on a Marine Mammal Monitoring Plan ("MMMP") that would address this, and would also provide useful evidence to inform future rounds of wind farm development. Conditions detailing required mitigation and monitoring for marine mammals will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

Commercial Fisheries - MSS recommended the implementation of the Fisheries Working Group to address the concerns of the fishing industry. The 'Moray Firth Offshore Wind Developers Group - Commercial Fisheries Working Group' ("MFOWDG-CFWG") has since been established and met for the first time on the 18<sup>th</sup> April 2013. Mitigating the construction, operational and decommissioning impacts of the Proposal, in combination with the adjacent proposed BOWL development, was identified as the key aim for the group. A condition for MORL to continue its involvement in the MFOWDG-CFWG will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

Fish Ecology - MSS recommended MORL undertake pre-construction surveys to gather further baseline information with regards to locations of spawning cod within the vicinity of the Proposal. MORL carried out cod surveys in February and March 2013 to identify if any cod spawning areas are located in and around the EDA. Low numbers were discovered within the lease area and in areas out-with the lease boundary, resulting in no mitigation required for cod. A condition to test the impact assessments for cod made in the ES post construction will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland, for the Telford, Stevenson and MacColl wind farms.

MSS recommended MORL carry out pre-construction surveys to gather baseline information with regards the presence of sandeels within the vicinity of the Proposal. MORL carried out sandeel surveys in February 2012 to identify if any sandeels are present in and around the EDA. A condition to test the impact assessments for sandeel made in the ES post construction will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland, for the Stevenson and MacColl wind farms.

MSS identified the noise contours from piling in the Proposal penetrate into the perceived spawning areas for the Orkney / Shetland herring stock. The Orkney / Shetland stock has not recovered like the other North Sea herring stocks, consequently, any potential impact on this stock is of concern. A condition to either restrict piling during the spawning period (August and September) and / or deploy suitable mitigation to protect the stock will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland, for the Telford and Stevenson wind farms.

Diadromous Fish - MSS is satisfied that the ES adequately covered what information is currently available as a great deal of uncertainty still remains about the detailed migration routes of Atlantic salmon, sea trout and European eels. MSS recommends that the main priorities at this stage regarding diadromous fish are to develop plans for monitoring diadromous fish in the vicinity of the Proposal and to ensure that suitable mitigation measures can be applied proportionately to any impacts detected during monitoring. The evolution of the 'Scottish Atlantic Salmon, Sea Trout and European Eel Monitoring Strategy' is currently on-going with the aim of trying to address the many unknowns surrounding the life patterns of diadromous fish. A condition to commit to participation in the monitoring strategy at a local level (the Moray Firth), will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

Aquaculture - MSS advised that there are no aquaculture sites within the proposed boundaries of the Proposal.

Physical and Coastal Processes - MSS stated the ES was extremely comprehensive, having considered a large number of possible receptors and a comprehensive selection of physical processes that affect those receptors, therefore had no objections.

Benthic Ecology - Initially, MSS was of the opinion that MORL had not provided sufficient information in the ES on benthic ecology to allow a sufficient assessment of the potential impacts that may arise from the Proposal. MORL addressed the MSS comments by highlighting relevant sections within the ES. This allowed MSS to respond with no concerns regarding benthic ecology.

Gravity Base Option - MSS raised some concerns about the design envelope approach and the difficulties of assessing impacts for the different scenarios. Questions were raised as to how realistic some of the options presented were, particularly concerning the use of gravity bases. It has since been agreed with MORL that if gravity bases are to be used this will require a further marine licence application to Marine Scotland for the dredging and disposal of the sediment associated with this option.

The **Maritime & Coastguard Agency (“MCA”)** raised no objection to the Proposal, subject to all MCA recommendations, as appropriate to the Proposal, be taken into account and addressed as contained within Marine Guidance Note 371 “Offshore Renewable Energy Installations (“OREIs”) – Guidance on UK Navigational Practice, Safety and Emergency Response Issues” and its annexes. In their initial response the MCA requested the submission of the bathymetry data to support the Navigational Risk Assessment (“NRA”). This was provided by MORL. The MCA highlighted the final layout, marking and lighting of the WTGs will be subject to consent and approval from a navigation safety perspective. Conditions relating to the requests from the MCA will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

**Moray Firth Sea Trout Project (“MFSTP”)** formally objected to the Proposal until there was commitment to specific surveys and monitoring to determine potential negative effects on sea trout and their prey, and consequently for adequate mitigation to be deployed. MORL responded to the MFSTP on how they propose to address the points raised. The MFSTP did not provide any further correspondence to MORL or Marine Scotland on the comments made. The requirement for the developer to contribute at a local level (the Moray Firth) to a monitoring strategy being developed by Marine Scotland will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

**National Air Traffic Services (“NATS”)** initially objected to the Proposal as it conflicted with NATS safeguarding criteria. Further discussions between MORL and NATS resulted in an agreement of a contract between the companies whereby the objection from NATS Safeguarding could be removed subject to conditions being attached on any consent. These conditions will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

NATS responded to the consultation on the Additional Ornithology Information indicating they had no further comments to make.

**Northern Lighthouse Board (“NLB”)** raised no objection to the Proposal. The NLB requested that they be consulted post-consent to ensure the Proposal, during construction, operation and decommissioning phases, will be suitably marked and lit and that Notices to Mariners and Radio Navigation Warnings are issued. The NLB also recommended that publication of information in other appropriate bulletins, stating the nature and timescale of the works are provided to ensure adequate notification of the Proposal to mariners.

As final numbers and layouts of the WTGs for the Proposal alone, and in combination with the other developments in the Moray Firth, are unknown at this stage, the NLB were unable to specify final marking and lighting requirements for each phase of the Proposal. Conditions requiring the Company to submit final plans on layout (Development Specification and Layout Plan), lighting (Lighting and Marking Plan) and navigational safety (Navigational Safety Plan) for approval will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

The NLB responded to the consultation on the Additional Ornithology Information indicating they had no further comments to make.

**Royal Society for the Protection of Birds Scotland (“RSPB Scotland”)** objected to the Proposal on the basis that the environmental assessment underestimates risk and potential environmental impacts. They claim recent demographic trends of at-risk bird species are not adequately considered and the cumulative impact assessment is incomplete and does not follow best practice. However, RSPB Scotland stated their objection is precautionary and in this regard would welcome further engagement with the MORL and statutory authorities to provide further advice and input to the assessment of ornithological interests. RSPB Scotland responded to the consultation on the Additional Ornithology Information indicating they were maintaining their objection to the Proposal.

RSPB Scotland highlighted that recent colony counts (undertaken by SNH in 2013) should be considered in the assessment; however this data has not yet been made publicly available. RSPB Scotland have also raised concerns regarding the use of the extended Band (2012) model for the estimation the collision risk and the use of the 98% avoidance rate in the assessments. Recent correspondence from RSPB Scotland has highlighted their issues with the way in which the acceptable levels of change to the populations have been estimated by MSS, the JNCC and SNH, and have stated that neither of the tools (PBR or ABC) are suitable for the purpose for which they have been applied. RSPB Scotland have offered no alternative means for assessing the levels of acceptable change however have suggested a reduction in scale to a total of 1000 MW for the Moray Firth region (MORL and BOWL combined) in order to ensure that impacts are within acceptable limits.

RSPB Scotland maintain that the Proposal on its own and in combination with BOWL would be likely to have an adverse impact on the integrity of the East Caithness Cliffs SPA, and that the proposed MORL and BOWL developments would be likely to result in unacceptable harm to a range of seabird species, most notably great black-backed gull, herring gull, gannet, kittiwake and puffin. RSPB Scotland have also criticised the high degree of precision in the estimation of predicted impacts and

setting of thresholds, due to the inherent uncertainty of the assessment process that is compounded by a lack of understanding and empirical data on the biological and behavioural ecology of seabirds and seabird populations. As a result, the robustness of the conclusions is questionable and adequate precaution should be taken. Marine Scotland and MSS fully recognise this uncertainty however feel that the assessment process has used the best available evidence. The assessment has also been highly precautionary as detailed in the AA.

RSPB Scotland whilst not removing their objection, have been involved in talks with Marine Scotland relating to the acceptable capacity of development. Discussions have also been on-going to develop a National Strategic Bird Monitoring Framework (“NSBMF”). This NSBMF will be conditioned on all offshore wind farms consented by Marine Scotland in the future. Based on this framework, a condition relating to the local monitoring appropriate to the Proposal will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

**Royal Yachting Association Scotland (“RYA Scotland”)** raised no objection to the Proposal. RYA Scotland is content MORL has addressed all of the comments in their response to the ES consultation. RYA Scotland has requested the location of the Proposal be provided for inclusion in the Clyde Cruising Club ‘Sailing Directions and Anchorages’. A condition relating to this request will be included in any marine licence granted by Marine Scotland.

**The Scallop Association (“SA”)** was consulted but no response was received from the organisation on the Proposal. However, the SA was included in the Scottish Fisherman’s Federation response in the list of organisations in represents (see Scottish Fisherman’s Federation below).

**Scottish Canoe Association (“SCA”)** raised no objection to the Proposal, however they noted the requirement to ensure that adequate navigation markings would be required to warn kayakers of any potential obstruction as well as potential navigational implications arising from the use of safety zones although the SCA acknowledged that the Proposal is well out from shore where kayakers would typically transit. Conditions relating to safety of navigation will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

**Scottish Fisherman’s Federation (“SFF”)** initially indicated they would remain opposed to the Proposal until such time as it can be proved that effects from the Proposal will not be totally detrimental to the fishing industry. The SFF raised concerns that the Proposal could lead to either restricted access or total loss of traditional fishing grounds, exclusion zones and vessel displacement. To this regard, the SFF stated they were open to dialogue and co-operation with MORL to enable them to become supportive of the applications and the need to lead to process towards ensuring co-existence in the marine environment of both fishing and renewables.

The SFF suggested that a fisheries working group be set up as the forum to channel this dialogue. The MFOWDG-CFWG has since been set up and welcomed by the SFF. MORL has developed a ‘Commercial Fisheries Mitigation Strategy’, which has

been accepted by the SFF as a live document, outlining its commitments for engagement with the fishing industry.

As a result of this, the SFF has confirmed that it no longer objects to the Proposal provided that MORL continues its commitment to realistically and proactively attempt to successfully mitigate the negative effects of the Proposal on the fishing industry and that such mitigation is successful. A condition to ensure the developer continues its membership of the MFOWDG-CFWG and its commitment to the mitigation strategy will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

**Surfers Against Sewage (“SAS”)** raised no objection to the Proposal, however raised concerns regarding potential effect on wave height and the route and installation method of the subsea cable as it comes ashore. MORL wrote to SAS addressing their concerns, highlighting the relevant sections within the ES and their intention to contact SAS and local surf clubs ahead of the construction phase once more detailed information is available. SAS did not provide any further correspondence to MORL or Marine Scotland on the comments made by MORL.

**Transport Scotland (“TS”)** raised no objection to the Proposal. At present, the road-based traffic and transportation logistics associated with the construction of the Proposal and the OfTI is yet to be decided. TS wish to be consulted again once this information is available to allow an assessment on the impact of these elements on the Trunk Road network. A condition ensuring that a Traffic and Transportation Plan is produced by the developer, and accepted by the Scottish Ministers, prior to the commencement of the development will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

**University of Aberdeen (“UoA”)** were consulted but did not submit a response due to their involvement in the preparation of the ES.

**Whale & Dolphin Conservation (“WDC”)** raised no objection to the Proposal but stated that they do not agree that MORL can be confident that the Proposal alone, and in combination with the other developments in the Moray Firth, will have no significant impacts on harbour seals and EPS (e.g. bottlenose dolphin, porpoise or minke whale). WDC identified the impacts from pile driving and displacement effects as possible negative effects on cetacean species and seals.

MORL has met with WDC to discuss issues raised in their response and provided an update on the works being proposed to address the concerns of WDC. WDC welcomed the approaches being taken and the opportunity to be involved in the development of the MMMP for the Moray Firth.

WDC also raised concerns over possible impacts on marine wildlife watching boat operators and pointed out that the WDC Scottish Dolphin Centre is located in Spey Bay may be adversely affected.

WDC listed suggestions and recommendations that they would like to see addressed by way of conditions in the consent. Where appropriate, enforceable conditions will be included in any consent granted by Scottish Ministers under Section 36 of the Electricity Act 1989 and / or any marine licence granted by Marine Scotland.

### Other Responses – in relation to the Application and ES

The following organisations had **no comment** to make;

- **Cromarty Firth Port Authority**
- **Health & Safety Executive**
- **Ports & Harbours**

**BT Network Radio Protection, Moray Firth Partnership, Marine Scotland Compliance** were consulted and a “nil return” response was received from each.

The **Bond Offshore Helicopters, Bristow Helicopters, CHC Helicopters, The Crown Estate, Inshore Fisheries Group (Moray Firth), Marine Safety Forum, PA Resources UK Ltd, Scottish Fisherman’s Organisation** and **Scottish Wildlife Trust**, were consulted but no responses were received.

### Additional Ornithology Information

Unless stated above, no responses were received in relation to the Additional Ornithology Information from the consultees.

## **5. Conditions**

Following consideration of all relevant information, including the ES, Additional Ornithology information, supporting documents and consultation responses, Marine Scotland consider that the following conditions must be included in the marine licences:

### **5.1 Conditions applicable to all phases of the works**

#### **5.1.1 Project Environmental Monitoring Programme (“PEMP”)**

The licensee must, no later than 6 months prior to the commencement of the works, submit a PEMP, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with the JNCC, SNH, WDC, the ASFB and any other ecological advisors as required at the discretion of the licensing authority. The PEMP must be in accordance with the ES as it relates to environmental monitoring.

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

Monitoring should be done in such a way as to ensure that the data which is collected allows useful and valid comparisons as between different phases of the works. Monitoring may also serve the purpose of verifying key predictions in the ES. Additional monitoring may be required in the event that further potential adverse environmental effects are identified for which no predictions were made in the ES.

The licensing authority may agree that monitoring may cease before the end of the lifespan of the works.

The PEMP must cover, but not be limited to the following matters

- a) Pre-construction, construction (if considered appropriate by the licensing authority) and post-construction monitoring surveys as relevant in terms of the ES and any subsequent surveys for:
  1. Cod;
  2. Herring;
  3. Sandeels;
  4. Diadromous fish;
  5. Benthic communities; and
  6. Seabed scour and local sediment deposition.
  
- b) The participation by the licensee in surveys to be carried out in relation to marine mammals as set out in the Marine Mammal Monitoring Programme.

All the initial methodologies for the above monitoring must be approved, in writing, by the licensing authority and, where appropriate, in consultation with the Moray Firth Regional Advisory Group (“MFRAG”), referred to in condition 5.1.3 of this licence. Any pre-consent surveys carried out by MORL to address any of the above species may be used in part to discharge this condition.

The PEMP is a live document and must be regularly reviewed by the licensing authority, at timescales to be determined by the licensing authority, in consultation with the MFRAG to identify the appropriateness of on-going monitoring. Following such reviews, the licensing authority may, in consultation with the MFRAG, require the licensee to amend the PEMP and submit such an amended PEMP, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation with MFRAG and any other ecological, or such other advisors as may be required at the discretion of the licensing authority. The PEMP, as amended from time to time, must be fully implemented by the licensee at all times.

The licensee must submit written reports of such monitoring surveys to the licensing authority at timescales to be determined by the licensing authority in consultation with the MFRAG. Subject to any legal restrictions regarding the treatment of the information, the results are to be made publicly available by the licensing authority, or by such other party appointed at their discretion.

### **5.1.2 Environmental Management Plan (“EMP”)**

The licensee must, no later than 6 months prior to the commencement of the works, submit an EMP, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with the JNCC, SNH, SEPA and any such other advisors or organisations as may be required at the discretion of the licensing authority. The works must, at all times, be constructed and operated in accordance with the approved EMP (as updated and amended from time to time by the licensee). Any updates or amendments made to the EMP by the licensee must be submitted, in writing, by the licensee to the licensing authority for their written approval.

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

- a) all construction as required to be undertaken before the final commissioning of the works; and
- b) the operational lifespan of the works from the final commissioning of the works until the cessation of electricity generation (Environmental management during decommissioning is addressed by condition 5.2.2).

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

- a) Mitigation measures to prevent significant adverse impacts to environmental interests, as identified in the ES and pre-consent and pre-construction surveys, and include the relevant parts of the Construction Method Statement (“CMS”);
- b) Pollution prevention measures and contingency plans;
- c) Management measures to prevent the introduction of invasive non-native marine species;
- d) Measures to minimise, recycle, reuse and dispose of waste streams;
- e) The reporting mechanisms that will be used to provide the licensing authority and relevant stakeholders (including, but not limited to, the JNCC, SNH, SEPA, MCA and the NLB) with regular updates on construction activity, including any environmental issues that have been encountered and how these have been addressed; and
- f) Details of how the licensee will give consideration to the two European Commission Designated Bathing Waters; Fraserburgh Tigerhill and Fraserburgh Philorth, with respect to minimising water quality and amenity impacts during construction.

The licensee must, no later than 3 months prior to the final commissioning of the works, submit an updated EMP, in writing, to cover the operation and maintenance activities for the works to the licensing authority for their written approval. Such

approval may be given only following consultation with the JNCC, SNH, SEPA and any such other advisors or organisations as may be required at the discretion of the licensing authority. The EMP must be regularly reviewed by the licensee and the MFRAG (refer to condition 5.1.3) over the lifespan of the works, and be kept up to date (in relation to the likes of construction methods and operations of the works in terms of up to date working practices) by the licensee in consultation with the MFRAG.

The EMP must be informed, so far as is reasonably practicable, by the baseline surveys undertaken as part of the ES and the PEMP.

### **5.1.3 Moray Firth Regional Advisory Group (“MFRAG”)**

The licensee must participate in any MFRAG established by the licensing authority for the purpose of advising the licensing authority on research, monitoring and mitigation programmes for, but not limited to, ornithology, diadromous fish, marine mammals and commercial fish. Should a SSMEG be established (refer to condition 5.1.4), the responsibilities and obligations being delivered by the MFRAG will be subsumed by the SSMEG at a timescale to be determined by the licensing authority.

### **5.1.4 Scottish Strategic Marine Environment Group (“SSMEG”)**

The licensee must participate in any SSMEG established by the licensing authority for the purpose of advising the licensing authority on research, monitoring and mitigation programmes for, but not limited to, ornithology, diadromous fish, marine mammals and commercial fish.

### **5.1.5 Atlantic salmon, sea trout and European eel Monitoring Strategy**

The licensee must, to the satisfaction of the licensing authority, participate in the monitoring requirements as laid out in the ‘Scottish Atlantic Salmon, Sea Trout and European Eel Monitoring Strategy’ so far as they apply at a local level (the Moray Firth). The extent and nature of the licensee’s participation is to be agreed by the licensing authority in consultation with the MFRAG.

### **5.1.6 Moray Firth Offshore Wind Developers Group - Commercial Fisheries Working Group (“MFOWDG-CFWG”)**

The licensee must continue its membership in the MFOWDG-CFWG, or any successor group formed to facilitate commercial fisheries dialogue to define and finalise the draft Commercial Fisheries Mitigation Strategy (dated 1<sup>st</sup> July 2013 (Revision C)) (“CFMS”). As part of the finalised CFMS, the licensee must produce and implement a mitigation strategy for each commercial fishery that can prove to the licensing authority that they will be adversely affected by the works. Should it be deemed necessary by the MFOWDG-CFWG, investigations into alternative gear for the scallop fishing industry in the Moray Firth must form part of the CFMS. The CFMS to be implemented must be approved in writing by the licensing authority. The licensee must implement all mitigation measures committed to be carried out by the licensee within the CFMS, so far as is applicable to the works. Any contractors, or

sub-contractors working for the licensee, must co-operate with the fishing industry to ensure the effective implementation of said CFMS.

#### **5.1.7 Health and safety incident**

If any serious health and safety incident occurs on the Site requiring the licensee to report it to the Health and Safety Executive, then the licensee must also notify the licensing authority of the incident within 24 hours of the incident occurring.

#### **5.1.8 Bunding and storage facilities**

The licensee must ensure suitable bunding, storage facilities are employed to prevent the release of fuel oils, lubricating fluids associated with the plant and equipment into the marine environment.

#### **5.1.9 Restoration of the Site to its original condition**

The licensee must take all reasonable, appropriate and practicable steps to restore the Site to its original condition before the licensed activities were undertaken, or to as close to its original condition as is reasonably practicable, to the satisfaction of the licensing authority, should the licensed activities be discontinued.

### **5.2 Prior to the commencement of the works**

#### **5.2.1 Commencement date of licensed activities**

The licensee must, prior to and no less than 1 month before the commencement of the licensed activities, notify the licensing authority, in writing, of the date of commencement of the licensed activities authorised under this licence.

#### **5.2.2 Decommissioning Programme**

Where the Secretary of State has, following consultation with the licensing authority, given notice requiring the licensee to submit to the Secretary of State a decommissioning programme, pursuant to section 105(2) and (5) of the Energy Act 2004, then construction may not begin on the site of the works until after the licensee has submitted to the Secretary of State a decommissioning programme in compliance with that notice.

#### **5.2.3 Construction Programme (“CoP”)**

The licensee must, no later than 6 months prior to the commencement of the works, submit CoP, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with the JNCC, SNH, SEPA, MCA, NLB, Aberdeenshire Council and any such other advisors or organisations as may be required at the discretion of the licensing authority. The CoP must be in accordance with the ES.

The CoP must set out:

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

#### **5.2.4 Construction Method Statement (“CMS”)**

The licensee must, no later than 6 months prior to the commencement of the works submit a CMS, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with the JNCC, SNH, SEPA, MCA, NLB, Aberdeenshire Council and any such other advisors or organisations as may be required at the discretion of the licensing authority. The CMS must set out the construction procedures and good working practices for installing the works. The CMS must be in accordance with the construction methods assessed in the ES and must include details of how the construction related mitigation steps proposed in the ES are to be delivered.

The CMS must, so far as is reasonably practicable, be consistent with the Design Statement (“DS”), the EMP, the Vessel Management Plan (“VMP”), the Navigational Safety Plan (“NSP”), the Piling Strategy (“PS”) (if required), the Cable Plan (“CaP”) and the Lighting and Marking Plan (“LMP”).

#### **5.2.5 Piling Strategy (“PS”)**

In the event that pile foundations are to be used, the licensee must, no later than 6 months prior to the commencement of the works, submit a PS, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with the JNCC, SNH and any such other advisors as may be required at the discretion of the licensing authority.

The PS must include:

- a) Full details of the proposed method and anticipated duration of pile-driving at all locations;
- b) Details of soft-start piling procedures and anticipated maximum piling energy required at each pile location; and
- c) Details of mitigation and monitoring to be employed during pile-driving, as agreed by the licensing authority.

The PS must be in accordance with the ES and reflect any surveys carried out after submission of the application. The PS must demonstrate how the exposure to and / or the effects of underwater noise have been mitigated in respect of the following species: bottlenose dolphin; harbour seal; Atlantic salmon; cod; and herring.

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

### **5.2.6 Development Specification and Layout Plan (“DSLPL”)**

The licensee must, no later than 6 months prior to the commencement of the works, submit a DSLP, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with the MCA, NLB, the CoS, the JNCC, SNH, the SFF and any such other advisors or organisations as may be required at the discretion of the licensing authority.

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

- a) A plan showing the proposed location of each individual OSP, seabed conditions, bathymetry, confirmed foundation type for each OSP and any key constraints recorded on the Site;
- b) A list of latitude and longitude co-ordinates accurate to three decimal places of minutes for each OSP, this should also be provided as a geographic information system (“GIS”) shape file using World Geodetic System 84 (“WGS84”) format;
- c) A table or diagram of each OSP;
- d) The finishes for each OSP; and
- e) The length and proposed arrangements on the seabed of all cables.

### **5.2.7 Design Statement (“DS”)**

The licensee must, prior to the commencement of the works, submit a DS, in writing, to the licensing authority that includes representative visualisations from key viewpoints agreed with the licensing authority, based upon the DSLP, as approved by the licensing authority (as updated and amended from time to time by the licensee). The DS must be provided, for information only, to the Highland Council, Moray Council, Aberdeenshire Council, the JNCC, SNH and any such other advisors or organisations as may be required at the discretion of the licensing authority. The DS must be prepared and signed off by at least one qualified landscape architect, instructed by the licensee prior to submission to the licensing authority.

### **5.2.8 Vessel Management Plan (“VMP”)**

The licensee must, no later than 6 months prior to the commencement of the works, submit a VMP, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with the JNCC, SNH, and any such other advisors or organisations as may be required at the discretion of the licensing authority.

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

- a) The number, types and specification of vessels required;
- b) Working practices to minimise the unnecessary use of ducted propellers;
- c) How vessel management will be co-ordinated, particularly during construction but also during operation; and
- d) Location of working port(s), how often vessels will be required to transit between port(s) and the Site and indicative vessel transit corridors proposed to be used.

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

### **5.2.9 Operation and Maintenance Programme (“OMP”)**

The licensee must, no later than 3 months prior to the commissioning of the first OSP, submit an OMP, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with the JNCC, SNH, SEPA, MCA, NLB, Aberdeenshire Council and any such other advisors or organisations as may be required at the discretion of the licensing authority. The OMP must set out the procedures and good working practices for the operations and maintenance of the OSPs, substructures, and cable network of the works. Environmental sensitivities which may affect the timing of the operation and maintenance activities must be considered in the OMP.

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

### **5.2.10 Navigational Safety Plan (“NSP”)**

The licensee must, no later than 6 months prior to the commencement of the works, submit a NSP, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with MCA, NLB and any other navigational advisors or organisations as may be required at the discretion of the licensing authority. The NSP must include, but not be limited to, the following issues:

- a) Navigational safety measures;
- b) Construction exclusion zones;
- c) Notice(s) to Mariners and Radio Navigation Warnings;
- d) Anchoring areas;
- e) Temporary construction lighting and marking;
- f) Emergency response and co-ordination arrangements for the construction, operation and decommissioning phases of the works; and
- g) Buoyage.

The licensee must confirm within the NSP that they have taken into account and adequately addressed all of the recommendations of the MCA in the current Marine Guidance Note 371, and its annexes, that may be appropriate to the works, or any other relevant document which may supersede said guidance.

### **5.2.11 Cable Plan (“CaP”)**

The licensee must, no later than 6 months prior to the commencement of the works, submit CaP, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with the JNCC, SNH, MCA, and the SFF and any such other advisors or organisations as may be required at the discretion of the licensing authority. The CaP must be in accordance with the ES.

The CaP must include the following:

- a) Details of the location and cable laying techniques for the cables;
- b) The results of survey work (including geophysical, geotechnical and benthic surveys) which will help inform cable routing
- c) A pre-construction survey for Annex 1 habitat to inform cable micro-siting and installation methods in consultation with licensing authority and their advisors;
- d) Technical specification of all cables, including a desk based assessment of attenuation of electro-magnetic field strengths and shielding;
- e) A burial risk assessment to ascertain if burial depths can be achieved. In locations where this is not possible then suitable protection measures must be provided;
- f) Methodologies for over trawl surveys of the cables through the operational life of the works where mechanical protection of cables laid on the sea bed is deployed; and
- g) Measures to address exposure of any cables.

#### **5.2.12 Traffic and Transportation Plan (“TTP”)**

The licensee must, no later than 6 months prior to the commencement of the works submit a TTP, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with Transport Scotland, the Highland Council, Moray Council, Aberdeenshire Council, and any such other advisors as may be required at the discretion of the licensing authority. The TTP must set out a mitigation strategy for the impact of road based traffic and transportation associated with the works.

#### **5.2.13 Ecological Clerk of Works (“ECoW”)**

Prior to the commencement of the works, the licensee must at its own expense, and with the approval of the licensing authority in consultation with the JNCC and SNH, appoint an ECoW. The term of appointment for the ECoW shall be from no later than 9 months post the issue of this licence until the final commissioning of the works.

The responsibilities of the ECoW must include, but not be limited to:

- a) Quality assurance of final draft version of all plans and programmes required under this licence;
- b) Provide advice to the licensee on compliance with licence conditions, including the conditions relating to the CMS, the EMP, the PEMP, the PS (if required), the CaP and the VMP;
- c) Monitor compliance with the CMS, the EMP, the PEMP, the PS (if required), the CaP and the VMP;
- d) Provide reports on point c) above to the licensing authority at timescales to be determined by the licensing authority; and
- e) Inducting site personnel on site / works environmental policy and procedures.

#### **5.2.14 Fisheries Liaison Officer (“FLO”)**

Prior to the commencement of the works, a Fisheries Liaison Officer (“FLO”), approved by licensing authority, must be appointed by the licensee for the period from commencement of the works until the final commissioning of the works. The licensee must notify the licensing authority of the identity and credentials of the FLO before commencement of the works by including such details in the EMP (refer to condition 5.1.2). The FLO must establish and maintain effective communications between the licensee, any contractors or sub-contractors, fishermen and other users of the sea during the construction of the works, and ensure compliance with best practice guidelines whilst doing so.

The responsibilities of the FLO include, but not limited to:

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

#### **5.2.15 Herring surveys**

In the event that pile foundations are to be used, the licensee must undertake herring surveys every year during the months of August and September commencing the first August and September following the date of this licence, up until, and including, the last August and September prior to commencement of the works, unless otherwise agreed in writing by the licensing authority. The methodology of the herring surveys must be agreed, in writing, by the licensing authority, following consultation with Marine Scotland Science, prior to the surveys commencing. The results of the herring surveys will be used to better inform the knowledge of spawning behaviour / characteristics of the Orkney / Shetland herring stock, thus allowing the licensee to devise mitigation options to minimise noise impacts from piling activity on all life stages of herring and to inform the licensee’s PS (if PS required).

Following the results of the herring surveys undertaken in the last August and September prior to the commencement of the works, the licensee must submit, in writing, its mitigation strategy to minimise the noise impacts on herring from piling activity, to the licensing authority, for their written approval.

#### **5.2.16 Cod surveys**

The cod surveys undertaken on 17-26<sup>th</sup> February 2013 and 10-19<sup>th</sup> March 2013 in the MORL will remain valid as a pre-construction baseline survey provided the commencement of the works occurs no later than 1<sup>st</sup> April 2018. If commencement of the works is later than 1<sup>st</sup> April 2018, the licensee must undertake a further baseline cod survey during the months of February and March immediately prior to the

commencement of the works in the area marked 'Cod Survey Area' shown in Figure 1, unless prior written approval is sought and obtained from the licensing authority. A full survey report and data set must be submitted, in writing, to the licensing authority within 6 months following completion of any further baseline cod survey for approval, in writing, by the licensing authority.

#### **5.2.17 Sandeel surveys**

The sandeel survey undertaken between 30<sup>th</sup> January and 2<sup>nd</sup> March 2012 in the Moray Firth by MORL will remain valid as a pre-construction baseline survey provided that the commencement of the works occurs no later than 1st April 2017. If commencement of the works occurs later than 1st April 2017, the licensee must undertake a further baseline sandeel survey prior to the commencement of the works of the area marked 'Sandeel Survey Area' shown in Figure 1, unless prior written approval is sought and obtained from the licensing authority. A full survey report and data set must be submitted by the licensee, in writing, to the licensing authority within 6 months following completion of any further baseline sandeel survey for approval, in writing, by the licensing authority.

#### **5.2.18 Navigational safety**

The licensee must, as soon as reasonably practicable prior to commencement of the works, notify the UKHO to permit the promulgation of maritime safety information and updating of nautical charts and publications through the national Notice to Mariners system.

The licensee must, as soon as reasonably practicable prior to the commencement of the works, ensure that local mariners, fishermen's organisations and HM Coastguard, in this case Maritime Rescue Coordination Centre Shetland, are made fully aware of the licensable marine activity through local Notice to Mariners or any other appropriate means. The licensee must consult with Fraserburgh Harbour Commissioners where appropriate, who may wish to issue local warnings to alert those navigating in the vicinity to the presence of the works during construction.

The licensee must ensure that details of the works are promulgated in the Kingfisher Fortnightly Bulletin, as soon as reasonably practicable prior to commencement of the works to inform the Sea Fish Industry of the vessel routes, the timings and the location of the works and of the relevant operations.

The licensee must prior to commencement of the works, complete an "Application for Statutory Sanction to Alter / Exhibit" form and submit this to the NLB for the necessary sanction to be granted.

The licensee must, prior to commencement of the works, ensure that the location of all OSPs and cables are made available for inclusion in the Clyde Cruising Club Sailing Directions and Anchorages.

The licensee must, no later than 6 months prior to the commencement of the works, submit a LMP, in writing, to the licensing authority for their written approval. Such approval may only be granted following consultation by the licensing authority with

MCA, NLB, the CAA, DIO and any such other advisors as may be required at the discretion of the licensing authority. The LMP must provide that the works be lit and marked in accordance with the current MCA, CAA and DIO navigational and aviation lighting policy and guidance that is in place as at the date of the licensing authority approval of the LMP, or any such other documents that may supersede said guidance prior to the approval of the LMP. The LMP must also detail the navigational lighting requirements detailed in International Association of Marine Aids to Navigation and Lighthouse Authorities (“IALA”) Recommendations O-139 or any other documents that may supersede said guidance prior to approval of the LMP.

The licensee must provide the LMP to the Highland Council, Moray Council, the JNCC, SNH and any other bodies as may be required at the discretion of the licensing authority.

#### **5.2.19 Aviation safety and Nautical Charting**

The licensee must, prior to the commencement of the works, and following confirmation of the approved DSLP by the licensing authority, provide the precise location and maximum heights of all OSPs and construction equipment (above highest astronomical tide (“HAT”)), and details of any lighting fitted to all OSPs, to the UKHO for aviation and nautical charting purposes.

#### **5.2.20 Pre-construction survey**

Prior to the commencement of the works, the licensee must undertake a side scan sonar survey in grid lines (within operational and safety constraints), across the area of the works to include cable route, and any vessel access routes from local service port(s) to the construction site. The results of this survey must be made available to licensing authority within 4 weeks of the completion of the survey, and will be used as the baseline survey should a further side scan sonar survey be necessary in accordance with condition 5.3.2.

#### **5.2.21 Third Party Verification (“TPV”)**

The licensee must, no later than 3 months prior to the commencement of the works, provide the licensing authority with a covering certificate detailing TPV of the works. Commencement of the works must not occur until the licensing authority has been provided with the covering certificate detailing TPV.

#### **5.2.22 Marine Pollution Contingency Plan (“MPCP”).**

The licensee must, no later than 3 months prior to the commencement of the works, submit in writing to the licensing authority for their written approval, a MPCP.

The plan must make provision in respect of spills and collision incidents occurring during the construction and operation of the works and where such spills or collisions occur then the plan must be adhered to in full. The plan must take into account existing plans for all operations, including offshore installations that may have an influence on the plan. Practices used to refuel vessels at sea must conform to industry standards and to relevant legislation. The plan must set out how any oil

leaks within the structures are to be remedied and that such relevant repairs are required to be undertaken without undue delay.

Commencement of the works must not occur until the licensing authority has given its written approval to the plan.

### **5.2.23 Marine Archaeology Reporting Protocol**

The licensee must, no later than 6 months prior to the commencement of the works, submit a reporting protocol which sets out what the licensee must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the works, in writing, to the licensing authority for their written approval. Such approval may be given only following consultation by the licensing authority with any such advisors as may be required at the discretion of the licensing authority. The reporting protocol must be implemented in full, at all times, by the licensee.

### **5.2.24 Noise Registry**

The licensee must, in the event that pile foundations are to be used, submit a noise reduction form (MS Application Noise Details (Form 1)) to the licensing authority and the JNCC stating the proposed date(s), location(s) and nature of the piling activities under authority of this licence.

## **5.3 During the works**

### **5.3.1 Amendments to approved plans**

The licensee must, at all times, construct the works in accordance with the approved CoP, CMS, PS (if required), DSLP, VMP, NSP, CaP, TTP and LMP (as updated and amended from time to time by the licensee).

Any updates or amendments made to the CoP, CMS, PS (if required), DSLP, VMP, NSP, CaP, TTP, and LMP by the licensee, must be submitted, in writing, by the licensee to the licensing authority for their written approval.

### **5.3.2 Transportation audit sheet**

The licensee must, on the first working day of the month, create, maintain and submit to the licensing authority a detailed transportation audit sheet for each month during the period when the construction of the work is undertaken for all aspects of the construction of the works. The audit sheet must include information on the loading facility, vessels, equipment, shipment routes, schedules and all materials listed in the licence to be deposited (e.g. piles, cables and chemicals). Where, following the submission of an audit sheet to the licensing authority, any alteration is made to the component parts of the sheet the licensee must notify the licensing authority of the alteration as soon as practicable following the making of the alteration.

If the licensee becomes aware of any materials on the audit sheet that are missing, or an accidental deposit, they shall contact the licensing authority as soon as practicable after becoming aware to advise the licensee on the appropriate remedial action. If the licensing authority is of the view that any accidental deposits associated with the construction works are present then the deposits must be removed by the licensee as soon as is practicable and at the licensee's expense.

### **5.3.3 Nature and quantity of deposited substances and objects**

In addition to the audit sheets required to be submitted to the licensing authority under condition 5.3.2, the licensee must, following the commencement of the works, submit audit reports to the licensing authority stating the nature and quantity of all substances and objects deposited below MHWS under the authority of this licence. Such audit reports must be submitted by the licensee at 6 monthly intervals, with the first such report being required to be submitted on a date no later than 6 months following the commencement of the works. Where appropriate, nil returns must be provided.

### **5.3.4 Navigational safety**

The licensee must notify the UKHO of the progress of the works to permit promulgation of maritime safety information and updating of nautical charts and publications through the national Notice to Mariners system.

The licensee must notify from, Kirkwall to Peterhead, local mariners, fishermen's organisations and HM Coastguard, in this case Maritime Rescue Coordination Centre Shetland, of the progress of the works through local Notice to Mariners or any other appropriate means.

The licensee must ensure that the progress of the works is promulgated in the Kingfisher Fortnightly Bulletin to inform the Sea Fish Industry of the vessel routes, the timings and the location of the works and of the relevant operations.

The licensee must ensure the process of removing the infrastructure, or such alterations made, within one month of notice being given by the licensing authority at any time it is considered necessary or advisable for the safety of navigation, and not replaced without further consent of the licensing authority. The licensee will be liable for any expense incurred.

The licensee must ensure that no radio beacon or radar beacon operating in the marine frequency bands are installed or used on the works without the prior written approval of the licensing authority.

The works shall be marked and/or lighted as required by the NLB and the marking to be continued unless and until the licensing authority rescind this direction.

If it is desired to display any marks or lights not required by this licence then details must be submitted to the NLB and their ruling complied with. The display of unauthorised marks or lights is prohibited.

The licensee must ensure the safety of navigation is not compromised by the works. The navigable depth must not be altered by more than 5% of stated chart datum unless otherwise agreed, in writing, with the licensing authority in consultation with the MCA and NLB.

### **5.3.5 Markings, lighting and signals of the works**

The licensee must ensure that the works are marked and lit in accordance with the requirements of the NLB and the CAA at all times and such marking and/or lighting must be continued unless and until such time as the licensing authority, by notice, relevantly varies this licence under section 30 of the 2010 Act and section 72 of the 2009 Act.

The licensee must ensure that no marks or lights, other than those required by virtue of this licence, are displayed unless they have been approved, in writing, by the NLB, CAA and the licensing authority.

The licensee must ensure site boundaries are marked by Cardinal Mark buoys (number to be determined when final layout is known). The Cardinal Mark buoys shall be a minimum of 3 metres in diameter at the waterline, have a focal plane of at least 3 metres above the waterline and be of suitable construction for the sea conditions commonly experienced in the Outer Moray Firth. The light range on these buoys shall be 5 nautical miles. All required buoyage shall remain in place until completion of this phase.

### **5.3.6 Markings, lighting and signals of jack up barges and vessels**

The licensee must ensure any vessel engaged in these works shall be marked in accordance with the International Rules for the Prevention of Collisions at Sea whilst under way, and in accordance with the Standard Marking Schedule for Offshore structures if secured to the seabed.

### **5.3.7 Emergencies**

If the assistance of a Government Department (to include departments of Devolved Administrations) is required to deal with any emergency arising from:

- a) the failure to mark and light the works as required by this licence;
- b) the maintenance of the works; or
- c) the drifting or wreck of the works,

to include the broadcast of navigational warnings, then the licensee is liable for any expenses incurred in securing such assistance.

### **5.3.8 Horizontal Directional Drilling (“HDD”)**

The licensee must ensure the seaward exit point of the HDD, if used, will be located as far offshore as practicable towards the depth of closure; the landward exit point of the HDD will be located onshore of the high-water mark, which may move landward due to coastal retreat; and the cables will be suitably buried between the seaward

exit of the HDD and the depth of closure (the depth of water beyond which annually significant wave events will cease to contribute to beach sediment supply and morphological processes).

### **5.3.9 Herring surveys**

The licensee must deploy any herring mitigation strategy approved by the licensing authority, during the annual herring spawning period (August and September) in any year of construction involving piling. Failing any agreement on mitigation, a piling restriction not exceeding 16 days within the months of August and September will take place in the area marked 'Herring Piling Mitigation Area', as shown in Figure 1, in any year of construction involving piling. The 16 days are not necessarily to be consecutive. The relevant 16 days of piling restrictions will be notified to the licensee by the licensing authority, in writing, at least 90 days prior to the first day of piling restriction.

### **5.3.10 Noise registry**

The licensee must, in the event that pile foundations are to be used, and piling is to be carried out for a prolonged period of time, at quarterly intervals, or after each phase of the piling activity on the Site, submit a noise reduction form (MS Closeout Pulseblock days (Wind Farm)) to the licensing authority and the JNCC stating the date(s), location(s) and nature of such activities under authority of this licence.

## **5.4 Conditions upon completion of the works**

### **5.4.1 Date of completion of the works**

No more than one month following the completion of the works the licensee must notify the licensing authority, in writing, of the date of completion of the licensed activities.

### **5.4.2 Amendments to approved plans**

The licensee must, at all times, operate the works in accordance with the approved VMP, OMP, NSP, CaP, TTP and LMP (as updated and amended from time to time by the licensee).

The license must, at all times, maintain the works in accordance with the approved OMP (as updated and amended from time to time by the licensee).

Any updates or amendments made to the VMP, OMP, NSP, CaP, TTP, and LMP by the licensee, must be submitted, in writing, by the licensee to the licensing authority for their written approval.

### **5.4.3 Navigational safety**

The licensee must notify the UKHO of the completion of the works to permit the promulgation of maritime safety information and updating of nautical charts and publications through the national Notice to Mariners system.

The licensee must, within 1 month of the final commissioning of the works, provide the “as-built” positions and maximum heights of all OSPs to the UKHO for aviation and nautical charting purposes.

The licensee must ensure that local mariners, fishermen's organisations and HM Coastguard, in this case Maritime Rescue Coordination Centre Shetland, are made fully aware of the completion of the works.

The licensee must ensure that the completion of the works is promulgated in the Kingfisher Fortnightly Bulletin to inform the Sea Fish Industry.

The licensee must ensure the process of removing any structure, or such alterations made, within one month of notice being given by the licensing authority at any time it is considered necessary or advisable for the safety of navigation, and not replaced without further consent of the licensing authority. The licensee will be liable for any expense incurred.

The licensee must ensure that no radio beacon or radar beacon operating in the marine frequency bands are installed or used on the works without the prior written approval of the licensing authority.

### **5.4.4 Nature and quantity of deposited substances and objects**

The licensee must no later than 28 days following completion of the works, submit a final audit report to the licensing authority stating the nature and quantity of all substances and objects deposited below MHWS under the authority of this licence. Where appropriate, nil returns must be provided.

### **5.4.5 Markings, lighting and signals of the works**

The licensee must ensure that the works are marked and lit in accordance with the requirements of the NLB and the CAA at all times and such marking and/or lighting must be continued unless and until such time as the licensing authority, by notice, relevantly varies this licence under section 30 of the 2010 Act and section 72 of the 2009 Act.

The licensee must ensure that the required IALA availability target for Category 1 Aids to Navigation (“AtoN”) is achieved through redundancy, monitoring and repair, must be in place and arrangements made to warn the mariner promptly of any AtoN fault and its subsequent return to fully operational service.

The licensee must ensure that lit Cable Marker Boards are positioned as near as possible to the shoreline so as to mark the points at which the cables come ashore. The Cable Marker Boards shall be diamond shaped, with dimensions 2.5 metres

long and 1.5 metres wide, background painted yellow with the inscription 'Cables' painted horizontally in black. The structures shall be mounted at least 4 metres above ground level, with a navigation light flashing yellow once every five seconds (Fl Y 5s) mounted on the upward apex of the board. The nominal range of these lights should be 3 nautical miles, and they should have an availability of not less than 97% (IALA Category 3) over a rolling three year period.

#### **5.4.6 Environmental protection**

The licensee shall ensure the beach and foreshore is returned to the original profile, or as close as reasonably practicable, following the completion of the works.

#### **5.4.7 Cod surveys**

The licensee must undertake a post-construction cod survey in the first February and March, occurring no earlier than 12 months, following the final commissioning of the works. This cod survey must be undertaken in the area marked 'Cod Survey Area' shown in Figure 1, unless prior written approval is sought and obtained from the licensing authority. A full survey report and data set must be submitted, in writing, to the licensing authority within 6 months following completion of any post-construction cod survey for approval, in writing, by the licensing authority.

#### **5.4.8 Sandeel surveys**

No earlier than 12 months following final commissioning of the works, the licensee must undertake a post-construction sandeel survey using a methodology agreed, in writing, with the licensing authority. The post-construction sandeel survey will cover the area marked 'Sandeel Survey Area' shown in Figure 1, unless prior written approval is sought and obtained from the licensing authority. A full survey report and data set must be submitted, in writing, to the licensing authority within 6 months following completion of any post-construction sandeel survey for approval, in writing, by the licensing authority.

#### **5.4.9 Noise registry**

The licensee must, in the event that pile foundations were used, within 12 weeks of completion of the works on the Site, submit a noise reduction form (MS Closeout Pulseblock days (Wind Farm)) to the licensing authority and the JNCC stating the actual date(s), location(s) and nature of piling activities carried out under authority of this licence.

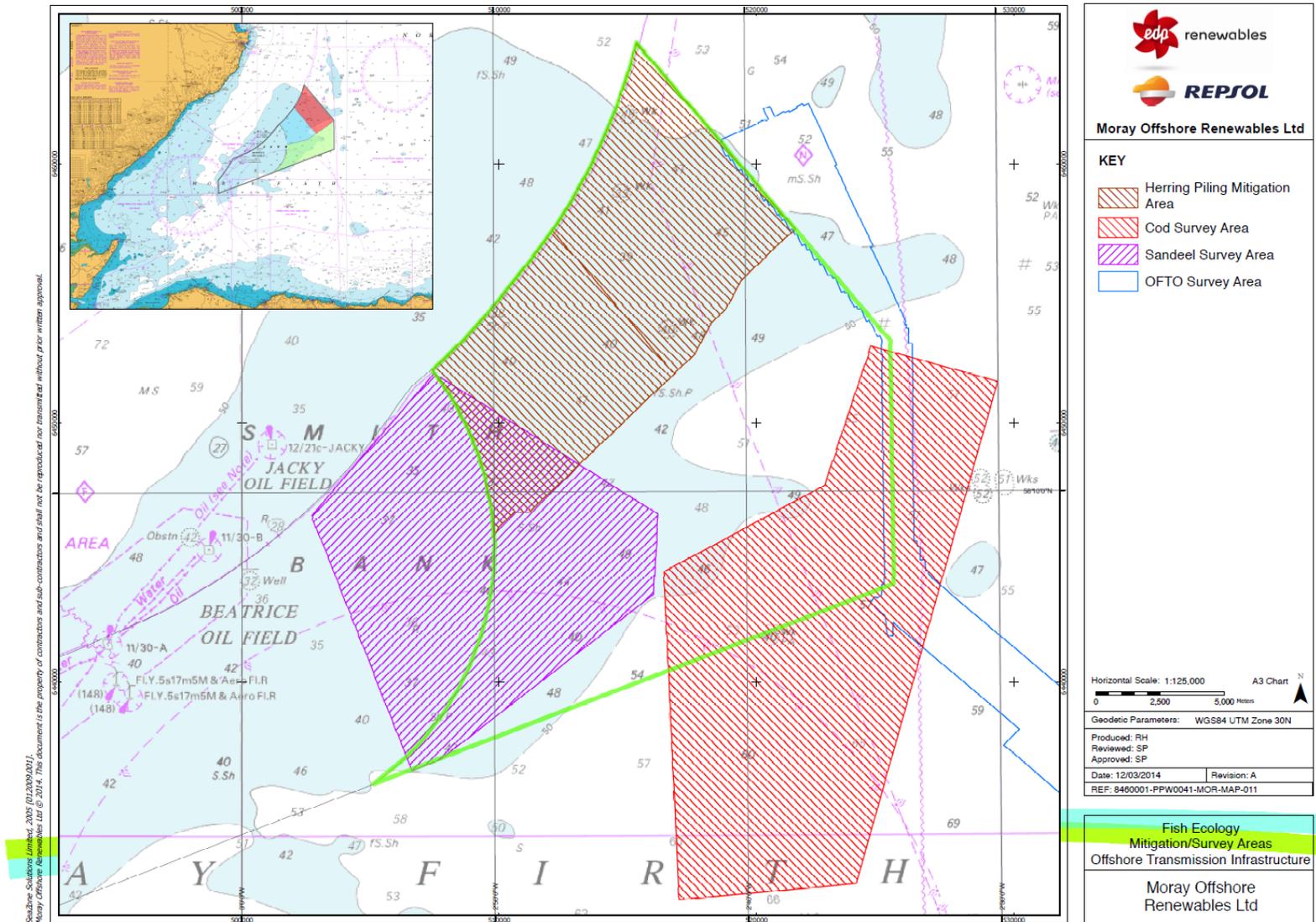


Figure 1. Herring Mitigation Area and the Cod and Sandeel Survey Areas for the Offshore Transmission Infrastructure

## 6. Regulatory Evaluation

### 6.1 Conclusions

In considering the applications, in particular the ES and the relevant provisions of the 2010 Act and the 2009 Act, a full and detailed assessment has been made of the potential direct and indirect effects of the project on human beings, fauna and flora, soils, water, air climate, the landscape, material assets, the cultural heritage and the interaction between any two or more of these factors.

Marine Scotland, as the regulator, is satisfied with the findings of the ES, and subject to the inclusion of the conditions referred to above in the marine licences, that they may grant in due course, is of the opinion that the marine elements of the project will not have a significant adverse effect on the environment.

### 6.2 Recommendations

Having carried out assessments of the potential environmental impacts of the proposed project, the reviewer acting on behalf of Marine Scotland makes the recommendations below:

Marine Scotland are satisfied that the ES and Additional Ornithology Information adequately address all environmental issues in relation to the Proposal, subject to the conditions referred to above being included in the relevant marine licences subsequently issued by Marine Scotland.

The reviewer acting on behalf of Marine Scotland recommends that a favourable EIA consent decision is given in respect of the project, subject to the inclusion of the above conditions being attached to any relevant marine licences.

Reviewed by:	Alexander Ford
Date:	03/03/2014
Approved by:	Gayle Holland
Date:	18/03/2014
The Licensing Authority:	Marine Scotland