

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

Environmental Impact Assessment Consent Decision

Project Title: European Offshore Wind Deployment Centre (EOWDC)

Applicant: Aberdeen Offshore Wind Farm Limited (AOWFL)

Location: Approximately 2 KM off Blackdog, Aberdeen Bay, Aberdeen

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 which applications have been submitted by Aberdeen Offshore Wind Farm Limited ('AOWFL') to Marine Scotland, the licensing authority on behalf of the Scottish Ministers, for–

- (i) a Marine Licence under section 29 of the Marine (Scotland) Act 2010; and
- (ii) a Consent under section 36 of the Electricity Act 1989,

to construct and operate the European Offshore Wind Deployment Centre ('EOWDC').

The works described in this Consent Decision comprise part of a project listed at Annex II 3(i) of the Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment ('EIA Directive'). 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 (which are all elements of the project other than the onshore infrastructure) of the EOWDC', to be sited in:

Aberdeen Bay, Aberdeen within the area bounded by joining the following points:

EOWDC Lease Boundary

57° 14.723' N	002° 00.911' W	57° 15.240' N	001° 56.865' W
57° 12.360' N	001° 58.680' W	57° 11.842' N	002° 02.721' W

Export Cable Corridor

57° 12.993' N	002° 03.535' W	57° 11.379' N	002° 04.335' W
57° 11.434' N	002° 02.914' W	57° 12.389' N	002° 02.410' W
57° 12.193' N	001° 59.977' W	57° 12.360' N	001° 58.680' W
57° 13.365' N	001° 58.047' W	57° 13.808' N	001° 58.450' W
57° 13.490' N	001° 59.273' W	57° 12.960' N	001° 59.175' W
57° 12.476' N	002° 00.583' W	57° 13.422' N	002° 00.731' W

The application made to Marine Scotland was supported by an environmental statement ('ES') and supporting information as required by regulation 12 of the MWR. AOWFL were required to produce further information in support of their application and submitted a Supplementary Environmental Information Statement ('SEIS').

2. Project Description

AOWFL is proposing to develop an offshore wind farm and deployment centre off the coast of Aberdeen, known as the European Offshore Wind Deployment Centre ('EOWDC').

The proposed project would combine a small commercially operated wind farm with a test and research centre, allowing manufacturers to test "first of run" wind turbines and innovative foundation solutions along with related operation and maintenance access logistics.

The EOWDC is to be located offshore approximately 2 km from the coastline of Aberdeenshire at Blackdog. The total area of the wind turbine layout is approximately 4.3 km² which is situated within a 20 km² lease boundary awarded to AOWFL by The Crown Estate. Water depth on the wind turbine locations ranges from 20 to 30 metres below Lowest Astronomical Tide (LAT).

The EOWDC would include, but not be limited to, 11 three bladed wind turbines with a maximum power generation of up to 100 MW, inter array cables, export cables to shore and turbine foundations.

3. The Environmental Statement

The principal potential impacts of the project, as detailed in the ES, are upon/are:

Offshore Ordnance
Coastal Processes
Marine Ecology, Intertidal Ecology, Sediment & Water Quality
Ornithology

Bats
Marine Mammals
Electromagnetic Fields
Statutory Designations and Conservation
Shipping & Navigation
Aviation
Ministry of Defence operations
Maritime Archaeology
Seascape and Landscape
Cultural Heritage
Commercial Fisheries
Salmon and Sea Trout
Socioeconomics, Recreation & Tourism
In Air Noise
Electromagnetic Interference

3.1 Environmental sensitivities

Scottish Natural Heritage ('SNH') advised that the proposal is likely to have a significant effect upon several European protected sites. On reviewing the original ES, SNH advised that the proposal would likely have a significant effect upon certain qualifying interests of various Special Protection Areas ('SPAs') and Special Areas of Conservation ('SACs'). 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 sites.

SNH cited a number of SPAs that should be considered in any appraisal. These included, but were not limited to, Fowlsheugh SPA, Buchan Ness to Collieston Coast SPA and the Ythan Estuary, Sands of Forvie and Meikle Loch SPA. Examples of the qualifying interests at some of these SPAs included, but were not limited to, Fulmar, Herring Gull, Common Tern and Shag.

SNH also advised that a number of SACs' qualifying interests could, directly or indirectly, be adversely impacted upon by the proposal. SNH identified the proposal as likely to have a significant effect upon the Moray Firth SAC, River Dee and South Esk SAC, Isle of May SAC, Firth of Tay and Eden Estuary SAC and the Berwickshire and North Northumberland Coast SAC. SNH advised that the following qualifying interests could be adversely affected by the proposal: Bottlenose Dolphins, Grey Seals, Atlantic Salmon and Freshwater Pearl Mussels. These interests are not present at all of the aforementioned SACs.

SNH recommended that conditions be attached to any determination granting authorisation for the proposal to ensure that, provided that the project was undertaken strictly and in accordance with these conditions, the integrity of the relevant sites would not be adversely affected. However, this did not abrogate Marine Scotland from undertaking an AA in view of the conservation objectives for the sites in accordance with SNH advice.

3.2 The appropriate assessment

The proposed works required an appropriate assessment to be made under Regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994. The appropriate assessment concluded, subject to appropriate conditions being attached to any consent, that the EOWDC would not adversely affect the integrity of the Natura sites that could be potentially impacted by the development.

4. Consultation

This section summarises the project consultation undertaken by Marine Scotland in 2011 (application and ES) and 2012 (SEIS).

4.1 Public consultation

In accordance with Regulation 16(1)(b) of the MWR Marine Scotland instructed Aberdeen Offshore Wind Farm Limited to place a public notice in relevant newspapers for two successive weeks. These public notices were “combined” with those required under The Electricity Works (Environmental Impact Assessment) Regulations 2000 (as amended). The public notice contained details of:

- the applicant's name and address
- that an application had been made under Part 4 of the Marine (Scotland) Act 2010
- a statement of the nature and location of the project
- the address details of where the application and ES could be inspected during office hours
- notice that parties could make such requests and representations to Scottish Ministers on the ES (and later SEIS) by specified dates

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

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| • The Scotsman | 5 th August 2011 & 12 th August 2011 |
| • The Press & Journal | 5 th August 2011 & 12 th August 2011 |
| • The Edinburgh Gazette | 5 th August 2011 & 12 th August 2011 |
| • The Buchan Observer | 9 th August 2011 & 16 th August 2011 |
| • The Ellon Times | 11 th August 2011 & 18 th August 2011 |

Notice of the SEIS appeared in the following publications:

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| • The Scotsman | 7 th August 2012 & 14 th August 2012 |
| • The Press & Journal | 7 th August 2012 & 14 th August 2012 |
| • The Edinburgh Gazette | 7 th August 2012 & 14 th August 2012 |
| • The Buchan Observer | 7 th August 2012 & 14 th August 2012 |
| • The Ellon Times | 9 th August 2012 & 16 th August 2012 |

The application, ES and SEIS were made available for public inspection at the following locations:

- Vattenfall Wind Power, 3rd Floor, The Tun, Holyrood Road, Edinburgh, EH8 8AE
- Balmedie Library, Eigie Road, Balmedie, AB23 8YF
- Aberdeen Central Library, Rosemount Viaduct, Aberdeen, AB25 1GW
- Peterhead Library, 51 St. Peter Street, Peterhead, AB42 1QD
- Ellon Library, Station Road, Ellon, AB41 9AE
- Bridge of Don Library, Scotstown Road, Bridge of Don, Aberdeen, AB22 8HH

Marine Scotland received 465 public representations in support of the application and 148 public representations objecting to the application. Representations in support of the proposal typically stated that the development of the EOWDC would offer new employment opportunities, would benefit the local economy and act as a source of green energy. Representations lodged objecting to the scheme primarily stated that the proposal would have a detrimental effect on the leisure and tourism industry in the North East of Scotland and also give rise to negative visual impacts.

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 3rd August 2011 and closed on the 16th September 2011 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 SEIS and opened on 7th August 2012 and closed on the 20th September 2012. Extensions to provide comments were permitted to consultees if required.

4.2.1 Consultee List

The application, ES and SEIS were sent to:

Consultee	Consultee
Aberdeenshire Council	Ministry of Defence
Aberdeen City Council	National Air Traffic Services
Aberdeen Harbour	Northern Lighthouse Board
Association of Salmon Fishing Boards	River Dee Trust & Dee District Salmon Fishery Board
British Airport Authority	River Don Trust
Blackdog, Milden, Eigie and Berryhill Salmon Fishings	Royal Yachting Association
British Telecom	Royal Society for the Protection of Birds
Chamber of Shipping	Scottish Canoe Association
Civil Aviation Authority	Scottish Environment Protection Agency
East Grampian Coast Partnership	Scottish Fisherman's Federation
Health & Safety Executive	Scottish Fisherman's Organisation
Historic Scotland	Scottish Natural Heritage
Inshore Fisheries Group	Scottish Wildlife Trust

Joint Radio Company	Surfers Against Sewage
Maritime and Coastguard Agency	The Crown Estate
Marine Safety Forum	Transport Scotland (Including Ports & Harbours Branch)
Marine Scotland Compliance	Whale & Dolphin Conservation Society
Marine Scotland Science	

4.2.2 Consultee Responses

Aberdeen City Council (ACC), a statutory consultee, did not object to the Development and did not request that any conditions be placed on any consent. ACC acknowledged that the Development represents a significant investment in terms of enhancing the renewable energy infrastructure within Aberdeen City and Shire as well as contributing significantly to encourage diversification of the regional economy and the potential for job creation across Scotland.

However, some issues were raised which ACC felt warranted further exploration by the applicant. These were the terrestrial impacts of the Development, noise impact from the re-routing of helicopter flights, calculation of the partial increase in carbon emissions resulting from the change in helicopter flight patterns, landscape and visual impacts and socio economic impacts.

The Company sought to address these concerns via the submission of Supplementary Environmental Information which included additional visualisations from Girdle Ness Lighthouse (Viewpoint 21) as well as further visuals from nearby golf courses at Murcar, Royal Aberdeen and Menie Estate (Viewpoints 23, 25 – 30). ACC agreed that there would be a relatively limited impact on Girdle Ness Lighthouse but recommended that an alternative viewpoint where both the lighthouse and the turbines would be intervisible may enable a more useful analysis of the potential impact. The Company responded stating that the assessment of cultural heritage impacts upon Girdle Ness Lighthouse was conducted following a site visit with the use of wireframe visualisations, and concluded that the impact is likely to be minor to moderate (Section 1.2.1.10 of Appendix 20.2 of the original ES submission). The provision of further visualisations would not alter this assessment.

ACC noted the additional impact assessment that has been undertaken in relation to golf courses located to the north of the River Don and stated that “the potential visual impact upon these recreational assets does not warrant refusal of the development.” ACC noted that none of the golf courses identified are included in Historic Scotland’s Inventory of Gardens and Designed Landscapes and that they were not aware that these golf courses include listed buildings.

The Company noted that terrestrial impacts of the Development would be dealt with through onshore planning applications which would be supported by Environmental Impact Assessments (EIAs) which will include consideration of cumulative and inter-relationship effects between the onshore and offshore elements of the overall project.

With respect to noise impact and carbon emissions the Company stated that the helicopter route change will be formally conducted by National Air Traffic Services

(NATS) and that the route change will be optimised to ensure safety, efficiency and will not take place over land. Consequently, there is likely to be an imperceptible change in noise levels at residential properties. With respect to the potential for an increase in carbon emissions, the Company stated that helicopter routes are not compulsory routes for pilots to follow. Normally helicopter pilots will fly on their own route which is usually a straight line between 2 points if it is safe to do so (outside of controlled airspace). Helicopters can fly over the wind farm if visibility permits. Therefore it is not possible to calculate any potential additional fuel burn caused by this as it is not known how many pilots will follow this route and the number who do so will vary.

With respect to socio and economic impacts of the Development, the Company noted that an assessment of the direct and supply chain impacts of construction, operation and decommissioning activities; impacts on tourism; impacts on recreational activities; and impacts on the offshore wind energy sector was included with the original ES submission. The report identifies significant positive effects benefiting the Inner Study Area (Aberdeen and Aberdeenshire) as well as the Wider Study Area (Scotland) and the UK.

Aberdeenshire Council (ASC), a statutory consultee, did not object to the Development however it also noted that it did not take a position in favour of the project either. However, ASC noted that both the Buchan and Formartine Area Committees were broadly supportive of the proposal. ASC noted that there is support for diversifying the economy by encouraging the development of both tourism infrastructure and renewable energy.

However, ASC stated that there is concern about whether or not this is the best site for the development given the potential impacts on the environment. ASC believed that there is also a concern that this may be a first phase of a larger development and this should be borne in mind when determining the current application. The Company confirmed that they have no plans to extend the Development at a later date.

ASC queried the location for the proposed turbine siting in terms of possible impact;

- to the Menie Golf Course
- on the anchorage and shipping lane to and from Aberdeen Harbour, particularly in bad weather
- on the breeding bird population at Bullers O'Buchan given the bird flight paths and subsequent collision risk with the proposed turbines
- on the electro magnetic fields and the existing fish species, specifically the fish nursery areas
- to marine radar, citing the objection from the Ministry of Defence, as well as the MoD firing range at Blackdog
- on Forvie Sands at Newburgh, and
- on Balmedie Country Park surrounding beaches as these are significant visitor destinations and the Balmedie – Blackdog area

The Company noted the questions raised by ASC in respect to location of the development and commented that impacts on the Menie Estate were considered in

the ES and were also investigated further through the submission of an Supplementary Sentimental Information Statement which contained additional photomontages from Menie

With respect to possible impact on Aberdeen Harbour it was noted that the Harbour had not objected to the Development nor had the Maritime & Coastguard Agency.

In response to ASC concerns about possible impacts on the breeding bird population at Bullers O'Buchan and EMF effects from cables the Company noted that these had been assessed as part of the Habitat Regulations Assessment (HRA). SNH and RSPB reviewed the HRA and did not object subject to appropriate conditions being placed on any consent. These conditions were recommended for inclusion on any consent so as to ensure that the Development will not adversely affect the integrity of relevant Natura sites such as the Buchan Ness to Collieston Coast Special Protected Area (SPA) which encapsulates the breeding bird population at Bullers O'Buchan.

Resolutions were identified through the application of suitable mitigation procedures such as a radar mitigation scheme, as discussed between the MoD and the Company, to resolve MoD concerns.

SNH advised on the potential impact of the Development on Forvie Sands SPA and SSSI, designated for its population of breeding and non breeding bird species. SNH stated that, subject to appropriate conditions being placed on any consent, the Development could be implemented without serious adverse effects on the natural heritage therefore maintaining the integrity of the SPA and SSSI. Scottish Ministers undertook an Appropriate Assessment in view of the conservation objectives for the site. The Company acknowledged that there would be a major – moderate visual impact from the Development on the National Nature Reserve.

With respect to impacts on Balmedie Country Park the Company noted that the original August 2011 ES assessment acknowledges that effects would occur. The Country Park is covered in the baseline report section 5.3.1 (also 5.2.2). Visitors are covered as a receptor group in Appendix 19.2 - section 4.3.5; there are also various references to visitors in relation to various viewpoints, e.g. VP1 and VP2. The Company believes that the assessment has dealt adequately with these issues.

ASC recommended conditions that should be considered and attached to any consent should the Development be consented. These conditions are reflected in the consent granted by Scottish Ministers under Section 36 of The Electricity Act (1989) on 26th March 2013.

Scottish Natural Heritage (SNH), a statutory consultee, commented that they were disappointed with the overall quality of the Environmental Statement. Despite this, SNH agreed with most of the conclusions in the ES although they considered that there were some issues which were not sufficiently addressed and required further attention before a final conclusion could be made. Following the Company's submission of Supplementary Environmental Information (SEI), SNH were of the opinion that the Development could be implemented without serious adverse effects on the natural heritage.

SNH, when commenting on the SEI, surmised that, when considering the further information provided to them, the proposal is likely to have a significant effect on the qualifying interests of a number of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). SNH advised Scottish Ministers to carry out an Appropriate Assessment in view of the conservation objectives for these sites. SNH went on to say that they had undertaken an appraisal of the Development and had concluded that the Development could be implemented without serious adverse effects on these sites and the wider natural heritage provided the consent is subject to a number of conditions to mitigate the effects. These conditions are reflected in the consent granted by Scottish Ministers under Section 36 of The Electricity Act (1989) on 26th March 2013.

SNH made a number of recommendations including the following:

- establishment of an independent expert panel to provide scientific advice on a research and monitoring programme
- a construction method statement or similar document should be provided to Marine Scotland for agreement with relevant consultees including details of commencement dates, duration and phasing information of key elements of construction such as foundations, turbine placements etc. a Vessel Management Plan providing details on numbers and individual vessel details including use of ducted propellers, how vessel management will be coordinated, location of working ports
- an Environmental Management System / Plan detailing all measures through all phases of the windfarm to prevent adverse impacts to marine mammals, birds, fish and habitats and include species protection plans
- details of the location and construction methods for the grid export cables, landfall sites and substation should be submitted in advance of the project construction commencing
- a Design Statement is required to provide guiding principles for the deployment of turbines
- a detailed decommissioning plan is required for the entire scheme

SNH also looked at the landscape and visual impacts of the proposal and noted that:

- the Development would introduce a complex large feature into a coastal area currently characterised by uninterrupted, simple views across the sea.
- the location of the Development, given its proximity to the coast and to the city of Aberdeen, is sensitive and prominent.
- the very large size of the turbines, would result in the Development being dominant in views from north and east Aberdeenshire, and the city.
- The Development would set a new precedent of development of this type inshore rather than on land. It would necessitate cumulative impacts with onshore developments being considered in future.
- The uncertain nature of the Development being a “deployment centre” rather than a fully designed wind farm means it may not necessarily follow

good design practice such as having the same turbine type, size, rotation speed and so on; or an evenly spaced 'readable' layout.

To successfully mitigate these concerns, SNH requested that a condition be included in any consent requiring a Design Statement to include guiding principles for the deployment of turbines.

The **Scottish Environment Protection Agency (SEPA)**, a statutory consultee, stated that it did not object to the Development provided that certain conditions were applied as follows:

- a project specific 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 and that the measures identified in this method statement shall be employed throughout the life of this project as set out in the method statement shall be in place before any work commences on site
- a site specific Construction Environmental Management Document (CEMD) must be submitted for the written approval of the planning authority (in consultation with SEPA) (and other agencies such as SNH as appropriate) and all work shall be carried out in accordance with the approved CEMD

SEPA advised that the CEMD should form the basis of more detailed site specific Construction Environmental Management Plans (CEMPs) which along with detailed method statements. This approach provides a useful link between the principles of development which need to be outlined at the early stages of the project and the method statements which are usually produced following award of contract (just before development commences).

SEPA recommended that the CEMD should be submitted for approval at least two months prior to the commencement of any works on site to allow the necessary reviews to be undertaken and to ensure no impact on project timescales.

This document should incorporate detailed pollution prevention and mitigation measures for all construction elements potentially capable of giving rise to pollution during all phases of construction, reinstatement after construction and final site decommissioning, as applicable. This document should also include any site specific CEMPs and Construction Method Statements provided by the contractor as required by the determining authority and statutory consultees. The CEMD and CEMP do not negate the need for various licences and consents if required. The requirements from the obtained licences and consents should be included within the final CEMPs.

SEPA also requested that a condition is attached to any consent requiring the preparation of a monitoring and mitigation scheme for potential impacts on the adjacent coastline. This request was captured under a wider condition for environmental monitoring in the consent granted by Scottish Ministers under Section 36 of The Electricity Act (1989) on 26th March 2013.

SEPA has confirmed that no specific licences for the Development are required under the Water Environment (Controlled Activities) (Scotland) Regulations 2011, However, the applicant must ensure that they comply with the relevant General Binding Rules (GBR) under the above regulations in relation to pollution control during the construction and operation of the development.

Aberdeen Harbour (AH) did not object to the Development however AH did note some specific issues in the ES that required further comment or questioning such as erroneous assumptions made by the Company which were resolved via further discussions between the Company and AH. AH, whilst not requesting any conditions to be placed on any consent, will be consulted on the development of an Emergency Response Cooperation Plan (ERCoP) along with the Maritime & Coastguard Agency (MCA).

Blackdog, Milden, Eigie and Berryhill Salmon Fishings, originally objected to the Development citing incorrect information provided in the application documentation, impact on the salmon fishery due to electromagnetic fields (EMF), noise and vibrations impacting on migratory patterns. However, in response to the consultation on the Supplementary Environmental Information Statement, Blackdog, Milden, Eigie and Berryhill Salmon Fishings agreed to remove their objection.

BAA Airports Ltd initially objected to the Development due to the impact on the Aerodrome Reference Point for Aberdeen Airport which would be impacted by the turbines and therefore conflict with safeguarding criteria. When consulted on the Supplementary Environmental Information Statement, BAA Airports Ltd confirmed that, after reviewing the mitigation measures agreed, and subsequent discussions with NATS, they were in a position to remove their objection subject to conditions being attached on any consent. This condition was reflected in the consent granted by Scottish Ministers under Section 36 of The Electricity Act (1989) on 26th March 2013.

British Telecom (BT) did not object as it concluded the Development should not cause interference to its current and presently planned radio networks.

The **Chamber of Shipping (CoS)** did not object to the Development noting that the final iteration of the Development will allow for sufficient space for vessels operating on the NE / SW route and that any route deviation caused by the Development will be minimal and acceptable from a navigational safety point of view, provided the risk mitigation measures and monitoring outlined in Section 20 of the Navigational Risk Assessment (NRA) are applied. The CoS were also content that the 0.25 nm separation between the designated anchorage area in Aberdeen Bay and the nearest turbine will be sufficient to maintain the safety of anchored vessels.

The **Civil Aviation Authority (CAA)** objected to the Development as the proposed layout detailed in the ES would not meet current CAA guidance as they would expect 900 m spacing between lights which necessitated that all of the peripheral turbines be fitted with Aviation Warning Lights. The CAA noted that there was a need for an airspace change and requested that Marine Scotland liaise with National Air Traffic Services (NATS) and BAA to ascertain the potential impact this may have on helicopter flights out of Aberdeen Airport. On review of the Supplementary

Environmental Information Statement, CAA were satisfied that the appropriate consultees had been consulted with regarding the proposals and provided further advice on appropriate lighting for the Development. CAA removed their objection.

The **Health and Safety Executive (HSE)** did not object to the Development and had no specific comments to make.

Historic Scotland (HS) did not object to the Development and agreed that there would be no significant impacts on the cultural heritage features within its statutory remit.

The **Inshore Fisheries Group (IFG)** raised no objections regarding the Development.

The **Joint Radio Company Limited (JRCL)** did not object to the Development.

Marine Scotland Science (MSS) did not object to the Development. MSS requested that water quality, sediment suspension / resuspension, habitat loss and noise and vibration be covered by various monitoring plans. The Applicant agreed to undertake this as part of any agreed monitoring programme. MSS stated that consideration should be given to exposure of the cable(s) by wave action and exposure of sensitive species to electromagnetic fields (EMF). The Applicant noted in the Supplementary Environmental Information Statement to the ES that studies have shown that chum salmon and other fish species have not been able to detect any effects from magnetic fields and that this is an issue which will be considered within the scope of the R & D programme including MSS's own ongoing research. It was also anticipated that cables will be buried to at least 0.6 m. A monitoring programme for diadromous fish was proposed which the applicant agreed would be investigated through an R & D working group. MSS recommended the implementation of appropriate mitigation strategies to minimise the impacts of construction noise on fish and other marine species. The Applicant agreed to investigate this accordingly with Marine Scotland. European Eel were considered by the Applicant within the wider assessment of the effects of noise and vibration and electromagnetic fields on fish species. It was noted by MSS that European Eel is not a qualifying species of the regional SACs which were considered as part of the Company's HRA, although it was noted they could be considered as part of the R & D programme as appropriate.

Marine Scotland Compliance (MSC) consulted with the owners of the three inshore boats that work from Aberdeen and fish in the general area of the Development and received no objections.

The **Maritime & Coastguard Agency (MCA)** raised no objection to the Development subject to conditions being attached on any licence. These conditions are reflected in the marine licence for the proposal and the consent granted by Scottish Ministers under Section 36 of The Electricity Act (1989) on 26th March 2013. This includes the creation of a full Emergency Response Cooperation Plan (ERCoP) from the construction phase onwards, which remains to be fully completed and requires to be properly documented, before any construction works commence. The MCA noted an error in the ES regarding availability of Emergency Tug Vessels

(ETVs) and that the MCA is responsible for funding any emergency salvage. This was acknowledged by the Company in later correspondence between the MCA and the Company who agreed to note the MCA comments and take them into account when preparing the ERCoP.

The **Ministry of Defence (MOD)** initially objected to the Development citing concerns with the Air Defence (AD) radar at Buchan. The MoD noted that the turbines would reduce the probability of the radar detecting aircraft flying over or in the vicinity of the turbines and that the RAF would be unable to provide a full air surveillance service in the area of the proposed wind farm. The MoD also noted continuing discussions with the Company regarding provision to allow vessel access associated with the Black Dog Firing Range and also the cabling / cable route to shore as the proposed route also affects the firing range. Following discussions with and further consideration of the mitigation proposals submitted by the Company to the MoD, the MoD confirmed that it was prepared to withdraw their objection subject to conditions being attached on any consent. These conditions are reflected in the consent granted by Scottish Ministers under Section 36 of The Electricity Act (1989) on 26th March 2013. The MoD removed their objection.

NATS (National Air Traffic Services) objected to the Development on the grounds of conflict with safeguarding criteria due to predicted impact on radar systems at Perwinnes and Alanshill. Further discussions between the Company and NATS lead to an agreement between the companies whereby the objection from NATS Safeguarding could be removed subject to conditions being attached on any consent. These conditions are reflected in the consent granted by Scottish Ministers under Section 36 of The Electricity Act (1989) on 26th March 2013 and reflect the same conditions requested by **BAA Airports Ltd**. NATS removed their objection

The **Northern Lighthouse Board (NLB)** did not object to the proposal however they requested a number of conditions be attached on any consent. These conditions are reflected in the consent granted by Scottish Ministers under Section 36 of The Electricity Act (1989) on 26th March 2013.

The **Royal Society for the Protection of Birds (RSPB) Scotland** initially objected to the Development on the grounds of uncertainty over the methods used to calculate collision risk, the significant impacts predicted arising from the Development, lack of full survey data provided with the application and the belief that there was not a strong enough commitment given towards a full monitoring programme. In response to the consultation on the Supplementary Environmental Information Statement to the ES for the Development, RSPB Scotland removed their objection subject to the implementation of certain conditions being attached on any consent. These conditions are reflected in the consent granted by Scottish Ministers under Section 36 of The Electricity Act (1989) on 26th March 2013. RSPB Scotland also recommended that ongoing research results from the Development, if consented, should be made publicly available to all legitimate users and that constraints that could potentially undermine projects such as the proposed Development do not restrict the utility of the facility.

The **Royal Yachting Association (RYA)** stated that they had no objection to the Development.

Transport Scotland, through their Term Consultants **JMP Consultants Limited**, did not object to the Development stating that the Development would not have any significant environmental impact on the trunk road network. Transport Scotland noted that a response will be provided separately relating to any potential impacts arising from the onshore works application.

Transport Scotland (Ports & Harbours) did not object to the Development however they recommended consulting with **Aberdeen Harbour** which had already been carried out.

The **Whale and Dolphin Conservation Society (WDCS)** did not object to the development however they expressed concern at, but not limited to, the possible negative effects on cetaceans and seals citing, in particular, impacts from pile driving, noise pollution generated throughout the lifetime of the project and displacement effects. WDCS made a number of recommendations to Marine Scotland in both their response to the ES and the Supplementary Environmental Information Statement. A number of these recommendations, such as the undertaking of adequate monitoring, have been incorporated into conditions on the consent. These conditions are reflected in the consent granted by Scottish Ministers under Section 36 of The Electricity Act (1989) on 26th March 2013.

The **Association of Salmon Fishery Boards**, the **Marine Safety Forum**, **Surfers Against Sewage**, the **Scottish Canoe Association**, the **Scottish Fisherman's Federation**, the **Scottish Fisherman's Organisation**, the **Scottish Wildlife Trust** and **The Crown Estate** were consulted but no responses were received.

5. Conditions

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

3.1 General conditions

3.1.1 Licence conditions binding other parties

All conditions attached to this licence bind any person who for the time being owns, occupies or enjoys any use of the Works for which this licence has been granted in relation to those licensed activities authorised under item 5 in section 21(1) of the 2010 Act whether or not this licence has been transferred to that person.

3.1.2 Vessels, agents, contractors and sub-contractors

The Licensee must provide, as soon as reasonably practicable in advance of their engagement in any Licensed Marine Activity, the name and function of any vessel, agent, contractor or sub-contractor appointed to engage in the Works. The notification must include the master's name, vessel type, vessel IMO number and vessel owner or operating company.

Any changes to the supplied details must be notified to the Licensing Authority, in writing, prior to any vessel(s), agent(s), contractor(s) or sub-contractor(s) engaging in the licensed activities. All agents, contractors, sub-contractors, and vessel operators must abide by the conditions set out in this licence.

Only those vessels, agents, contractors or sub-contractors notified to the Licensing Authority are permitted to carry out any part of the Works

The Licensee must satisfy themselves that any such vessels, agents, contractors or sub-contractors is aware of the extent of the Works for which this licence has been granted, the activity which is licensed and the terms of the conditions attached to this licence.

The Licensee must give a copy of this licence, and any subsequent variations that have been made to this licence in accordance with section 30 of the 2010 Act, ensuring it is read and understood, to the masters of any vessels, agents, contractors or sub-contractors engaged in the Works.

3.1.3 Force Majeure

If by any reason of force majeure any substance or object is deposited anywhere in the marine environment, other than at the Site, then the Licensee must notify the Licensing Authority of the full details of the circumstances of the deposit within 48 hours of the incident occurring (failing which as soon as reasonably practicable after that period of 48 hours has elapsed). Force majeure may be deemed to apply when, due to stress of weather or any other cause, the master of a vessel, vehicle or marine structure determines that it is necessary to deposit the substance or object other than at the specified Site because the safety of human life or, as the case may be, the vessel, vehicle or marine structure is threatened. Under Annex II, Article 7 of the Convention for the Protection of the Marine Environment of the North-east Atlantic, the Licensing Authority is obliged to immediately report force majeure incidents to the Convention Commission.

3.1.4 Material alterations to the licence application

The Licensee must, where any information upon which the granting of this licence was based has after the granting of this licence altered in any material respect, notify the Licensing Authority of this fact, in writing, as soon as is practicable.

3.1.5 Submission of reports, studies, surveys and plans to the Licensing Authority

Prior to the Commencement of the Works, the Licensee must submit the details and specifications of all reports, studies, surveys and plans that are required to be undertaken in relation to the works under this licence, in writing, to the Licensing Authority for their written approval, within the time periods specified in this licence.

Thereafter, the Licensee must submit all reports, studies, surveys and plans to the Licensing Authority as are required under this licence, and the Section 36 consent dated 26th March 2013, within the time periods specified in this licence, and the

Section 36 consent, to allow the Licensing Authority to consider whether any consequential action may be required to be undertaken.

Where it would appear to the Licensee that there may be a delay in the submission of the reports, studies, surveys and plans to the Licensing Authority then the Licensee must advise the Licensing Authority of this fact as soon as is practicable and no later than the time by which those reports, studies or surveys ought to have been submitted to the Authority under the terms of this licence.

The reports, studies, surveys and plans must include executive summaries, assessments and conclusions and any data must, subject to any rules permitting non-disclosure, be made publically available by the Licensing Authority or by any such party appointed at their discretion.

3.1.6 Chemical Usage

The Licensee must ensure that all chemicals which are to be utilised in the Works have been approved in writing by the Licensing Authority prior to use. All chemicals utilised in the Works must be selected from the List of Notified Chemicals assessed for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002, unless approved in writing by the Licensing Authority.

3.1.7 Environmental protection

The Licensee must ensure that all reasonable, appropriate and practicable steps are taken at all times to minimise damage to the Scottish marine area that may be caused by the activity authorised under this licence.

The Licensee must ensure that any debris or waste materials placed below MHWS during the construction of the Works are removed from the Site, as soon as is reasonably practicable, for disposal at a location above MHWS approved by SEPA.

The Licensee must ensure that all substances and objects deposited during the Works are inert and do not contain toxic elements which may be harmful to the marine environment, the living resources which it supports or human health.

The Licensee must ensure that the risk of transferring non-native species to and from the Site is kept to a minimum by ensuring that all appropriate bio-fouling management practices are implemented during the Works.

The Licensee must ensure that if oil based drilling muds are utilised then they must be contained within a zero discharge system. Any drill cuttings associated with the use of water-based drilling muds situated within the licensed area of the Works need not be removed from the seabed.

3.1.8 Availability of the licence for inspection

The Licensee must ensure that copies of this licence are available for inspection at any reasonable time by any authorised Enforcement Officer at:

- a) *the premises of the Licensee;*
- b) *the premises of any agent, contractor or sub-contractor acting on behalf of the Licensee; and*
- c) *any onshore premises directly associated with the Works.*

3.1.9 Inspection of the Works

Any persons authorised by the Licensing Authority, must be permitted to inspect the Works at any reasonable time. As far as reasonably practicable, the Licensee must, on being given reasonable notice by the Licensing Authority (of at least 72 hours), provide transportation to and from the Site for any such persons authorised by the Licensing Authority to inspect the Site.

3.1.10 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 the 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.

3.1.11 Marine Pollution Contingency Plan

The Licensing Authority must, no later than three months prior to the Commencement of the Works, submit in writing to the Licensing Authority for their written approval, a Marine Pollution Contingency Plan ('MPCP').

The MPCP 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 MPCP must be adhered to in full. The MPCP must take into account existing plans for all operations, including offshore installations, that may have an influence on the MPCP. Practices used to refuel vessels at sea must conform to industry standards and to relevant legislation. The MPCP must set out how any oil leaks within the turbine nacelle 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 MPCP.

3.2 Conditions specific to the Works

3.2.1 Prior to the Commencement of the Works

3.2.1.1 Commencement date of licensed activities

The Licensee must, prior to and no less than one month before the intended Commencement of the Works, notify the Licensing Authority, in writing, of the date of Commencement of the Works authorised under this licence and confirm the date no less than 24 hours before Commencement of the Works.

3.2.1.2 Shielding or burial of cables

The Licensee must, no later than six months prior to the Commencement of the Works, provide the Licensing Authority for their written approval a report detailing current 'best practice' relating to the attenuation of field strengths of cables by shielding or burial designed to minimise effects on electro-sensitive and migratory fish species. Such 'best practice' guidance as is identified must be incorporated into the Construction Method Statement and the Cable Laying Strategy, in respect of which conditions 13 and 25 respectively of the Section 36 consent relates.

3.2.1.3 Third Party Certification

The Licensee must, no later than three months prior to the Commencement of the Works, unless otherwise agreed in writing with the Licensing Authority, provide the Licensing Authority with a covering certificate detailing Third Party Certification, or a suitable alternative as agreed in writing with the Licensing Authority, of the turbines and sub-structures. Commencement of the Works must not occur until the Licensee has provided the Licensing Authority with the covering certificate(s) detailing Third Party Certification.

3.2.1.4 Ecological Clerk(s) of Works and Liaison Officer(s)

The Licensee must ensure that a suitably qualified and experienced Ecological Clerk(s) of Works or liaison officer(s) is, or are, appointed prior to the Commencement of the Works primarily, but not exclusively, for environmental liaison to establish and maintain effective communications between the Licensee, contractors, stakeholders, conservation groups and other users of the sea during the period in which licensed activities authorised under this licence are undertaken. Prior to the Commencement of the Works the Licensee must notify the Licensing Authority in writing of the identity, contact details and qualifications of the appointed Ecological Clerk(s) of Works, or liaison officer(s).

The Licensee must ensure that the Ecological Clerk(s) of Works or liaison officer(s) environmental remit includes monitoring compliance with the commitments made by the Licensee in the Environmental Statement, Supplementary Environmental Information Statement and all plans or programmes required under this licence or the Section 36 consent.

3.2.1.5 Navigational safety

The Licensee must, as soon as reasonably practicable prior to the 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 Commencement of the Works, ensure that local mariners, fishermen's organisations, HM Coastguard and the Maritime Rescue Coordination Centre Aberdeen are made fully aware of the activity authorised under this licence through local Notice to Mariners or any other appropriate means.

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.

3.2.1.6 Monitoring of marine mammals

Prior to the Commencement of the Works the Licensee must agree with the Licensing Authority, in writing, the details of the appointment of a Marine Mammal Observer ("MMO"). When appointed, the MMO must as a minimum maintain a record of any sightings of marine mammals and maintain a record of the action taken to avoid any disturbance being caused to marine mammals during noisy activities (such as piling), as agreed in writing with the Licencing Authority. The Licensee must provide the Licensing Authority with the MMO's records no later than 6 months following Commencement of the Works, and at 6 monthly intervals thereafter.

3.2.1.7 Cable Protection Plan

In the event that cable protection is required the Licensee must, as soon as is practicable following the Licensee learning that it is required, submit a Cable Protection Plan ('CPP') to the Licensing Authority for their approval, in consultation with SNH, MCA, NLB and any other advisors as required by the Licensing Authority. The CPP must include surveys that will be undertaken to identify scour protection / armouring works required to protect the cable. The CPP must be incorporated into the Construction Method Statement, in respect of which condition 13 of the Section 36 consent relates. The installation of any cable protection must not commence until the CPP has been agreed in writing by the Licensing Authority.

3.2.1.8 Noise Registry

The Licensee must, in the event that pile foundations are to be used, submit a noise reduction form (Marine Scotland Application Noise Details (Form 1)) to the Licensing Authority and the Joint Nature Conservation Committee ("JNCC") stating the

proposed date(s), location(s) and nature of the piling activities under authority of this licence.

3.2.2 During the Works

3.2.2.1 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 Construction of the Works 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 substances or objects listed in the licence to be deposited (as described in Part 2 of this licence). 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 in the following month's audit sheet.

If the Licensee becomes aware of any substances or objects on the audit sheet that are missing, or an accidental deposit occurs, they must contact the Licensing Authority as soon as practicable after becoming aware, for advice on the appropriate remedial action. Should the Licencing Authority deem it necessary, 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 routes, and any vessel access routes from local service port(s) to the Site to locate the substances or objects. If the Licensing Authority is of the view that any accidental deposits associated with the construction of the Works are present, then the deposits must be removed by the Licensee as soon as is practicable and at the Licensee's expense.

3.2.2.2 Nature and quantity of deposited substances and objects

In addition to the audit sheets required to be submitted to the Licensing Authority under condition 3.2.2.1, 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 six monthly intervals, with the first such report being required to be submitted on a date no later than six months following the Commencement of the Works. Where appropriate, nil returns must be provided.

3.2.2.3 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 local mariners, fishermen's organisations and HM Coastguard, in this case Maritime Rescue Coordination Centre Aberdeen, 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 any part of the infrastructure, or such alterations are 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 OFCOM.

3.2.2.4 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 current CAA Policy and Guidance (or any other relevant documents that, from time to time, may supersede that Guidance) 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.

The Licensee must ensure that no marks or lights, other than those required by virtue of this licence, may be displayed unless they have been approved, in writing, by the NLB, CAA and the Licensing Authority.

The Licensee must ensure that the Works are marked in accordance with IALA Recommendation O-139 on The Marking of Man-Made Offshore Structures.

3.2.2.5 Markings, lighting and signals of jack up barges and vessels

The Licensee must ensure that any jack up barges and vessels used during the Works must, when jacked up, exhibit signals in accordance with the UK Standard Marking Schedule for Offshore Installations.

3.2.2.6 Environmental protection

The Ecological Clerk(s) of Works or liaison officer(s) (in respect of which condition 3.2.1.4 relates) must provide regular (frequency to be agreed with the Licensing Authority) reports to the Licensing Authority as to the compliance with the commitments made by the Licensee in the Environmental Statement, Supplementary Environmental Information Statement and the Project Environmental Monitoring Programme and all other plans and programmes provided by the Section 36 consent to include the Vessel Management Plan and the Construction Method Statement.

3.2.2.7 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, submit a noise

reduction form (Marine Scotland 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.

3.2.3 Conditions upon Completion of the Works

3.2.3.1 Date of Completion of the Works

The Licensee must, no later than one month following the Completion of the Works, notify the Licensing Authority, in writing, of the completion date.

3.2.3.2 Navigational safety

The Licensee must, as soon as practicable following the Completion of the Works, 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 ensure that local mariners, fishermen's organisations and HM Coastguard, in this case Maritime Rescue Coordination Centre Aberdeen, are informed 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 part of the infrastructure, or such alterations are 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 OFCOM Licensing Authority.

3.2.3.3 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.

3.2.3.4 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 current CAA Policy and Guidance (or any other relevant documents that from time to time may supersede that Guidance) 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.

The Licensee must ensure that the Works are marked in accordance with IALA Recommendation O-139 on The Marking of Man-Made Offshore Structures.

3.2.3.5 Operation and Maintenance of the Works

The Licensee must provide an Operation and Maintenance Programme to the Licencing Authority within 3 months of the Completion of the Works. Notification must be provided at least 3 months in advance of any subsequent maintenance works where any additional deposits are required. In the event that these works are not assessed in the Application, and are considered by the Licencing Authority as being a material change to the licence, they will require further Marine Licences.

3.2.4 Decommissioning

3.2.4.1 Decommissioning of the Works

This licence does not permit the Decommissioning of the Works for which a separate marine licence is required.

6. Regulatory Evaluation

6.1 Conclusions

In considering the application, in particular the ES and SEIS and the relevant provisions of the Marine (Scotland) Act 2010, a full and detailed assessment has been made of the potential direct and indirect effects of the proposal 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 Appropriate Authority, are satisfied with the findings of the ES and SEIS and, subject to the inclusion of the conditions referred to above in the marine licence that they may grant in due course, are 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 adequately addresses all environmental issues in relation to the European Offshore Wind Deployment Centre, subject to the conditions referred to above being included in the relevant marine licence 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 licence.

Environmental Impact Consent Decision

Having considered the analysis and recommendations of the environmental impact assessment process above, an environmental impact assessment consent decision is given **in favour of** the European Offshore Wind Deployment Centre in accordance with Regulation 22 of the MWR.

Reviewed by:	Andrew Sutherland
Date:	11 th August 2014
Approved by:	Robert Main
Date:	11 th August 2014
The Licensing Authority:	Marine Scotland