# marine scotland



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# MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2007 (REGULATION 22)

PROJECT TITLE: DOUNREAY TRÌ FLOATING WIND DEMONSTRATION

**PROJECT** 

APPLICANT: DOUNREAY TRÌ LIMITED

LOCATION: APPROXIMATELY 6 KM OFF DOUNREAY, CAITHNESS

Name	Assessor or Approver	Date
Tracy McCollin	Assessor	27/02/2017
Gayle Holland	Approver	09/03/2017

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# MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2007 (REGULATION 22)

# **ENVIRONMENTAL IMPACT ASSESSMENT CONSENT DECISION**

PROJECT TITLE: DOUNREAY TRÌ FLOATING WIND DEMONSTRATION PROJECT

APPLICANT: DOUNREAY TRÌ LIMITED

LOCATION: APPROXIMATELY 6 KM OFF DOUNREAY, CAITHNESS

# **Environmental Impact Assessment Consent Decision**

Having considered the analysis and recommendations of the environmental impact assessment process, an environmental impact assessment consent decision is given in favour of the Dounreay Trì Floating Wind Demonstration Project in accordance with Regulation 22 of the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended).

- 1.1 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"), for applications which have been submitted by Dounreay Trì Limited ("the Company") in relation to the Dounreay Trì Floating wind Demonstration Project ("the Development"), to Marine Scotland ("MS"), the Licensing Authority on behalf of the Scottish Ministers, for:
  - Two Marine Licences under Part 4 of the Marine (Scotland) Act (the "2010 Act") for the deposit of substances and objects and the construction, alteration or improvements of works within the Scottish Marine Area:
    - A Marine Licence for the platform and mooring system which includes a plinth of crushed stone on the seabed immediately beneath the platform; and
    - ii. A Marine Licence for the export cable.
- 1.2 The works described in this Consent Decision comprise part of a project listed in Annex II of the Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment ("the EIA Directive"). The EIA Directive has been transposed into UK law for marine works (including works requiring a Marine Licence) by the MWR.
- 1.3 The project in this instance comprises the marine elements of the Development, to be sited approximately 6km off Dounreay as shown in Figure 1.

1.4 The application made to MS on 17 October 2016 was supported by an Environmental Statement ("ES") and supporting information as required by regulation 12 of the MWR.

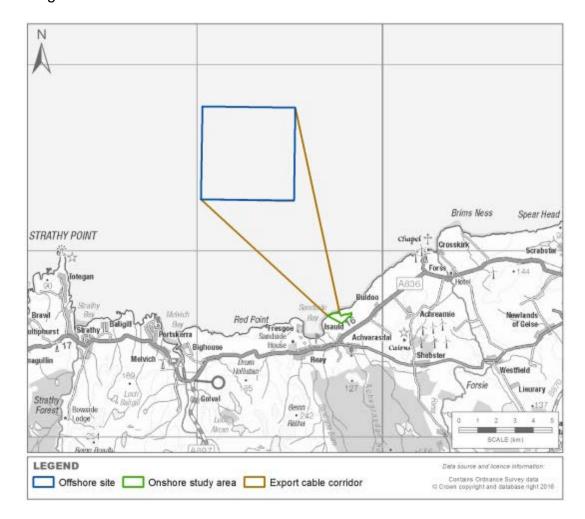


Figure 1 Location of the Dounreay Trì Floating Wind Demonstration Project

# 2 Development description

- 2.1 The aim of the Development is to demonstrate a floating offshore wind farm called Dounreay Trì which shall consist of:
  - A two turbine offshore wind farm with an installed capacity of between 8 to 12 megawatts ("MW"), approximately 6 km off Dounreay, Caithness;
  - A single export cable to bring the power to shore immediately to the west of the Dounreay Restoration Site fence line; and
  - Subject to a Connection Offer from Scottish and Southern Energy Power Distribution, the associated onshore electrical infrastructure to connect the Development at, or near, the existing Dounreay substation.
- 2.2 The main offshore components will include:

- Two offshore wind turbines;
- A floating foundation;
- Mooring clump weight (mooring line to attach clump weight on seabed to floating platform;
- Mooring chain and/or steel lines;
- Drag embedment anchors;
- · One cable to bring the renewable electricity ashore; and
- Scour protection for the anchors and the export cable, where necessary.
- 2.3 The wind turbines will be installed on the platform and commissioned at the fabrication port, prior to being towed to the offshore site.

#### 3 The Environmental Statement

- 3.1 The principal potential impacts of the Development on a range of receptors as detailed in the ES, are:
  - Physical and coastal processes;
  - Intertidal ecology;
  - Benthic and shellfish ecology;
  - Fish ecology;
  - · Marine mammals, basking sharks and turtles;
  - Marine ornithology;
  - Commercial fisheries;
  - Shipping and navigation;
  - Aviation and radar;
  - Seascape, landscape and visual amenity;
  - Offshore archaeology and cultural heritage;
  - Other users of the marine environment; and
  - Socio-economics, recreation and tourism.
- 3.2 Habitats Regulations Appraisal
- 3.3 The Company submitted an ES that includes a report to inform a Habitats Regulations Appraisal along with the application on 17 October 2016. This information was sent out for consultation. Based on information provided by Scottish Natural Heritage ("SNH") MS concluded that the Development would be likely to have a significant effect on the qualifying interests as listed below. The reason for this was that the Development area is within foraging range, the species were recorded during site surveys and are sensitive to potential impacts, notably collision risk or displacement.

# **Common guillemot (breeding)**

North Caithness Cliffs SPA Hoy SPA East Caithness Cliffs SPA Sule Skerry and Sule Stack SPA Cape Wrath SPA

Marwick Head SPA
Rousay SPA
Copinsay SPA
Handa SPA
West Westray SPA
Calf of Eday SPA
North Rona and Sula Sgeir SPA
Troup, Pennan and Lion`s Heads SPA

# Razorbill (breeding)

North Caithness Cliffs SPA East Caithness Cliffs SPA West Westray SPA Cape Wrath SPA Handa SPA

# **Puffin (breeding)**

North Caithness Cliffs SPA Hoy SPA East Caithness Cliffs SPA Sule Skerry and Sule Stack SPA Cape Wrath SPA West Westray SPA North Rona and Sula Sgeir SPA

# Northern fulmar (breeding)

North Caithness Cliffs SPA Hoy SPA East Caithness Cliffs SPA Cape Wrath SPA Rousay SPA Copinsay SPA Handa SPA West Westray SPA Calf of Eday SPA North Rona and Sula Sgeir SPA Troup, Pennan and Lion's Heads SPA Fair Isle SPA Shiant Isles SPA Buchan Ness to Collieston Coast SPA Foula SPA Sumburgh Head SPA Fowlsheugh SPA Flannan Isles SPA Noss SPA Fetlar SPA Firth of Forth SPA

St Kilda SPA Forth Islands SPA Hermaness, Saxa Vord and Valla Field SPA Mingulay and Berneray SPA Flamborough Head and Bempton Cliffs SPA

#### Northern gannet (breeding)

Sule Skerry and Sule Stack SPA
North Rona and Sula Sgeir SPA
Fair Isle SPA
Noss SPA
St Kilda SPA
Forth Islands SPA
Hermaness, Saxa Vord and Valla Field SPA

# **Great skua (breeding)**

Hoy SPA Handa SPA

#### Kittiwake (breeding)

North Caithness Cliffs SPA Hoy SPA East Caithness Cliffs SPA Marwick Head SPA Copinsay SPA Handa SPA West Westray SPA Calf of Eday SPA

# **Great black-backed gull (breeding)**

Hoy SPA East Caithness Cliffs SPA

#### Herring gull (breeding)

East Caithness Cliffs SPA

- 3.4 MS were therefore required to complete an Appropriate Assessment ("AA").
- 3.5 In Scotland, Scottish Ministers are currently in the process of identifying a suite of new marine SPAs. In 2014 advice was received from the Statutory Nature Conservation Bodies ("SNCBs") on the sites most suitable for designation and at this stage they became draft SPAs ("dSPAs"). Once Scottish Ministers have agreed the case for a dSPA to be the subject of a public consultation, the proposal is given the status of proposed SPA ("pSPA") and receives policy protection, which effectively puts such sites in

the same position as designated sites, from that point forward until a decision on classification of the site is made. This policy protection for pSPAs is provided by Scottish Planning Policy (paragraph 210), the UK Marine Policy Statement (paragraph 3.1.3) and the National Marine Plan for Scotland (paragraph 4.45).

- 3.6 It is not a legal requirement under the Habitats Directive or relevant domestic regulations for the AA to assess the implications of the proposal on the pSPAs. The AA includes an assessment of implications upon those sites in accordance with domestic policy. Scottish Ministers are also required to consider article 4(4) of Council Directive 2009/147/EC on the conservation of wild birds ("the Birds Directive") in respect of the pSPAs. The considerations under article 4(4) of the Birds Directive are separate and distinct to the considerations which must be assessed under this Habitats Directive assessment but they are, nevertheless, set out within the AA.
- 3.7 In accordance with regulation 50 of the Conservation (Natural Habitats, &c.) Regulations 1994 ("the 1994 Regulations") and regulation 63 of the Conservation of Habitats and Species Regulations 2010 ("the 2010 Regulations") the Scottish Ministers will, as soon as reasonably practicable following the formal designation of the pSPAs, review their decisions authorising the proposal. This will include a supplementary AA being undertaken, if LSE is identified, concerning the implications of the proposal on the sites as designated (as they are currently pSPAs their conservation objectives are currently in draft form, their conservation objectives are finalised at the point the sites are designated).

## 4 The Appropriate Assessment

- 4.1 The proposed Development required an AA under Regulation 48 of the 1994 Regulations and Regulation 61 of the 2010 Regulations.
- 4.2 MS undertook an AA based on information provided by the Company, SNH and advice from Marine Scotland Science ("MSS"). MS have considered the conservation objective of "maintaining the population of the species as a viable component of the site" on the individual qualifying features of the SPAs. As the effects of the Dounreay Trì Floating Wind Demonstration Project, alone and in combination with other developments, on the populations were found to be acceptable for all the species being considered in the assessment MS concluded that the Development will not adversely affect the integrity of the SPAs with respect to the individual qualifying features.
- 4.3 A full explanation of the issues and justifications for decisions regarding site integrity is provided in the AA, available on the Marine Scotland website.

#### 5 Consultation

5.1 This section summarises the consultation on the Development undertaken by the Company and Marine Scotland.

#### Public consultation

- 5.1.1 In accordance with Regulation 16(1)(b) of the MWR, Marine Scotland directed the Company to place a public notice in relevant newspapers for two successive weeks. These public notices were combined with the public notice requirements under The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (as amended), the Electricity (Applications for Consent) Regulations 1990 (as amended) and the Marine (Scotland) Act 2010. 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 and a statement of the nature and location of the Development
  - 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 by specified dates
- 5.2 Notice of the Application and the ES appeared in the following publications:

Caithness Courier
Edinburgh Gazette
The Herald
19 October 2016;
19 October 2016;
21 October 2016; and

John O'Groat Journal 21 October 2016.

- As the Company did not place these public notices for two consecutive weeks as required by the legislation they were placed in the following publications on the listed dates to fulfil this commitment. The first response from a statutory consultee which was substantive to the ES had been received in the meantime. The following notices fulfilled the additional requirements under The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (as amended) whereby the applicant was required to place public notices stating this had been received.
  - John O'Groat Journal 18 and 25 November 2016;

Edinburgh Gazette 18 and 25 November 2016;
Caithness Courier 23 and 30 November 2016; and

Glasgow Herald 22 November 2016.

#### 5.4 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. The consultation on the ES opened on 19 October 2016 and closed

on 30 November 2016 with Local Authorities permitted additional time in accordance with The Electricity (Applications For Consent) Regulations 1990 (as amended). Extensions to provide comments were permitted to consultees if required.

#### 5.5.1 Consultee List

5.6 The Application, ES and accompanying documents were sent to the consultees listed in table 1 below.

#### Table 1 List of consultees

British Telecom

Civil Aviation Authority

Caithness Chamber of Commerce

Caithness District Salmon Fishery Board

Caithness Kayak Club

Caithness and Sutherland Visitor Attraction Group

Chamber of Shipping

**Defence Infrastructure Organisation** 

**Develop Durness Group** 

**Dounreay Site Restoration Limited** 

Dounreay Stakeholder Group

Historic Environment Scotland

Highlands and Islands Airports Limited

Highlands and Islands Enterprise

Inshore Fisheries Groups (IFGs) - Moray Firth & North Coast

Inshore Fisheries Groups - National

Joint Radio Company

Marine Safety Forum

Meygen

National Air Traffic Service

Northern District Salmon Fishery Board

North Shore Surf Club

**Nuclear Decommissioning Authority** 

Orkney ferries

Orkney Fisheries Association

**Orkney Harbours** 

Orkney Islands Sea Angling Association

Orkney Sailing Club

Pentland Firth Yacht Club

Reay Golf Club

Royal Society for the Protection of Birds Scotland

Royal Yachting Association Scotland

Scottish Canoe Association

Scottish Creel Fishermen's Federation

Scottish Fishermen's Federation

Scottish Fishermen's Organisation

Scottish Government Marine Planning and Strategy

Scottish Government Planning and Architecture Division

Scottish Sea Farms

Scottish Sub Aqua Club

Scottish Surfers Federation

Scottish Water

Scottish Wildlife Trust

Scrabster Fishery Office/ Marine Scotland Compliance

Scrabster Harbour

Seafish

Sport Scotland

Surfers Against Sewage

Transport Scotland - Roads

Transport Scotland - Ports and Harbours

The Crown Estate

Visit Scotland

Whale and Dolphin Conservation

Wick Harbour

#### **Community Councils**

Caithness West Community Council Melvich Community Council Strathy & Armadale Community Council Thurso Community Council Castletown Community Council

# 6 Summary of consultation responses received

- 6.1 The following text provides a brief summary of the representation received from the public. This is followed by an outline of the main impacts identified in the ES, the relevant responses received from consultees in relation to each of these and, where applicable, suggested mitigation measures. The ES outlines a number of embedded mitigation measures some of which are applicable to the Development as a whole and some of which are specific to the offshore elements i.e. marine elements of the Development. The chapter for each receptor considered in the ES outlines which of these embedded mitigation measures are relevant and also provides specific mitigation to minimise impact on each receptor.
- 6.2 Seven representations were received from members of the public, 5 objecting to the Development and 2 in support.
- 6.3 The main reasons given for objecting to the proposal were:
  - Not wanting the view spoilt by the turbines;
  - The negative impact the Development would have on house prices and tourism;
  - Concerns about whether the impact on migrating whales had been taken into account;
  - That there had been little or no employment for local people in the construction of wind farms in the area and that there is no incentive for the population of working age to stay;

- That many of the local villages have high levels of fuel poverty but the area is being chosen as the site for so many of these power generating turbines:
- Concerns that the demonstration project could lead to more development in the future;
- That there is no overall strategy for the siting of the turbines that takes into account the impact on the local communities;
- The cumulative impact of the wind farms in the area;
- That a new nuclear energy generation site in the area would generate significant electricity for the area and provide much more employment for local people;
- That information in the ES was not complete e.g. no-fishing zones, gannets and puffins;
- The danger the Development would pose to shipping; and
- That there was no significant community benefit fund to offset the detriment from this development for the community in Portskerra/Melvich.
- 6.4 The main reasons for supporting the proposal were:
  - It will provide opportunities for young people to be trained and involved in the Development throughout its life cycle;
  - The Development will bring skilled employment to the local economy;
  - Potential for growth of new industry as offshore wind is less contentious than onshore; and
  - Floating wind technology could play a vital role in harnessing renewable energy and this demonstration project is an important first step in realising this potential.

# 7 Summary of main findings

- 7.1 The summary below highlights the main points from the assessment of the potential impacts of each of the receptors. This includes information on:
  - How the baseline information was collected:
  - The potential impacts that have been identified for each phase of the Development:
  - The overall findings of the assessment for each receptor;
  - Comments received from consultees; and
  - Relevant mitigation measures.
- 7.2 The ES notes there are general mitigation measures that will apply to the Development as a whole and the onshore and offshore elements of the Development. These are outlined in Section 4.6 Embedded mitigation of the ES. There are also specific mitigation measures that apply to individual receptors and details of these are provided in the relevant receptor chapter. The text below summarises the general and specific mitigation measures relevant for each receptor, more detail can be found in the ES.

# 8 Physical and coastal processes

- 8.1 The ES provides a summary of the baseline information that had been collected. This includes information on the geology of the site and the sediment characteristics, typical wind and wave regimes in the area and the potentially significant radioactive particles released by historic activities at the Dounreay installation.
- 8.2 The potential impacts identified for each stage of the Development are:

#### Potential impacts in the construction phase

- Loss of, and/or alteration, of the physical and chemical characteristics of the seabed due to installation of infrastructure (cables, moorings, anchors);
- Changes in water quality related to the installation of subsea infrastructure primarily increased suspended sediment concentrations;
- Sediment quality impacts due to the dispersal of radioactive particles into wider environment resulting from potential disturbance of contaminated sediments; and
- Changes in water and sediment quality due to pollution from routine and accidental discharges from vessels.

# Potential impacts in the operations and maintenance phase

- Changes to local sediment transportation processes and seabed features due to altered hydrodynamics related to interactions between mooring cables, anchors and cables with the action of water currents and waves; and
- Changes in water and sediment quality due to pollution from routine and accidental discharges from vessels.

#### Potential impacts in the decommissioning phase

- Potential impacts arising during the decommissioning phase are expected to be similar to, but not exceeding, those arising during the construction phase. Following removal of structures opportunities for seabed recovery in the former location of seabed infrastructure may arise; and
- If the export cable is left in situ any potential impacts will be reduced further.
- 8.3 All impacts were assessed as having negligible significance.
- 8.4 The ES also considers the potential for cumulative impacts and these were assessed to be negligible.

- 8.5 MSS noted that they had requested clarification regarding historic contaminated sediments and that this had been adequately addressed in the ES.
- 8.6 The Scottish Environment Protection Agency ("SEPA") requested that a condition be applied in relation to the cable that should include:
  - The finalised route of the cabling be agreed with the determining authority in consultation with SEPA;
  - Confirmation of the method of laying the cable, and if buried, the depth of burial be provided; and
  - Justification be provided, in relation to disturbance of any radioactive contamination, for the method of cable laying chosen.
- 8.7 SEPA welcomed the particle monitoring strategy outlined in the ES and requested that the proposals are covered by a condition so this can be agreed prior to the Development commencing. SEPA noted that a condition should be applied for similar monitoring at decommissioning.
- 8.8 SEPA noted that the Company should consider using the current beach monitoring arrangements undertaken by Dounreay Site Restoration Limited to validate the effectiveness of offshore monitoring. They also noted that any radioactive particles recovered during monitoring may require further authorisation from SEPA and recommended ongoing discussion.
- The mitigation measures outlined in the ES, both general to the Development and specific to this receptor, are:
  - Project Environmental Monitoring Programme;
  - Construction Environmental Management Document:
  - Operational Environmental Management Plan;
  - Pollution Control Plan;
  - Industry best practice and safety measures for pollution control;
  - Cable protection management;
  - Use of clean rock for cable protection;
  - Cable route survey; and
  - Particle monitoring strategy.

## 9 Intertidal ecology

- 9.1 The ES provides a description of the habitats of conservation importance based on a field study, a comprehensive desk based study and consultation with key stakeholders.
- 9.2 The dog whelk *Nucella lapillus* is on the OSPAR List of Threatened and/or Declining Species and Habitats and was a common species found in the study area. Although this is a protected species, the dog whelk is common in the UK and is not included on the Scottish List of Priority Marine Features or

- any other conservation legislation, as Scottish populations are not considered to be under threat or declining (SNH, 2014)<sup>1</sup>.
- 9.3 A full description of all the habitats and species recorded is presented in the Intertidal Survey Report (Appendix 7.1 to the ES). Of the eleven biotopes recorded in the study area, five were listed under EC Habitats Directive as they may form part of an Annex I habitat.
- 9.4 The following impacts are assessed in the ES:

Potential impacts in construction phase

- Loss of habitat or species through work at the cable landfall through direct or indirect impacts (e.g. sediment or other pollution events);
- Disturbance to, or displacement of, fauna in proximity to the Development through construction activities; and
- Introduction of new species.

Potential impacts in operation and maintenance phase

Habitat creation as a result of cable protection.

Potential impacts decommissioning phase

- Potential impacts arising during the decommissioning phase are expected to be similar to those arising during the construction phase.
- 9.5 The ES provides information on the mitigation measures used to reduce the potential impact and also carried out a cumulative impact assessment.
- 9.6 All the impacts, bar one, are considered to be negligible. The introduction of new species was assessed as having a minor impact significance after taking into account mitigation measures (see below). New species could be introduced by vessels, vehicles or instrumentation used in the installation e.g via hull fouling or released in ballast water.
- 9.7 No specific comments on intertidal ecology were received.
- 9.8 The mitigation measures for this receptor were:
  - Project Environmental Monitoring Programme; and
  - International Marine Contractors Association ("IMCA") Guidance: IMCA Guidance will be followed by all vessels exceeding identified thresholds, to ensure correct protocol for ballast water management and discharge.

#### 10 Benthic and shellfish ecology

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<sup>&</sup>lt;sup>1</sup> Scottish Natural Heritage. (2014). Priority Marine Features in Scotland's Seas. [online] Available at: http://www.snh.gov.uk/docs/A1327320.pdf [Accessed 04/08/2016]

- 10.1 The ES provides an overview of the baseline data collected from the site and export cable corridor (including a 2 km buffer zone around the site). The baseline information was a combination of desk based literature review and the results from previous multi-beam surveys and underwater video based monitoring.
- The following impacts have been considered in the assessment. These have been informed through scoping and the consultation process.

#### Potential impacts in the construction phase

- Substrate, habitat and species loss due to placement of infrastructure (cables, mooring, anchors);
- Increased suspended sediment and turbidity due to installation of subsea infrastructure;
- Release of radioactive particles present in sediment into wider environment as a result of disturbance of sediment; and
- Damage to habitat or species due to pollution from routine and accidental discharges.

# Potential impacts in the operations and maintenance phase

- Hydrodynamic changes leading to scour around subsea infrastructure;
- Damage to habitat or species due to pollution from routine and accidental discharges;
- Introduction of marine non-natives as a result of vessel movement or through the use of subsea infrastructure as stepping stones;
- Creation of habitat for benthic fauna through colonisation of subsea infrastructure; and
- Impact to benthic communities from any thermal load or electromagnetic fields ("EMF") arising from the cables during operation.

# Potential impacts in the decommissioning phase

- Potential impacts arising during the decommissioning phase are expected to be similar to, but not exceeding, those arising during the construction phase. Following removal of structures opportunities for habitat recovery in the former location of foundations may arise.
- 10.3 The ES provides information on the mitigation measures used to reduce the potential impact and also carried out a cumulative impact assessment.
- 10.4 No significant impact to benthic and shellfish ecology were identified in the ES at any stage of the construction, operation and maintenance and decommissioning. Two potentially significant impacts were identified:
  - Damage to habitat or species due to pollution from routine and accidental discharges; and

 Introduction of non-natives as a result of vessel movement or through use of subsea infrastructure as stepping stones.

These impacts will be mitigated through general project commitments and as a result the overall significance was assessed to be minor.

- 10.5 SNH agreed with the conclusion of the ES though they did feel that the cable route information was not dealt with well and there could be damage to Priority Marine Features that they were not aware of. However, due to the scale of the Development they concluded there is unlikely to be any significant adverse impacts to any relevant protected species or habitats. SNH advise that a benthic survey of the cable route and mooring system location is undertaken prior to installation.
- MSS provided advice to note they were generally happy with the conclusions of the ES but noted some concerns. The multi-beam data used to produce maps of local bathymetry and inform biotope allocation is acknowledged to be of relatively low resolution. MSS suggest further high resolution video and acoustic surveys should be completed to increase the reliability of biotope distributions. MSS suggested that suspended sediment loads and smothering impacts from cable trenching activities needed further consideration.
- 10.7 The mitigation measures relevant to this receptor are:
  - Project Environmental Monitoring Programme;
  - Construction Environmental Management Document;
  - Operational Environmental Management Plan;
  - Pollution Control Plan:
  - International Marine Contractors Association Guidance (including Ballast Water Management);
  - Industry best practice and safety measures for pollution control;
  - Use of clean rock for cable protection; and
  - Cable protection management.

#### 11 Fish ecology

- 11.1 For the purposes of the ES the International Council for the Exploration of the Sea ("ICES") rectangle boundary was used as the assessment boundary. This was because fish species are highly mobile and data is collected by regulators using this boundary as guide. The Development lies within ICES rectangle 46E6.
- 11.2 A review was undertaken of the existing literature and data relevant to fish ecology in the area and used to give an overview of the existing environment.
- 11.3 The ES provides an overview of the designated sites within the area, the rivers Thurso, Naver and Borgie, located 17 km, 23 km and 24 km from the

Development site respectively are all designated as a Special Area of Consrvation ("SAC") for their importance to Atlantic salmon. The North-west Orkney Marine Protected Area is located 33 km to the north of the site and is an area of importance for sandeels.

- 11.4 The ES baseline description provides information on those species which are protected by conservation legislation (those species of commercial importance are discussed in Section 12 Commercial fisheries of the ES). The diadromous fish species included Atlantic salmon, sea trout and European eel. The pelagic species of conservation importance were Atlantic herring, Atlantic mackerel, European sprat and horse mackerel. The demersal species of conservation importance present in the area were sandeel, haddock, cod, lemon sole, blue whiting, monkfish, whiting, saithe, plaice, hake and ling.
- 11.5 Elasmobranch species were also considered with highest landings rates for spotted ray and thornback ray. Other species are likely present and this includes common skate, spurdog, tope shark, blue shark, porbeagle shark, Portuguese dogfish and the sandy ray.
- 11.6 The only shellfish species on the Scottish list of Priority Marine Features in the area are the European spiny lobster and ocean quahog. The ES also considers the freshwater pearl mussel as this is present in the rivers Naver and Borgie and a qualifying feature of the SAC.
- 11.7 The following impacts have been established through scoping and the consultation process as requiring assessment:

#### Potential impacts in the construction phase

- Disturbance or damage to sensitive species due to underwater noise generated from construction activities;
- Direct habitat loss due to disturbance of spawning and nursery grounds during the installation of export cables and placement of anchors on the seabed; and
- Effects of increased sedimentation / smothering on fish during placement of anchors and export cable.

#### Potential impacts in the operations and maintenance phase

- Habitat loss of spawning and nursery grounds due to the presence of anchors and export cable on the seabed;
- Effects of thermal changes and EMF from subsea and dynamic cables on sensitive species;
- Effects of operational noise on sensitive species;
- Fish aggregation around the floating structure and associated infrastructure; and
- Entanglement with mooring lines and dynamic cables.

Potential impacts in the decommissioning phase

- Potential impacts arising during the decommissioning phase are expected to be similar to, but not exceeding, those arising during the construction phase.
- 11.8 The ES provides details of the assessment of potential impacts and the cumulative effect of the Development.
- No significant impacts to fish ecology were identified in the assessment of potential impacts at any stage of the construction, operation and maintenance or decommissioning. One potentially significant impact was identified entanglement with mooring lines and dynamic cables, this will be mitigated through general project commitments as well as mitigation specific to fish ecology. As a result of this mitigation, the impact's significance was assessed as minor. All the remaining potential impacts were assessed as minor.
- 11.10 SNH agreed with the conclusions of the ES and welcomed the mitigation measure of checking for, and removal of, debris from the moorings and cables. MSS concurred with SNH.
- 11.11 MSS noted that engagement with the National Research and Monitoring Strategy for Diadromous Fish may be appropriate for this Development.
- 11.12 The Northern District Salmon Fishery Board and the Caithness District Salmon Fishery Board had no specific comments on the Development.
- 11.13 The mitigation measures relevant to this receptor are:
  - Construction Environmental Management Document;
  - Routine of inspection of moorings and cables; and
  - Removal and reporting of debris (including fishing gear) from moorings and cables.

## 12 Marine mammals, basking sharks and turtles

- 12.1 The data to inform the ES was collected during site specific surveys commissioned specifically for the Development. This consisted of aerial video surveys for marine mammals and other large megafauna. A detailed review of existing literature and data relating to marine mammals in the Development area was also undertaken.
- There are two SACs for seals in the Pentland Firth and Orkney waters, Faray and Holm of Faray (grey seals) and Sanday (harbour seals). The ES also notes the Dornoch Firth and Morrich More SAC (harbour seals) which is located in the Moray Firth seal Management Unit and supports approximately 2% of the UK harbour seal population. The ES also notes that the Inner Hebrides and the Minches cSAC had been through public consultation and has policy protection. The only bottlenose dolphin SAC in

Scotland is the Moray Firth SAC, the northern edge of which is approximately 120 km from the Development. Basking sharks have been proposed as a protected feature of the draft Sea of the Hebrides Marine Protected Area. There are a total of 20 designated seal haul out sites within 50 km of the Development.

- 12.3 The aerial surveys did not record any turtles though the ES notes they have been previously sighted in the Pentland Firth and also to the north of Orkney during late summer and early autumn.
- 12.4 A number of potential impacts on marine mammals are identified in the ES These were divided into those impacts which could occur during the construction, operational and decommissioning phases.

Potential impacts considered during construction:

- Impacts associated with construction noise including the risk of physiological impact, barrier effect and displacement;
- Impacts of construction noise on prey species;
- Risk of injury resulting from collision with installation vessels; and
- Impacts associated with effects upon marine water quality, particularly due to any disturbed sediments affecting turbidity but also to any accidental release of pollutants.

# Potential impacts considered during operation:

- Risk of injury resulting from collision or entanglement with mooring lines;
- Impacts of operational noise;
- Habitat exclusion resulting from the physical presence of devices occupying key foraging/breeding areas;
- Disturbance due to the physical presence of vessels and other human activity;
- Risk of injury resulting from collision with operational vessels;
- Risk associated with electromagnetic fields associated with subsea cabling;
- Long term habitat change, including the potential for change in foraging opportunities; and
- Impacts associated with changes in fisheries practices.
- 12.5 Potential impacts considered during decommissioning phase are expected to be similar to those arising during the construction phase and would be temporary and of short duration.
- 12.6 Additional to the impacts directly associated with this Project, the environmental impact assessment includes potential cumulative impacts from the following developments: The Orkney-Caithness interconnector cable, HIE Dounreay Floating Wind Deployment Centre, Brims Tidal Array and Meygen. Potential cumulative impacts considered:

- Construction noise:
- Disturbance due to the physical presence of vessels and other human activity;
- Risk of injury resulting from collision with construction vessels;
- Impacts associated with effects upon marine water quality, particularly due to any disturbed sediments affecting turbidity but also to any accidental release of pollutants; and
- Long term habitat change, including the potential for change in foraging opportunities.
- 12.7 The potential impacts during the construction phase were assessed to be of negligible or minor impact significance when a vessel management plan is implemented. Having a vessel management plan as a mitigation measure will minimise the collision risk and disturbance to marine mammals and basking sharks. The same conclusion was made for the operational phase.
- 12.8 There is more uncertainty regarding the cumulative assessment as there is a lack of available or finalised information for most of the developments under construction. Based on the available information the cumulative impact significance was assessed to be negligible or minor.
- 12.9 SNH were in agreement with the conclusions of the ES that the impacts on cetaceans are likely to be minor/negligible based on the sensitivities of the features and the duration and magnitude of the activities.
- 12.10 WDC agreed with the conclusions of the ES but noted that if pile driving were to be used further information to assess the impact would be required. They requested involvement in the development of the vessel management plan and suggest Marine Mammal Observers ("MMOs") be used at all times during construction and deployment of the floating platform and cable laying.
- 12.11 MSS agreed with the conclusions of the ES and were in agreement that a vessel management plan was needed. They also recommended a monitoring programme to inspect the mooring lines for debris and, where possible, remove it. Although this was not discussed specifically as a mitigation measure for this receptor in the ES it is included as a mitigation measure for fish ecology.
- 12.12 The mitigation measure relevant to this receptor is a vessel management plan and the use of MMOs.

# 13 Marine ornithology

The baseline data was collected by undertaking a detailed literature review and a programme of ultra-high resolution digital video aerial surveys. The surveys were commissioned to run between January and December 2015, on a monthly basis, although two surveys were successfully completed in June 2015.

- The Development site is located near to a number of important bird sites which have been classified as SPAs under the Birds Directive. Part of the information submitted with the ES is a report to inform a Habitats Regulations Appraisal. Marine Scotland carried out the AA, which contains further details of the potential impacts on the birds that use these sites (available on the Marine Scotland <a href="webpage">webpage</a>).
- 13.3 Ten species were recorded more than ten times during the aerial surveys and these were considered for further assessment during the different phases of the construction and operation of the Development. The ten species are:
  - Fulmar;
  - Gannet;
  - Great Skua;
  - Kittiwake;
  - Herring gull;
  - Great black-backed gull;
  - Arctic tern;
  - Guillemot;
  - · Razorbill; and
  - Puffin.
- 13.4 The potential impacts that have been assessed are:

#### During construction

- Disturbance/displacement/exclusion due to construction noise or physical presence;
- Potential for a barrier effect due to physical presence;
- Potential change in habitat/prey availability; and
- Potential increase in suspended sediment affecting visibility.

# During operation

- Collision risk, in particular for migratory species/populations;
- Potential impact of disturbance/displacement/exclusion due to physical presence, marine noise and maintenance works;
- Potential for a barrier effect due to physical presence;
- Potential change in habitat/prey availability;
- Potential increase in suspended sediment affecting visibility; and
- Creation of a roosting habitat or foraging opportunities.

#### Decommissioning

 Potential impacts arising from the decommissioning phase are expected to be similar to, but not exceeding, those arising during the construction phase, and would be temporary and of short duration.

- 13.5 Information on cumulative impacts on ornithology interests was provided in the HRA report.
- 13.6 The assessment concluded that the effects of disturbance and displacement during both construction and operation was considered to be negligible for all species. Collision risk modelling demonstrated that the effects of the project on all species was negligible. Impacts arising from the decommissioning phase were considered to be similar to those assessed under the construction phase.
- 13.7 SNH agreed with the conclusions of the ES that the impacts on bird features will be minor/negligible. SNH advised that monitoring should be undertaken to provide data on the behaviour of bird species to the platform e.g. are some species attracted to the platform? SNH also advised that aerial surveys are continued during the breeding season and cover preconstruction, construction and post construction to monitor seabird densities.
- 13.8 The Royal Society for the Protection of Birds ("RSPB") were supportive of the Development and requested a condition to implement an environmental monitoring programme. They noted this would give a better understanding of the interactions of seabirds with the turbine structures, which would contribute to improving certainty in environmental assessments. They also noted some concerns with regard to the marine ornithological assessment and emphasised that these would need to be addressed in future proposals. A condition requiring environmental monitoring (to include birds) will be included in any marine licence, and/or section 36 consent if granted.
- 13.9 There were no mitigation measures specific to this receptor and the general project wide mitigation will apply.

#### 14 Commercial fisheries

- 14.1 The ES considers the impacts of the Development on commercial finfish and shellfisheries within the vicinity of the Development boundary. There are no active finfish or shellfish marine aquaculture sites within the vicinity of the proposed Development and there is only one low intensity fixed engine fishery about 8 km away from the offshore boundary. Therefore, these were not considered further.
- 14.2 The area is in ICES rectangle 46E6 and this was used to provide an overview and context of fisheries within and around the Development area likely to be affected by the proposals.
- 14.3 A review of existing literature and data relevant to the assessment was used to provide an overview of the existing environment. No site specific studies were carried out and the literature review and consultation with the Scottish Fishermen's Association ("SFF") was used to provide the baseline description of commercial fisheries activity.

- 14.4 The ES identifies the pot and creel fishery, particularly for the under 15 m fleet and predominantly under 10 m vessels, as the most important fisheries in the Development area. It was noted that there may be some activity by the demersal and, to a lesser degree, the pelagic and scallop dredging fleet.
- 14.5 The following impacts were considered in the assessment. These have been identified through scoping and the consultation process.

# Potential Impacts in the construction phase

- Loss of access to fishing grounds due to the presence of vessels and safety zones during construction;
- Obstruction of regular fishing vessel transit routes due to the presence of vessels and safety zones during construction; and
- Change in the abundance or distribution of target species and resulting impact on fisheries resource due to construction activities.

#### Potential Impacts in the operations and maintenance phase

- Loss of access to fishing grounds due to the presence of floating platform, associated moorings and safety zone;
- Displacement to other fishing grounds resulting in increase pressure on resources or conflict with other sea users, due to the presence of floating platform, associated moorings and safety zone;
- Obstruction of regular fishing vessel transit routes due to the presence of floating platform, associated moorings and safety zone;
- Potential for fishing gear to become entangled with floating and subsea structures, resulting in damage or loss of fishing gear; and
- Change in the abundance or distribution of target species and resulting impact on fisheries resource due to the presence of operational infrastructure.
- 14.6 The impact as a navigational risk is addressed in Section 13 of the ES Shipping and Navigation and the Navigational Risk Assessment supplied with the ES.

#### Potential Impacts in the decommissioning phase

- Impacts during the decommissioning phase will be similar to, but not exceeding, those during the construction phase.
- 14.7 The ES also provides an assessment of the cumulative impact of other projects.
- 14.8 The assessment concluded that there were four key fisheries all of which were low intensity pelagic fishery targeting herring, mixed demersal fishery primarily landing haddock and monkfish, scallop dredging fishery and an inshore creel fishery predominantly composed of <10 m vessels targeting crab and lobster.

- 14.9 There is potential for moderate impacts to the inshore creel fishery in terms of loss of access to fishing grounds during operation and potential moderate impacts were identified for all four key fisheries from the risk of gear damage or loss as a result of snagging on project infrastructure.
- 14.10 Where there is potential for fishing grounds to be impacted these will be mitigated through a Fishing Management Plan and the appointment of a Fisheries Liaison Officer ("FLO"). The application and monitoring of an operational safety zone will mitigate the risk of snagging.
- 14.11 With mitigation in place all residual impacts were assessed as minor or negligible.
- 14.12 The SFF recognised that the work that had been undertaken to choose a site that lessened any possible impact on fishing and noted that if the final site chosen is on the southern edge of the area this aim would be achieved in terms of not majorly interfering with either fishing activity or navigation.
- 14.13 The SFF raised concerns about the proposed area for dredging the seabed to provide flat bottom for the plinth and with the proposed potential scour protection of the anchors. Their concerns were that this would make it almost impossible to restore the area during the decommissioning stage. SFF noted that as there were sparse details on the export cable route further discussion would be required on all these concerns when developing the Cable Burial Plan. SFF is prepared to contribute to the development of a Cable Burial Plan to provide their view on the suitability of rock dump or mattresses for use in any given area and noted this would be the appropriate time to discuss scour protection.
- 14.14 Other points raised by SFF were the importance of a good FLO, use of a uniform vocabulary of definitions to avoid confusion, clarity as to what work could be offered to local vessels to mitigate the disturbance the development will cause during construction and the need for a post lay survey to confirm burial of the cable. The SFF would also expect to be added to the notifications of any lost gear which becomes trapped in the mooring system.
- 14.15 MSS were content with the conclusion in the ES that there are no significant impacts to be expected on the identified fisheries if the mitigation measures suggested are put in place. MSS also noted the lack of detail of scour protection for the anchors and the export cable and these details should be included in a Cable Burial Plan.
- 14.16 General measures relevant to the mitigation of impacts on Commercial Fisheries include:
  - Cable Laying Strategy and Method Statement;
  - Construction Environmental Management Document;
  - Operational Environmental Management Plan;

- Vessel Management Plan (VMP);
- Construction Safety Zone 500m around the offshore site during the installation of the mooring system and platform;
- Operational Safety Zone 50m around the mooring platform; and
- Navigational aids e.g. marking, lighting and an Automatic Identification System ("AIS") transmitter.

And measures specific to Commercial Fisheries are:

- Fisheries management plan;
- Appointment of a FLO;
- · Cable Protection Monitoring; and
- Advisory zone (as suggested by SFF, the zone would extend 50m from the anchors and encompass the platform and mooring system. Advisory zones are marked on the "Fish Safe" system and would trigger an alarm that there is a high risk of snagging when approaching the zone).

# 15 Shipping and navigation

- The ES provides an overview of the current shipping and navigation activity and included an assessment of the potential impacts to shipping and navigation during construction, operation and decommissioning. All potential navigational issues were provided in a separate Navigational Risk Assessment.
- The Navigational Risk Assessment sets out the methods used to assess the risk for 'Most Likely' and 'Worst Credible' consequences. The assessment took into account the minimum regulatory mitigations and set out what additional mitigations may be required.
- The risk assessment process has found that no risks lie within the 'Intolerable' zone. Those judged to lie within the 'Tolerable with application of mitigation measures to as low as reasonably practicable ("ALARP")' are illustrated on risk criticality matrices for 'Most Likely' and 'Worst Credible' outcomes.
- 15.4 The ES summarises the potential impacts to shipping and navigation as:

Potential impacts in the construction phase

- Disruption to navigation created by support vessels during construction;
- Increased pressure on Search and Rescue services; and
- Project vessel collides with a third party vessel including when towing floating platform to site.

Potential impacts in the operations and maintenance phase

• Disruption to navigation created by floating platform or any 'advisory zone';

- Increased pressure on search and rescue services;
- Vessel collides with floating platform;
- Project vessel collides with a third party vessel; and
- Disruption to navigation created by support vessels during operation and maintenance.

# Potential impacts in the decommissioning phase

Potential impacts arising from decommissioning phase are expected to be similar to, but not exceeding, those arising during the construction phase and would be temporary and of short duration.

- 15.5 The ES also provides an assessment of the cumulative effects of the Development with other projects.
- 15.6 The assessment concludes that with all the mitigation in place the overall significance of the potential impacts were negligible or minor.
- 15.7 The Maritime and Coastguard Agency ("MCA") provided comments on the ES, some of which were providing recommendations as to which guidance documents should be used to ensure compliance with best practice in relation to design standards e.g. for mooring systems. The MCA also noted that a detailed justification for a 50m operational safety zone would be required and indicated they would be content to discuss this further with the applicant.
- The MCA recognised that export cable routes and the associated cable protection are issues that need further development but noted any consented cable protection works must ensure existing and future safe navigation is not compromised. The MCA would accept a maximum of 5% reduction in surrounding depth referenced to Chart Datum and noted concerns on possible wear and tear on the export cable resulting from the movement of the turbines from waves, tides and currents. The MCA provided information regarding the requirements for an Emergency Response Co-operation Plan and aviation lighting.
- 15.9 The Northern Lighthouse Board ("NLB") noted their requirements for the turbine platform to be marked in accordance with IALA Recommendation 0-139<sup>2</sup>. The NLB also provided information regarding a range of other requirements that the applicant would have to comply with, and stated that all navigational marking and lighting of the site or its associated marine infrastructure will require the Statutory Sanction of the Northern Lighthouse Board prior to deployment.
- 15.10 The mitigation measures to minimise navigational impacts will consist of industry standard mitigation measures for shipping and navigation and project specific measures as summarised below.

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<sup>&</sup>lt;sup>2</sup> http://www.iala-aism.org/product/marking-of-man-made-offshore-structures-o-139/

Standard mitigation measures specific to shipping and navigation:

- Regulatory requirements to inform vessels in transit, inform local vessel operators of construction activities and following best practice guidance – the Fishing Liaison with Offshore Wind and Wet Renewables Group;
- Design standards;
- Temporary safety zones during construction;
- · Safety management plan;
- Hazard identification and risk assessment;
- Tool box talk;
- Floating platform interventions;
- Maintenance notifications;
- Advisory zone; and
- Site marking and lighting.

# Project specific mitigation measures:

- AIS on floating platform;
- Local tugs on standby during towage;
- · Chartings and notifications when platform offsite;
- Project vessel able to respond in an emergency;
- Floating platform and Wind Turbine Generators remain lit even if the platform was to lose station;
- Appointment of a marine co-ordinator;
- AIS on work vessels;
- Circulation of information to local ports, ship operators, fishermen, recreational organisations; and
- Advisory area vessels warned not to enter area.

#### 16 Aviation and radar

- The ES describes the aviation and military conditions in the vicinity of the Development and assesses the potential impacts arising during construction, operation and decommissioning with regard to aviation and radar systems. The ES identifies and assesses the potential impacts of the Development on civilian and military aviation and aviation safeguarding and, if required, the mitigation measures to be implemented to prevent, reduce or offset any potential adverse effects where possible.
- The baseline environment was defined through a desktop review of available data and guidance. The assessment used specific criteria within the Aviation Impact Assessment ("AIA"). This included using standard guidance and tools such as the Civil Aviation Authority ("CAA") Civil Air Publication (CAP) 764, Policy and Guidelines on Wind Turbines<sup>3</sup> and modelling tools such as ATDI ICS LT (Version 3.3.92).

<sup>3</sup> 

- 16.3 The ES concludes that there was no identifiable interaction with civil and military radar systems owing to distance of the Development from such systems, the curvature of the earth and intervening terrain.
- The assessment identified that the Development may have a potential impact on Ministry of Defence ("MOD") low flying operations and search and rescue ("SAR") operations. A summary of the impact assessment for each of these receptors is given below.

# 16.4.1 MOD low flying operations

The Zone is located in Low Flying Area 14, which covers Scotland to the north of the Scottish central belt. Fast jet and transport aircraft can fly down to a minimum of 250 ft Minimum Separation Distance throughout the UK Low Flying System. Helicopters normally operate down to 100 ft above ground level, but due to the nature of their task, and for specific training purposes, they may fly lower. However, the Site is not in an area of priority with regard to the effects of wind energy development on military low flying operations.

#### 16.4.2 Search and rescue operations

The wind farm may present a physical obstruction and affect SAR operations. However, when on an operational mission, SAR helicopters are not constrained by the normal rules of the air, operating in accordance with their Aircraft Operator Certificate. This allows pilots total flexibility to manoeuvre using their best judgement thus making them highly adaptable to any environment in which they operate.

- 16.5 The assessment did not consider that the Development would present any cumulative impact on radar systems, low flying operations or SAR operations.
- 16.6 The ES concludes that the overall significance of the potential impacts, with mitigation in place, was minor.
- 16.7 National Air Traffic Services (En Route) Public Limited ("NERL") had no safeguarding objection to the proposal but noted that if changes were made to the Development then further consultation would be required.
- The MOD had no objection to the proposal but noted that the turbines would need to comply with requirements for aviation safety lighting in accordance with the Civil Aviation Authority direction, CAP 393 Air Navigation Order<sup>4</sup>. The MOD noted their main concerns were with respect to the turbines creating a physical obstruction to air traffic movements and causing interference to Air Traffic Control and Air Defence radar installations. They noted that they wished to be consulted and notified of the progression of planning applications and submissions and, if permission is granted, outline information that they will need to be sent prior to commencement of

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<sup>&</sup>lt;sup>4</sup> https://publicapps.caa.co.uk/docs/33/CAP393Edition5Amend1\_OCT2016.pdf

- construction to allow updates to flying charts to make sure military aircraft avoid this area.
- 16.9 The CAA provided some general comments suggesting that Emergency Service Helicopter Support Units e.g. Air Ambulance and Scottish Police need to be consulted. The CAA do not require the turbine to be lit owing to the proposed height but note that if an aviation stakeholder such as the MOD make a request for lighting (see above) then the CAA would likely support the request. They note that if the height of the turbines changes then further consultation would be required. The CAA then outline their requirements with regard to charting for turbines of different heights and also request that any feature/structure 70 ft (21.3m) in height, or greater, above ground level is also reported to the Defence Geographic Centre to allow for notification to the relevant aviation authorities.

16.10 In summary, the mitigation measures for this receptor are:

# MOD low flying

 Details of the Site are required to be promulgated through the Defence Geographic Centre and the UK AIS, to enable the depiction of the platform and turbines on appropriate aviation charts and documentation as required. Lighting of turbines shall be in accordance with CAP 393 Article 220<sup>5</sup>.

# Search and rescue operations

 An Emergency Response Cooperation Plan ("ERCoP") will be in place for the construction, tow out, operation and decommissioning phase of the Project. The ERCoP is completed initially in discussion between the developer and the Maritime and Coastguard Agency (MCA), SAR and Navigation Safety Branches, in cooperation with the Maritime Rescue Coordination Centre. The SAR helicopter bases will be supplied with an accurate chart of the final platform location, and yawing attributes.

# 17 Seascape, landscape and visual amenity

- 17.1 The ES provides a description of the areas of seascape, landscape and visual amenity of the local area, identifies what the likely effects of the Development on these resources will be, indicates measures to avoid, reduce or offset these effects and provides an assessment of the nature and significance of those effects. The ES considers both objective and subjective impacts such as changes in perception of the local landscape/seascape.
- 17.2 A detailed review was undertaken of the literature and data relating to Seascape/Landscape and Visual Effects ("SLVIA") to give an overview of the existing environment. Site visits were undertaken to define Coastal

<sup>5</sup> Civil Aviation Authority. (2015 a). CAP 393 Air Navigation: The Order and the Regulations. CAA.

Character Areas ("CCA") and Local Coastal Character Areas ("LCCA"), identify the visual amenity baseline and assess the effects of the Development on the SLVIA receptors. Night time effects were addressed during daylight hours using wireline images to locate the proposed lighting sources and the area was visited after dark to establish the baseline conditions of illumination from the settlements and developments along the coast.

- 17.3 National Scenic Areas ("NSA"), Special Landscape Areas ("SLA"), Gardens and Designed Landscapes, and Wild Land Areas ("WLA") were also considered in the ES. An assessment of the sequential visual amenity baseline was also provided.
- 17.4 The key potential impacts of the Development on the seascape and landscape resources and on visual amenity during each phase are:

#### Potential impacts in the construction phase

 Construction effects will be indirect and temporary, lasting approximately 6 months. The primary effects will be due to visibility of vessel movements relating to towing of the floating platform into position, installation of mooring lines and anchors, and export cable installation.

## Potential impacts in the operational phase

- The focus of this part of the assessment is on the likely effects during the
  operational phase. The Development would introduce two very large
  vertical man-made features in views of the open sea beyond Sandside
  Bay, with the platform largely reading as a recessive horizontal element
  merging with the sea surface. The visual context of the great majority of
  views of the Development is dominated by the large, expansive scale of
  the open sea, occasionally also including distant coastal features and
  hills or mountains further inland;
- It is stressed that opportunities to gauge the true scale of the turbines will therefore be very limited, given the relative lack of frequency of backclothing by land, and juxtaposition with associated scale comparators including landforms, buildings and trees; and
- Also, significant in establishing the wider seascape, landscape and visual context of the Development is the presence of numerous existing large scale wind energy infrastructure Projects within the baseline resource. Together with the existing Dounreay industrial establishment, which is the dominant built development in the vicinity of the Development, these constitute major contextual elements.

#### Potential impacts in the decommissioning phase

 Effects during decommissioning would be similar to those arising during the construction period with the seascape and landscape resources and visual amenity being returned to the baseline conditions.

- 17.5 The ES provides the results of the cumulative assessment and notes there would be no significant cumulative effects with the exception of Farr Bay, Strathy and Portskerra Special Landscape Area.
- 17.6 In summary, the overall conclusion of the ES is:

Impacts on the seascape resource

 The Development will result in limited significant effects on the seascape resource. These are restricted to three remote stretches of the coastline in the vicinity of The Old Man of Hoy, and Sandside Bay, closer to the Development.

Impacts on the landscape resource

• The Development will result in one significant effect on the landscape resource to the Farr Bay, Strathy and Portskerra SLA.

Impacts on the visual amenity

- The Development will not result in any significant impacts on people at static viewpoints or on roads or cycle routes.
- 17.7 SNH noted that the proposed Dounreay Tri floating wind project is unlikely to significantly impact upon or affect the integrity of nationally protected NSAs or WLAs.
- 17.8 SNH considered there to be potential for moderate and therefore significant effects on sections of coastal character and high sensitivity visual receptors extending between LCCAs 35 to 41 (and between Strathy and Strathy Point to Ness of Litter). However, these impacts will be largely localised and, therefore, do not trigger issues of national interest to SNH.
- 17.9 SNH disagreed with the first 'rule' which has been applied to assessment of cumulative impacts (ES para 15.143), where the assessment for seascape receptors (LCCAs) includes only the offshore developments. To omit consideration of terrestrial wind developments in planning which are proposed along the seaboard within or adjacent to the LCCAs entails that the cumulative assessment is incomplete and results of assessment therefore misleading. SNH consider that the moderate significant landscape, visual and coastal effects predicated are likely to be contained between Strathy Point and Litter Ness. As such potential cumulative significant effects are likely to reflect this analysis and pattern of effects and are unlikely to trigger issues of national interest to SNH.
- 17.10 The Highland Council ("THC") noted that there had been detailed discussions with the Council's Landscape Officer pre-application and during processing of the application and contributed to the selection of viewpoints to be included in the visual impact assessment. THC note the methodology used for the visual impact assessment do not meet the standards laid out by

THC and note several aspects where they do not agree with the assessment or feel the impact has been understated. Whilst acknowledging the concerns of THC's Landscape Officer and SNH, the Planning Service considers the localised visual impacts of the Development to be acceptable on balance.

- 17.11 THC noted that while the landscape and seascape effects appear to be underestimated in the ES, these are judged to be acceptable on the basis that these are relatively limited in extent. Whilst there are some impacts on perception of scale on the landscape, the coastal and landscape characters are generally extensive enough that this effect does not significantly compromise the defining characteristics of the characters as a whole.
- 17.12 THC agree with the ES and SNH's assessment that there would be no impact on the physical or perceptual qualities of the wild land.
- 17.13 Orkney Islands Council considered that given the proximity of the Development to Orkney and the ferry routes to and from Orkney, that the Development will not have a significant adverse visual impact.
- 17.14 The mitigation measures are that the Development will not occupy the whole of the site and the final location of the platform within the offshore site will be agreed in consultation with Scottish Ministers and THC.

# 18 Offshore archaeology and cultural heritage

- 18.1 The ES describes the existing archaeological environment in the offshore Study Area and export cable corridor and presents the assessment of the potential impacts arising from the Development during the construction, operation and maintenance and decommissioning phases. A full and detailed description of the baseline marine historic environment is presented in Appendix 16.1: Marine Historic Environment Technical Baseline Report.
- 18.2 Cumulative effects from interactions with other existing or planned projects are also considered. The mitigation measures which will be implemented to prevent, reduce or offset any potential adverse effects are also described.
- 18.3 A detailed review of the existing literature and data relating to the marine historic environment was used to give an overview of the existing environment.
- 18.4 The ES identifies the following potential impacts for each phase of the development:

Potential impacts in the construction phase

 During construction and installation, direct impacts on cultural material on the seabed could be caused by the installation of the floating wind farm platform and gravity anchors for catenary cables. The deployment of gravity anchors is considered to have greater potential impact on marine cultural heritage as they penetrate the surface resulting in complete

- destruction of any cultural heritage beneath and in the immediate vicinity of the anchors, and by the dredging of seabed for installation of the clump weight;
- Direct impacts on cultural material on the seabed could also be caused by the excavation of any trenches for the export cable along the cable route and at the landfall – which would result in the removal of marine cultural heritage or removal of material that forms the context of the site;
- The laying and anchoring of surface-laid mooring and export cables and their associated armour or cable protection and stabilisation methods also have the potential to cause direct impacts to cultural material on the seabed. Installation of rock placement, concrete mattresses and armoured cabling (which is likely to be heavier) could cause direct damage to marine cultural heritage through compression; and
- Direct impacts on cultural material by compression could be caused by the dropping of vessel anchors onto cultural heritage during construction and installation.

# Potential impacts in the operations and maintenance phase

- During operation and maintenance, it is possible that direct impacts to cultural material on the seabed could be caused by maintenance vessels dropping anchors on the seabed during routine inspections or preventative maintenance or by the removal of devices for general maintenance;
- There is potential that movement of the mooring cable could expose areas of seabed which could affect sites of cultural heritage interest (if present). However, such movement is considered to be very unlikely due to the cables being anchored or buried; and
- Changes to local seabed dynamics could affect unknown historic site formation processes.

#### Potential impacts in the decommissioning phase

- Potential impacts arising during the decommissioning phase are expected to be similar to, but not exceeding, those arising during the construction phase.
- 18.5 The ES contains an assessment of the cumulative impact caused by planned and consented projects in the area.
- 18.6 The conclusion of the ES is that the residual impacts on cultural heritage, with mitigation, would be negligible.
- 18.7 Historic Environment Scotland ("HES") are content that the proposal does not raise any significant concerns for their remit. HES recommends a condition requiring the developer to submit the proposed Written Scheme of Investigation for approval by HES and MS prior to commencement of construction. HES also recommends a condition requiring the adoption and implementation of a suitable protocol for archaeological discoveries, this

protocol should be approved by HES and MS prior to commencement of works on the site.

- 18.8 HES provided other comments in relation to marine assets:
  - Notes that the full geophysical and geotechnical assessment has not yet been completed. HES notes it is best practice to carry out such work prior to the design being finalised and consent granted. Although HES are content with the work so far they note there is a risk that if a nationally important find is made in an area where avoidance is not possible then the cable route or site could be rendered unusable.
  - HES note that the ES states that the mitigation strategy in this case would be to excavate but HES note that they would likely recommend preservation in situ and that this approach should be included in any mitigation strategy.
- 18.9 The mitigation for this receptor includes general project mitigation and specific mitigation.

#### General mitigation

- A written scheme of investigation, to include cross-referencing with construction and environmental management plans, and inductions on any marine historic environment assets to avoid; and
- An agreed reporting protocol for the accidental discovery of cultural remains in line with The Crown Estate (2014) Protocol for Archaeological Discoveries: Offshore Renewables Projects<sup>6</sup>

#### Specific mitigation

• Avoida

- archaeological or cultural heritage importance will be avoided through project design e.g. placement of floating wind farm platform anchors and dredging for them, and location of export cables route. Geophysical anomalies identified from only a single type of response may be given an avoidance buffer of 20 m, while anomalies identified from further geophysical surveys may be given an avoidance buffer of 50 m. This is in order to take account of a potential debris scatter field around a wreck or a multiple response representing the tip of a wreck that extends further than the core location of the anomaly. This may result in layout redesign to avoid highly sensitive remains.
- Archaeological Survey and Recording Where layout redesign and avoidance are not possible, targeted archaeological survey (high resolution remote sensing survey/drop down camera/Remote Operated Vehicle survey/geotechnical) is to be undertaken to identify the nature,

<sup>&</sup>lt;sup>6</sup> https://www.thecrownestate.co.uk/media/148964/ei-protocol-for-archaeological-discoveries-offshore-renewables-projects.pdf

extent and potential importance/sensitivity of any remains of potential archaeological or cultural heritage importance affected by the Project. Archaeologically significant remains necessitate full archaeological recording and reporting, conducted by experienced maritime archaeologists.

#### 19 Other users of the marine environment

- 19.1 The ES assesses the impacts of the Development on human activities other than the main users in the marine environment. This covers subsea cables and utilities (including electrical and telecommunications), military activity, oil and gas activities, marine renewables, waste disposal and aggregate extractions.
- 19.2 An overview of the existing environment for this receptor was collected via a literature review and consultation with stakeholders. No site specific surveys were undertaken.
- 19.3 The following potential impacts were identified for each phase of construction.

# Potential impacts in the construction phase

- Obstruction of marine renewable energy activities due to the presence of safety zones and construction vessels during installation activities;
- Obstruction of military activities due to the presence of safety zones and construction vessels during installation activities; and
- Obstruction of electricity cable installation activities due to cable landfall construction activities, the presence of safety zones and construction vessels during installation activities.

#### Potential impacts in the operations and maintenance phase

- Obstruction of marine renewable energy activities due to the presence of the floating structure, associated moorings and export cable; and the presence of safety zones and vessels during maintenance activities;
- Obstruction of military activities due to the presence of the floating structure and associated moorings; and the presence of safety zones and vessels during maintenance activities;
- Obstruction of electricity cable installation activities due to the presence of the floating structure, associated moorings and export cable; and
- the presence of safety zones and vessels during maintenance activities.

#### Potential impacts in the decommissioning phase

- Impacts during the decommissioning phase would be similar to, but not exceeding, those discussed for the construction phase.
- 19.4 The conclusion of the assessment was that the overall significance of the residual impacts was minor in all cases.

- 19.5 No significant cumulative impact was identified.
- 19.6 Orkney Islands Council noted that early discussions should take place about the landfall of the export cable and potential overlap with the Orkney-Caithness interconnector as there are a limited number of locations where the cables can come ashore.
- 19.7 The mitigation measures for this receptor are:

## General mitigation

- Cable Laying Strategy and Method Statement;
- Construction Environmental Management Document;
- Operational Environmental Management Document;
- · Vessel Management Plan in construction and operational phases;
- Construction Safety Zone;
- Operational Safety Zone; and
- Navigational aids such as site marking and lighting.

## Specific mitigation

- Liaison with other marine users during construction and maintenance
- Installation of acoustic transponder (to alert military submarines to the presence of the floating platform); and
- Negotiations on location of export cable route and landfall.

## 20 Socio-economics, recreation and tourism

- The ES provides information on the socio-economic, recreation and tourism issues and benefits that are associated with the Development. The assessment considers where the commissioning of the floating platform occurs and where the Operations and Maintenance ("O&M") base is located. These locations will be identified during the detailed design phase of the Development. The assessment of the potential socio-economic impact is strategic with a focus at a local (Caithness), regional (Highland) and national (Scotland) level.
- 20.2 No bespoke studies were carried out but existing desk based studies and assessments were used. Consultation with relevant stakeholders was also undertaken.
- 20.3 Two approaches were undertaken for the assessment, firstly the potential benefits and impacts to socio-economics and, secondly, the potential impacts to recreation and tourism.
- 20.4 The assessment provides a baseline description for the socio-economics that included information on the national and regional economic situation,

population statistics, port and harbour facilities that could be used during the Development and transport links. In summary, it was noted that the Highland region local authorities and stakeholder agencies see marine renewable energy as a growth industry and that as a result of proposed upgrades to harbours and planned road improvements, Caithness is well placed to support the marine renewables industry.

20.5 The potential socio-economic benefits and impacts are identified as:

#### Benefits

- Local employment and business opportunities;
- Gross value added;
- Local employment and business opportunities generated through onshore works;
- Quality of life;
- Improvements to local infrastructure;
- Increased knowledge;
- Clustering effect; and
- Energy security.

## Impacts

- Pressure on local infrastructure and services;
- Commercial fisheries impacts; and
- Direct impact on access to amenities.
- 20.6 The assessment includes a cumulative impact assessment and notes that the impacts assessed that have the potential to have cumulative effects area:
  - Local employment and business opportunities
  - Improvements to local infrastructure
  - Clustering effect
  - Pressure on local infrastructure and services
- 20.7 The assessment concluded that the majority of the socio-economic impacts from the Development are positive at a national, regional and local level.
- 20.8 THC notes the potential of the Development to create jobs although acknowledges that the exact details are not known yet.
- 20.9 SFF expressed surprise that the assessment had not referred to the Best Practice Guidelines for Fishing Industry Financial and Economic Impact Assessments. They also noted more clarity was needed on what work can genuinely be offered to local vessels to deploy equipment and cables.
- 20.10 Scrabster Harbour Trust supports the Development and states one of the main reasons for this is that the operations and maintenance support

activities will offer job creation and local supply chain opportunities for the Caithness and North Sutherland economy. This will play a part in transitioning the local economy away from reliance on the existence of the Dounreay Nuclear plant. The construction phase will also generate local economic benefits, onshore and offshore.

20.11 The assessment notes that there are only limited mitigation measures that have been agreed relevant to this assessment due to the largely positive nature this Development has on employment and other service benefits.

## Project mitigation

This will be achieved through planning, i.e. planning ahead for the Development activities in order to avoid conflicts with other sectors that generate income for the economy.

Specific mitigation

## Infrastructure requirements

- If construction of the floating platform is carried out in the Highland region then the Company will liaise with the relevant planning authorities, to avoid congestion and pressure on existing housing and accommodation. This will allow measures such as the supply of temporary accommodation for personnel during the construction phase;
- The Company will work with relevant planning authorities to develop appropriate mitigation for any potential conflicts of Project vessels and other transport with existing uses of ports; and
- The Company will discuss with ports authorities the best way to ease congestion in the vicinity of the Development site, including consideration of infrastructure upgrades in the locality if required (although unlikely due to small scale of the Development).

## Harbour congestion

- The Company will work with the relevant harbour authorities when planning major operations to fit into general harbour management.
- 20.12 A baseline description for the tourism and recreation is provided in the ES and provides information on recreational angling, surfing, recreational sailing, sea angling and wildlife trips, canoeing and kayaking, SCUBA diving and walking in the area.
- 20.13 The potential impacts identified in the ES are:

#### Construction

Congestion and disruption at piers, slipways and anchorages as a result
of project vessels affecting recreational and tourism activities in the area.

## Recreation

- Direct impact on offshore recreational activities in the area; and
- Direct impact on onshore recreational activities during the construction period.

#### **Tourism**

- Potential for impacts on tourism where visitors are deterred from visiting due to disruption throughout the construction phase; and
- Industrialisation of the local seascape reducing tourists' visual amenity during construction works.

## Operations and maintenance

#### Recreation

- Disruption or severance to offshore recreation during operation and maintenance activities; and
- Disruption or severance to offshore recreation due to the physical presence of the Development.

## **Tourism**

- Direct impact to tourism whereby tourists are deterred from visiting due to the physical presence of the Development; and
- Additional topic of interest creating a new draw for tourists providing socio-economic benefit to the local area.

#### Decommissioning

- Impacts arising during decommissioning are expected to be similar to, but not exceeding, those occurring during the construction and installation phase.
- 20.14 No significant adverse cumulative impacts are expected on tourism or recreational interests in terms of disruption to activities as these impacts are likely to be highly localised. As those associated with the proposed projects are mostly restricted to the construction phase they are expected to be temporary in nature.
- 20.15 In summary, the potential effects to tourism and recreation throughout all stages of the Development were assessed to have a negligible or minor overall significance.
- 20.16 Comments were received from the Pentland Firth Yacht Club who had no objections to the Development as long as any sea activities are well marked.

- If this is the case there will be no increase in hazard or disruption to passing vachts and the club do not sail dinghies in that area.
- 20.17 The Royal Yachting Association Scotland ("RYAS") were content that if the application were to be approved, the Clyde Cruising Club were sent the details of the final scheme so it can be included in electronic updates of, and the next edition of, the relevant Sailing Directions. RYAS also note that there needs to be clarification of whether there will be an operational safety exclusion zone, which they would oppose although they see the need for construction exclusion zones. RYAS make the point that the device presents no more of a hazard than an anchored ship would and the latter would not be marked on a chart.
- 20.18 The mitigation measures to reduce the impact on these receptors are based on general measures and specific measures.

## General mitigation

- The contractor must adopt Best Practicable Means, as defined in Section 72 of the Control of Pollution Act 1974 as a means of controlling noise from construction sites;
- The Company / contractor/s must follow the guidelines of the Construction Environmental Management Document including the carrying out of vessel management strategies and communication and harbour management and planning to limit disruption to offshore recreational activities during construction and O&M activities; and
- The location and nature of Development activities and potential obstructions to mariners must be provided in Notices to Mariners in order to avoid disruption to other harbour users. These will be issued prior to the start of construction and, where necessary, during work at the site.

## Specific mitigation

- Continued consultation with local diving, sailing, surfing, angling and canoeing clubs to inform them of the timescales of Development activities so they can avoid the Study Area during construction periods, if necessary;
- Additional dedicated temporary accommodation must be provided for project workers if, at any stage of the Development, it appears there may be pressure to existing accommodation. This will reduce pressure on local residential and tourism accommodation; and
- In order to minimise impacts on any walking routes, including the core path network, access to and along the core paths will, during construction, be maintained along the construction corridor using diversions where required; and
- Consultation with key stakeholders must be continued during the detailed design phase to ensure that all are up to date on any diversion that may be put in place in relation to existing paths.

# 21 Summary

- 21.1 The ES concludes that there will not be a significant environmental impact on any of the receptors. The general mitigation and, in some cases, additional specific mitigation identified as part of the assessment will reduce the impacts to an acceptable level.
- 21.2 The general and specific mitigation identified in the ES will be incorporated into the conditions included in any consent granted by Scottish Ministers for this Development under section 36 of the Electricity Act 1989 and/or any marine licence which may be granted.

## 22 Conditions

22.1 Annexes 1 to 4 contain the conditions included in the Marine Licences (one for the wind farm and one for the export cable), section 36 consent and for the direction for the grant of deemed planning permission. For consistency and ease of cross referencing the numbers in this section are the same as in the marine licences and section 36.

## 23 Regulatory evaluation

#### Conclusions

- 23.1 In considering the application and, in particular, the ES 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 Development 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.
- 23.2 Marine Scotland, a Directorate of the Scottish Government, as the Appropriate Authority under the MWR, consider that, having taken account of the information provided by the Company, the responses of the consultative bodies and members of the public, there are no outstanding concerns with regards to the effects on the environment which would require the application for a Marine Licence to be refused. Marine Scotland consider that, subject to the inclusion of the conditions referred to above, Marine Licences and a section 36 consent may be granted in due course.

#### Recommendations

- 23.3 Having carried out assessments of the potential environmental impacts of the proposed Development, 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 Dounreay Trì Floating Wind Demonstration Project subject to the conditions referred to above being

included in the relevant Marine Licence and section 36 consent, if subsequently granted.

 Marine Scotland recommends that a favourable EIA consent decision is given in respect of the Dounreay Trì Floating Wind Demonstration Project, subject to the inclusion of the above conditions being attached to any relevant Marine Licence and section 36 consent.

## 24 Environmental Impact Consent Decision

24.1 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 Dounreay Trì Floating Wind Demonstration Project in accordance with Regulation 22 of the MWR

## ANNEX 1 MARINE LICENCE - WINDFARM - CONDITIONS

The number of the conditions has been kept the same as those in the marine licence for the windfarm for ease of cross referencing. The definitions of terms is included in the marine licence.

#### 3. PART 3 – CONDITIONS

## 3.1. General conditions

## 3.1.1. Compliance with the Application and approved plans

The Licensee must at all times construct and operate the Works in accordance with this Licence, the Application, the Environmental Statement, the Section 36 consent and the plans and programmes approved by the Scottish Ministers.

The Licensee must, at all times, maintain the Works in accordance with the approved Operation and Maintenance Plan ("OMP").

Reason: To ensure compliance with the Marine Licence, and the Environmental Statement associated with the Application.

# 3.1.2. 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.

Reason: To safeguard the obligations of the licence, in accordance with s.29(5) of the Marine (Scotland) Act 2010.

# 3.1.3. Vessels, vehicles, agents, contractors and sub-contractors

The Licensee must provide, as soon as reasonably practicable in advance of their engagement in the Works authorised under this licence, the name and function of any vessel, vehicle, agent, contractor or sub-contractor appointed to engage in the Works to the Licensing Authority. Where applicable the notification must include the vessel type, vessel IMO number and vessel owner or operating company.

The Licensee must ensure that any changes to the supplied details must be notified to the Licensing Authority, in writing, 14 days prior to any vessel, vehicle, agent, contractor or sub-contractor engaging in the Works.

The Licensee must ensure that only those vessels, vehicles, operators, agents, contractors or sub-contractors notified to the Licensing Authority are permitted to carry out any part of the Works.

The above details must be recorded in section 2.5 and 2.6 of this licence. If not provided at application these details and any subsequent changes will require a variation to the licence to update section 2.5 and 2.6 prior to engagement in the Works.

The Licensee must satisfy themselves that any masters of vessels or vehicle operators, agents, contractors or sub-contractors are 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. All masters of vessels or vehicle operators, agents, contractors and sub-contractors permitted to engage in the Works must abide by the conditions set out in this licence.

The Licensee must give a copy of this licence, and any subsequent variations made to this licence in accordance with section 30 of the 2010 Act, to the masters of any vessels, vehicle operators, agents, contractors or sub-contractors permitted to engage in the Works, and must ensure that the licence and any such variations are read and understood by those persons.

Reason: To ensure all parties involved in the Works are aware of the licence and its conditions, to reduce the risk of a breach of the licence, in accordance with s.39(1)(b) of the 2010 Act.

## 3.1.4. Force Majeure

Should the Licensee or any of their agents, contractors or sub-contractors, by any reason of *force majeure* deposit anywhere in the marine environment any substance or object, 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 or vehicle operator determines that it is necessary to deposit the substance or object other than at the 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.

Reason: To provide a defence for the Master to protect himself and his crew in the event of a force majeure, in accordance with s.29(2)(a) of the 2010 Act.

# 3.1.5. 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 the licence, altered in any material respect, notify the Licensing Authority of this fact, in writing, as soon as is practicable.

Reason: To ensure that the Works are carried out in accordance with the Application documentation, in accordance with s.29(2)(a) of the 2010 Act.

# 3.1.6. Submission of plans and specification of studies and surveys to the Licensing Authority

The Licensee must submit plans and the details and specifications of all studies and surveys that are required to be undertaken under this licence in relation to the Works, in writing, to the Licensing Authority, for their written approval. Commencement of the studies or surveys and implementation of plans must not occur until the Licensing Authority has given its written approval to the Licensee.

Plans or the specification of studies and surveys prepared pursuant to another consent or licence relating to the Works by the Licensee or by a third party may also be used to satisfy the requirements of this licence.

Reason: To ensure that the Licensing Authority is kept informed on progress of the Works, in accordance with s.29(3)(c) of the 2010 Act.

# 3.1.7. Submission of reports to the Licensing Authority

The Licensee must submit all reports and notifications to the Licensing Authority, in writing, as are required under this licence within the time periods specified in this licence. Where it would appear to the Licensee that there may be a delay in the submission of the reports 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 ought to have been submitted to the Licensing Authority under the terms of this licence.

The reports 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.

Reports prepared pursuant to another consent or licence relating to the Works by the Licensee or by a third party, may also be used to satisfy the requirements of this licence.

Such reports will include, but not be limited to, Transport Audit sheets, deposits sheets and Marine Mammal Observer ("MMO") reports.

Reason: To ensure that all reports and notifications are submitted within a reasonable timescale after licence is granted, in accordance with s.29(3)(c) of the 2010 Act.

# 3.1.8. Chemical usage

The Licensee must ensure that all chemicals which are to be utilised in the Works have been approved prior to use. All chemicals which are to be 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 (as amended) or as exempted. The Licensee must submit a report of all chemicals and

quantities to be used (e.g. oils and fluorinated gases) during the construction, and operation of the works to the Licensing Authority no later than one calendar month prior to the Commencement of the Works. Any changes to the types of chemicals which are proposed to be utilised must be consulted on with the Licensing Authority prior to the Commencement of the Works or, as the case may be, after the Commencement of the Works but prior to their utilisation.

Reason: To minimise the environmental impact in the event of a release through the use of authorised chemicals in the interest of protecting the environment, in accordance with s.29(2)(b) of the 2010 Act.

## 3.1.9. Fluorinated greenhouse gases

The Licensee must ensure that all equipment to be utilised in the Works that contains fluorinated greenhouse gases (hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and other greenhouse gases that contain fluorine, listed in Annex I of Regulation (EU) 517/2014 and The Fluorinated Greenhouse Gases Regulations 2015 ("the Regulations"), or mixtures containing any of those substances) must take precautions to prevent the unintentional release ('leakage') of those gases. They must take all measures which are technically and economically feasible to minimise leakage of fluorinated greenhouse gases.

Where a leakage of fluorinated greenhouse gases is detected, the Licensee must ensure that the equipment is repaired without undue delay.

The Licensee must ensure that all equipment to be utilised in the Works that contains fluorinated greenhouse gases in quantities of 5 tonnes of CO<sub>2</sub> equivalent or more, and not contained in foams, must ensure that the equipment is checked for leaks in accordance with Annex 4 of the Regulations. Records of leak checks must be kept in accordance with Annex 6 of the Regulations. These records must be submitted to the Licensing Authority annually, and immediately in the event of discovery of any leak.

Where the equipment is subject to leak checks under Article 4(1) of the Regulations, and a leak in the equipment has been repaired, the Licensee must ensure that the equipment is checked by a certified person within one calendar month after the repair to verify that the repair has been effective. In such event, the Licensing Authority must be informed of the date of discovery, date of repair and date of inspection.

Reason: To ensure compliance of the Works with Regulation (EU) 517/2014 and The Fluorinated Greenhouse Gases Regulations 2015, in accordance with s.29(2)(b) of the 2010 Act.

## 3.1.10. Environmental protection

The Licensee must ensure that all reasonable, appropriate and practicable steps are taken at all times to avoid or minimise any damage to the Scottish marine area as a result of the undertaking of the Licensed Activities.

The Licensee must ensure that all personnel adhere to the Scottish Marine Wildlife Watching Code, where appropriate, during all installation, operation and maintenance activities authorised under this licence.

The Licensee must ensure that any debris or waste material placed below MHWS during the construction and operation of the Works is removed from the Site, as soon as is reasonably practicable, for disposal at a location above the MHWS approved by the Scottish Environment Protection Agency ("SEPA").

The Licensee must ensure that all substances and objects deposited during the execution of the Works are inert (or appropriately coated or protected so as to be rendered 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 marine non-native species to and from the Site is kept to a minimum by ensuring appropriate bio-fouling management practices are implemented during the Works.

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

Reason: To ensure environmental impacts are minimised, in accordance with s.29(2)(b) of the 2010 Act.

# 3.1.11. Availability of the licence for inspection

The Licensee must ensure that copies of this licence and any subsequent amendments or variations are available for inspection at any reasonable time by any authorised marine 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;
- c) any onshore premises directly associated with the Works; and
- d) aboard any vessel engaged in the Works.

Reason: To ensure the licence is available for the purpose of inspection, in accordance with s.29(2)(b) of the 2010 Act.

# 3.1.12. Inspection of the Works

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

Reason: To ensure access to the Site for the purpose of inspection, in accordance with s.29(2)(b) of the 2010 Act.

## 3.1.13. Emergencies

If the assistance of a Government Department (to include departments of Administrations other than the Scottish Government) 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.

Reason: To ensure the Licensee is aware of financial liabilities, in accordance with s.29(2)(b) of the 2010 Act.

# 3.2. Conditions specific to the Works

## 3.2.1. Conditions applicable to all phases of the Works

## 3.2.1.1. Incident Reporting

In the event of any breach of health and safety or environmental obligations relating to the Works during the period of this licence, the Licensee must provide written notification of the nature and timing of the incident to the Licensing Authority, including confirmation of remedial measures taken and/or to be taken to rectify the breach, within 24 hours of the incident occurring.

Reason: To keep the Scottish Ministers informed of any such incidents which may be in the public interest, in accordance with s.29(3)(c) of the 2010 Act.

## 3.2.1.2. Bunding and storage facilities

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

Reason: To ensure pollution prevention is undertaken, in accordance with s.29(2)(b) of the 2010 Act.

## 3.2.1.3. 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 Works were undertaken, or to as close to its original condition as is reasonably practicable, in accordance with the Project Environmental Monitoring Plan ("PEMP") and the Decommissioning Programme

("DP") to the satisfaction of the Licensing Authority. Should the Works be discontinued prior to Completion of the Works, the Licensee must inform the Licencing Authority in writing of the discontinuation of the Works. A separate marine licence application will be required for the removal of Works.

Reason: To mitigate the effects of the activity on the Site, in accordance with s.29(3)(e) of the 2010 Act.

# 3.2.1.4. Lighting and Marking Plan ("LMP")

The Company must, no later than 6 months prior to the Commencement of the Development or at such a time as agreed with the Scottish Ministers, submit a Lighting and Marking Plan ("LMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the MCA, NLB, MoD, CAA, RYA Scotland and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The LMP must provide that the Development be lit and marked in accordance with the current CAA and MoD aviation lighting policy and guidance that is in place as at the date of the Scottish Ministers approval of the LMP, or any such other documents that may supersede said guidance prior to the approval of the LMP. The LMP must also detail the navigational lighting requirements detailed in IALA Recommendation O-139 or any other documents that may supersede said guidance in place immediately prior to the approval of the LMP.

The Company must provide the LMP, for information, to THC, OIC, SNH and any other bodies as may be required at the discretion of the Scottish Ministers.

**Reason:** To ensure navigational safety and the safe marking and lighting of the offshore generating station.

# 3.2.1.5. Emergency Response Co-operation Plans ("ERCoP")

The Licensee must, in discussion with the Maritime and Coastguard Agency's ("MCA") Search and Rescue Branch, complete an Emergency Response Cooperation Plans ("ERCoP") for the construction and operation phases. The ERCoP should include full details for the construction and operation phases of the authorised scheme in accordance with MCA recommendations contained within Marine Guidance Notice ("MGN") 543 (or subsequent updates). A copy of the final plan must be submitted to the Licensing Authority no later than 6 calendar months, or at such a time as agreed with the Licensing Authority, prior to the Commencement of the Works.

Reason: To ensure the Licensing Authority is aware of the ERCoP, in accordance with s.29(3)(c) of the 2010 Act.

## 3.2.2. Prior to the Commencement of the Works

# 3.2.2.1. Bathymetry

# 3.2.2.2. Commencement date of the Works

The Licensee must, prior to and no less than 1 calendar month before the Commencement of the Works, notify the Licensing Authority, in writing, of the date of Commencement of the Works authorised under this licence.

Reason: To inform the Licensing Authority of the date of the Works, in accordance with s.29(3)(c) of the 2010 Act.

# 3.2.2.3. Third Party Certification or Verification

The Licensee must, no later than 6 calendar months prior to the Commencement of the Works, or at such a time as agreed with the Licensing Authority, provide the Licensing Authority with Third Party Certification ("TPC") or Verification ("TPV") (or suitable alternative as agreed, in writing, with the Licensing Authority) for all Wind Turbine Generators ("WTGs"), mooring systems and WTGs platform structures. The TPC or TPV must include an assessment on the suitability of the mooring system. The applicant must follow the HSE guidance for Offshore Installation Moorings, as appropriate.

Reason: To provide independent certification or verification of the technology, materials or equipment, in accordance with s.29(2)(b) of the 2010 Act.

## 3.2.2.4. Bathymetry surveys

The Licensee must, prior to Commencement of the Works, complete a full sea floor coverage swath-bathymetry survey that meets the requirements of the International Hydrographic Organisation (IHO) Order 1a standard, with the final data set and survey report to the MCA Hydrography Manager.

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

## 3.2.2.5. Navigation and Charting

The Licensee must, no later than 7 days prior to Commencement of the Works, notify the UK Hydrographic Office ("UKHO") of the proposed Works to facilitate the promulgation of maritime safety information and updating of Admiralty charts and publications through the national Notice to Mariners system.

The Licensee must, no later than 7 days prior to the Commencement of the Works, ensure that local mariners, fishermen's organisations and HM Coastguard, in this

case Shetland Coastguard Operations Centre, are made fully aware of the Works 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, 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 notify the Defence Geographic Centre ("DGC") (mail to dvof@mod.uk) of the locations, heights and lighting status of the turbines, the estimated dates of construction and the maximum height of any construction equipment to be used, at least 10 weeks prior to the Commencement of the Works, to allow for the appropriate notification to the relevant aviation communities. The DGC must be updated when the actual dates of construction are known.

The Licensee must, no later than 14 days prior to the Commencement of the Works, ensure that aviation stakeholders are made fully aware of the Works though a Notice to Airmen ("NOTAM"). To arrange an associated NOTAM, a developer should contact CAA Airspace Regulation (AROps@caa.co.uk); providing the same information as required by the DGC.

Reason: To reduce the navigational risk to other legitimate users of the sea, in accordance with s.29(2)(b) of the 2010 Act.

## 3.2.2.6. Noise Registry

The Licensee must complete and submit a Proposed Activity Form in the online Marine Noise Registry for all aspects of the Works that will produce loud, low to medium frequency (10Hz-10kHz) impulsive noise no later than 7 days prior to Commencement of the Works. If any aspects of the Works differ from the Proposed Activity Form in the online Marine Noise Registry, the Licensee must complete and submit a new Proposed Activity Form no later than 7 days prior to Commencement of the Works.

## 3.2.3. During the Construction of the Works

## 3.2.3.1. Transportation audit sheet

The Licensee must submit to the Licensing Authority a detailed transportation audit sheet for each calendar month during the period when construction of the Works is undertaken, this must be within 14 days of the end of each calendar month. It must cover all aspects of the construction of the Works. The transportation audit sheet must include, but not be limited to, information on the loading facility, vessels, equipment, shipment routes, schedules and all materials deposited (as described in

Part 2 of this licence) in that calendar month. Where, following the submission of a transportation audit sheet to the Licensing Authority, any alteration is made to the component parts of the transportation audit sheet, the Licensee must notify the Licensing Authority of the alteration in the following month's transportation audit sheet.

If the Licensee becomes aware of any substances or objects on the transportation audit sheet that are missing, or becomes aware that an accidental deposit has occurred, the Licensee must contact the Licensing Authority as soon as practicable after becoming aware, for advice on the appropriate remedial action (which may include requiring charts to be amended to show such deposits). 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 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 following the giving of such a view by the Licensing Authority, and at the Licensee's expense.

Reason: To confirm that the deposits made were in accordance with the Application documentation, and that any accidental deposits are recovered or charted appropriately in accordance with s.29(3)(c) of the 2010 Act.

# 3.2.3.2. Nature and quantity of deposited substances and objects

The Licensee must, in addition to the transportation audit sheets required to be submitted to the Licensing Authority under condition 3.2.3.1 following the Commencement of the Works, submit audit reports, in writing, 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 monthly intervals, with the first such report being required to be submitted on a date no later than 1 calendar month following the Commencement of the Works. Where appropriate, nil returns must be provided.

Reason: To confirm that the deposits made were in accordance with the Application documentation, in accordance with s.29(3)(c) of the 2010 Act.

## 3.2.3.3. Navigational safety

The Licensee must notify the UKHO of the progress of the Works to facilitate the promulgation of maritime safety information and updating of Admiralty 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 Shetland Coastguard Operations Centre, 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 notify the Clyde Cruising Club of the progress of the Works.

The Licensee must, in the case of damage to, or destruction or decay of, the Works, notify the Licensing Authority, in writing, as soon as reasonably practicable following such damage, destruction or decay. The Licensee must carry out any remedial action as required by the Licensing Authority, and intimated to the Licensee in writing, which may include any requirement to display aids to navigation, following consultation with the MCA, the NLB or any such advisors as required by the Licensing Authority.

The Licensee must ensure that any vessels permitted to engage in the Works are marked in accordance with the International Rules for the Prevention of Collisions at Sea whilst under way and in accordance with the UK Standard Marking Schedule for Offshore Installations if the vessel is secured to the seabed.

The Licensee must ensure that no radio beacon or radar beacon operating in the marine frequency bands is installed or used on the Works without the prior written approval of the Office of Communications ("OfCom").

The Licensee must ensure that navigable depth is not altered by more than 5% referenced to Chart Datum unless otherwise agreed in writing, with the Licensing Authority in consultation with the MCA and NLB.

Reason: To reduce the navigational risk to other legitimate users of the sea, in accordance with s.29(2)(b) of the 2010 Act.

## 3.2.3.4. Markings, lighting and signals of the Works and Jack up vessels

The Licensee must ensure that the Works are marked and lit in accordance with the requirements of the NLB, MCA, the Civil Aviation Authority ("CAA") and the Ministry of Defence ("MOD") at all times and such markings and/or lighting must be continued unless and until such time as the Licensing Authority, by notice, relevantly varies this licence under section 30(3)(c) of the 2010 Act.

The Licensee must not display any marks and lights additional to those required by virtue of this licence and as agreed in the Lighting and Marking Plan ("LMP") without the written approval of the Licencing Authority following consultation with the NLB, MCA, CAA, and the MOD.

The Licensee must ensure that the Works are marked and lit in accordance with International Association of Lighthouse Authorities ("IALA") Recommendation O-139.

The Licensee must ensure that the turbines are lit with a single 2000 candela, red aviation light, flashing Morse 'W' in unison with all other turbines and in accordance with the Civil Aviation Authority Air Navigation Order Part 28 Lights and Lighting (220).

Reason: To ensure safe appropriate marking and lighting of the offshore Works, in accordance with s.29(2)(b) of the Marine (Scotland) Act 2010.

# 3.2.4. Conditions upon Completion of the Works

## 3.2.4.1. Date of Completion of the Works

The Licensee must, no more than 1 calendar month following the Completion of the Works, notify the Licensing Authority, in writing, of the date of Completion of the Works.

Reason: To inform the Licensing Authority of the Completion of the Works, in accordance with s.29(3)(c) of the 2010 Act.

# 3.2.4.2. Final Commissioning of the Works

The Licensee must, no more than 1 calendar month following the Final Commissioning of the Works, notify the Licensing Authority, in writing, of the date of the Final Commissioning of the Works.

Reason: To inform the Licensing Authority of the Final Commissioning of the Works, in accordance with s.29(3)(c) of the 2010 Act.

# 3.2.4.3. Navigational safety

The Licensee must notify the UKHO of the Completion of the Works to facilitate the promulgation of maritime safety information and updating of Admiralty charts and publications through the national Notice to Mariners system.

The Licensee must, within 1 calendar month of the Completion of the Works, provide the "as-built" positions and maximum heights of all WTGs, along with any sub-sea infrastructure, 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 Shetland Coastguard Operations Centre, 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 that the Clyde Cruising Club are made fully aware of the Completion of the Works.

The Licensee must, where any damage, destruction or decay is caused to the Works, notify the Licensing Authority, in writing, of such damage, destruction or decay as soon as reasonably practicable following such damage, destruction or decay. The Licensee must carry out any remedial action which the Licensing Authority advises the Licensee, in writing, as requiring to be taken, which may

include requirement to display aids to navigation, following consultation with the MCA, the NLB or any such advisers as required.

The Licensee must ensure that no radio beacon or radar beacon operating in the Marine frequency bands is installed or used on the Works without the prior written approval of OfCom.

As per the requirements of MCA's MGN 543 and supplementary updates, the Licensee must complete post-installation hydrographic surveys of the consented area or subsections thereof, to the IHO Order 1a survey standard. On completion of these surveys the data and a corresponding report of survey must be supplied to the UKHO, with notification to the MCA Hydrography Manager.

The Licensee must not exhibit, alter and discontinue navigational lighting of the Works without the Statutory Sanction of the Commissioners of Northern Lighthouses. An 'Application for Statutory Sanction to Exhibit/Discontinue' form must be completed by the Licensee as fully as possible and returned to the NLB via e-mail to <a href="mailto:navigation@nlb.org.uk">navigation@nlb.org.uk</a> for the necessary sanction to be granted prior to exhibiting, altering or discontinuing navigational lighting.

Reason: To reduce the navigational risk to other legitimate users of the sea, in accordance with s.29(2)(b) of the 2010 Act.

# 3.2.4.4. Nature and quantity of deposited substances and objects

The Licensee must, no later than 1 calendar month following the Completion of the Works, submit a final audit report, in writing, to the Licensing Authority stating the nature and quantity of all substances and objects deposited below MHWS within the Scottish marine area under the authority of this licence. Where appropriate, nil returns must be provided.

Reason: To confirm that the deposits made were in accordance with the Application documentation, in accordance with s.29(3)(c) of the 2010 Act.

## 3.2.4.5. Markings, lighting and signals of the Works

The Licensee must ensure that the Works are marked and lit in accordance with the agreed LMP and the requirements of the NLB 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 and lit in accordance with IALA Recommendation O-139.

The Licensee must ensure that the position of the platform is actively monitored and a contingency plan is developed to respond to any reported off-station events. This should include the transmission of local Radio Navigation Warnings.

The Licensee must ensure that the turbines are lit with a single 2000 candela, red aviation light, flashing Morse 'W' in unison with all other turbines and in accordance

with the Civil Aviation Authority Air Navigation Order Part 28 Lights and Lighting (220).

The Licensee must ensure that the platform and the structure of each wind generator should be painted yellow all round from sea level to 15 metres or the height of the Aid to Navigation, if fitted, whichever is greater.

The Licensee must ensure that each wind generator is fitted with lights visible from all directions in the horizontal plane. These lights should flash yellow once every 5 seconds, with a range of 5 nautical miles. All lights on these structures should be synchronised. These lights should comply with IALA recommendations and have an availability of not less than 99.8% (IALA Category 1), calculated over a rolling 3 year period.

The Licensee must ensure that all navigation lights are mounted below the lowest point of the arc of the rotor blades. They should be exhibited at a height of at least 6 metres above HAT.

The Licensee must ensure that the platform is fitted with a sound signal with a nominal range of two nautical miles, placed not less than 6 metres and not more than 30 metres above sea level. The character should be rhythmic blasts corresponding to morse letter 'U' every 30 seconds. The minimum duration of the short blast shall be 0.75 seconds and the sound signal should be operated when the meteorological visibility is two nautical miles or less. The sound signal should comply with IALA recommendations and have an availability of not less than 97.0% (IALA Category 3), calculated over a rolling 3 year period.

The Licensee must ensure that the structure shall display identification panels with black letters or numbers 1 metre high on a yellow background visible in all directions. These panels shall be easily visible in daylight as well as at night, either by the use of illumination or retro-reflecting material.

Reason: To ensure safe appropriate marking and lighting of the offshore Works, in accordance with s.29(2)(b) of the 2010 Act.

## 3.2.4.6. Noise registry Close Out

The Licensee must complete and submit a Close-out Report for all aspects of the Works that produced loud, low to medium frequency (10Hz-10kHz) impulsive noise in the online Marine Noise Registry no later than 12 weeks from the Completion of the Works.

Reason: To ensure compliance with reporting requirements on marine noise, in accordance with s.29(3)(c) of the 2010 Act.

## 3.2.4.7. Operation and Maintenance of the Works

The Licensee must operate and maintain the Works in accordance with the approved OMP. The Licensing Authority must be notified at least 6 calendar months in advance of any maintenance of the Works where any additional deposits are

required. In the event that these works are were not assessed in the Application and are considered by the Licencing Authority as being material they will require further marine licences.

Reason: To ensure compliance with the approved OMP to prevent decay of the Works and to ensure that any maintenance work is carried out under an appropriate licence in accordance with s.29(3)(b) of the 2010 Act.

#### 3.2.4.8. Removal of the Works

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

The Licensee must, no later than 3 months prior to any proposed removal works, submit a plan for the Removal of the Works, in writing, to the Licensing Authority, along with a marine license application for the Removal of the Works.

Removal of the Works must not occur until the Licensing Authority has given its prior written approval to the plan and issued a marine licence.

**Reason**: To ensure that removal of works is carried out under an appropriate licence, in accordance with s.29(3)(a) of the 2010 Act.

# 3.2.4.9. Decommissioning

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

Reason: To ensure that decommissioning is carried out according to the approved Decommissioning Programme under an appropriate licence, in accordance with s.29(3)(d) of the 2010 Act

## ANNEX 2 MARINE LICENCE – EXPORT CABLE - CONDITIONS

The number of the conditions has been kept the same as those in the marine licence for the export cable for ease of cross referencing. The definitions of terms is included in the marine licence.

## 3. PART 3 – CONDITIONS

## 3.1. General conditions

# 3.1.1. Compliance with the Application and approved plans

The Licensee must at all times construct and operate the Works in accordance with this Licence, the Application, the Environmental Statement, the Section 36 consent and the plans and programmes approved by the Scottish Ministers.

The Licensee must, at all times, maintain the Works in accordance with the approved Operation and Maintenance Plan ("OMP").

Reason: To ensure compliance with the Marine Licence, and the Environmental Statement associated with the Application.

## 3.1.2. 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.

Reason: To safeguard the obligations of the licence, in accordance with s.29(5) of the Marine (Scotland) Act 2010.

# 3.1.3. Vessels, vehicles, agents, contractors and sub-contractors

The Licensee must provide, as soon as reasonably practicable in advance of their engagement in the Works authorised under this licence, the name and function of any vessel, vehicle, agent, contractor or sub-contractor appointed to engage in the Works to the Licensing Authority. Where applicable the notification must include the vessel type, vessel IMO number and vessel owner or operating company.

The Licensee must ensure that any changes to the supplied details must be notified to the Licensing Authority, in writing, 14 days prior to any vessel, vehicle, agent, contractor or sub-contractor engaging in the Works.

The Licensee must ensure that only those vessels, vehicles, operators, agents, contractors or sub-contractors notified to the Licensing Authority are permitted to carry out any part of the Works.

The above details must be recorded in section 2.5 and 2.6 of this licence. If not provided at application these details and any subsequent changes will require a

variation to the licence to update section 2.5 and 2.6 prior to engagement in the Works.

The Licensee must satisfy themselves that any masters of vessels or vehicle operators, agents, contractors or sub-contractors are 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. All masters of vessels or vehicle operators, agents, contractors and sub-contractors permitted to engage in the Works must abide by the conditions set out in this licence.

The Licensee must give a copy of this licence, and any subsequent variations made to this licence in accordance with section 30 of the 2010 Act, to the masters of any vessels, vehicle operators, agents, contractors or sub-contractors permitted to engage in the Works, and must ensure that the licence and any such variations are read and understood by those persons.

Reason: To ensure all parties involved in the Works are aware of the licence and its conditions, to reduce the risk of a breach of the licence, in accordance with s.39(1)(b) of the 2010 Act.

## 3.1.4. Force Majeure

Should the Licensee or any of their agents, contractors or sub-contractors, by any reason of *force majeure* deposit anywhere in the marine environment any substance or object, 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 or vehicle operator determines that it is necessary to deposit the substance or object other than at the 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.

Reason: To provide a defence for the Master to protect himself and his crew in the event of a force majeure, in accordance with s.29(2)(a) of the 2010 Act.

## 3.1.5. 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 the licence, altered in any material respect, notify the Licensing Authority of this fact, in writing, as soon as is practicable.

Reason: To ensure that the Works are carried out in accordance with the Application documentation, in accordance with s.29(2)(a) of the 2010 Act.

# 3.1.6. Submission of plans and specification of studies and surveys to the Licensing Authority

The Licensee must submit plans and the details and specifications of all studies and surveys that are required to be undertaken under this licence in relation to the Works, in writing, to the Licensing Authority, for their written approval. Commencement of the studies or surveys and implementation of plans must not occur until the Licensing Authority has given its written approval to the Licensee.

Plans or the specification of studies and surveys prepared pursuant to another consent or licence relating to the Works by the Licensee or by a third party may also be used to satisfy the requirements of this licence.

Reason: To ensure that the Licensing Authority is kept informed on progress of the Works, in accordance with s.29(3)(c) of the 2010 Act.

# 3.1.7. Submission of reports to the Licensing Authority

The Licensee must submit all reports and notifications to the Licensing Authority, in writing, as are required under this licence within the time periods specified in this licence. Where it would appear to the Licensee that there may be a delay in the submission of the reports 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 ought to have been submitted to the Licensing Authority under the terms of this licence.

The reports 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.

Reports prepared pursuant to another consent or licence relating to the Works by the Licensee or by a third party, may also be used to satisfy the requirements of this licence.

Such reports will include, but not be limited to, Transport Audit sheets and deposits sheets reports.

Reason: To ensure that all reports and notifications are submitted within a reasonable timescale after licence is granted, in accordance with s.29(3)(c) of the 2010 Act.

## 3.1.8. Chemical usage

The Licensee must ensure that all chemicals which are to be utilised in the Works have been approved prior to use. All chemicals which are to be 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 (as amended) or as exempted. The Licensee must submit a report of all chemicals and quantities to be used (e.g. oils and fluorinated gases) during the construction, and

operation of the works to the Licensing Authority no later than one calendar month prior to the Commencement of the Works. Any changes to the types of chemicals which are proposed to be utilised must be consulted on with the Licensing Authority prior to the Commencement of the Works or, as the case may be, after the Commencement of the Works but prior to their utilisation.

Reason: To minimise the environmental impact in the event of a release through the use of authorised chemicals in the interest of protecting the environment, in accordance with s.29(2)(b) of the 2010 Act.

# 3.1.9. Fluorinated greenhouse gases

The Licensee must ensure that all equipment to be utilised in the Works that contains fluorinated greenhouse gases (hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and other greenhouse gases that contain fluorine, listed in Annex I of Regulation (EU) 517/2014 and The Fluorinated Greenhouse Gases Regulations 2015 ("the Regulations"), or mixtures containing any of those substances) must take precautions to prevent the unintentional release ('leakage') of those gases. They must take all measures which are technically and economically feasible to minimise leakage of fluorinated greenhouse gases.

Where a leakage of fluorinated greenhouse gases is detected, the Licensee must ensure that the equipment is repaired without undue delay.

The Licensee must ensure that all equipment to be utilised in the Works that contains fluorinated greenhouse gases in quantities of 5 tonnes of CO<sub>2</sub> equivalent or more, and not contained in foams, must ensure that the equipment is checked for leaks in accordance with Annex 4 of the Regulations. Records of leak checks must be kept in accordance with Annex 6 of the Regulations. These records must be submitted to the Licensing Authority annually, and immediately in the event of discovery of any leak.

Where the equipment is subject to leak checks under Article 4(1) of the Regulations, and a leak in the equipment has been repaired, the Licensee must ensure that the equipment is checked by a certified person within one calendar month after the repair to verify that the repair has been effective. In such event, the Licensing Authority must be informed of the date of discovery, date of repair and date of inspection.

Reason: To ensure compliance of the Works with Regulation (EU) 517/2014 and The Fluorinated Greenhouse Gases Regulations 2015, in accordance with s.29(2)(b) of the 2010 Act.

## 3.1.10. Environmental protection

The Licensee must ensure that all reasonable, appropriate and practicable steps are taken at all times to avoid or minimise any damage to the Scottish marine area as a result of the undertaking of the Licensed Activities.

The Licensee must ensure that all personnel adhere to the Scottish Marine Wildlife Watching Code, where appropriate, during all installation, operation and maintenance activities authorised under this licence.

The Licensee must ensure that any debris or waste material placed below MHWS during the construction and operation of the Works is removed from the Site, as soon as is reasonably practicable, for disposal at a location above the MHWS approved by the Scottish Environment Protection Agency ("SEPA").

The Licensee must ensure that all substances and objects deposited during the execution of the Works are inert (or appropriately coated or protected so as to be rendered 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 marine non-native species to and from the Site is kept to a minimum by ensuring appropriate bio-fouling management practices are implemented during the Works.

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

Reason: To ensure environmental impacts are minimised, in accordance with s.29(2)(b) of the 2010 Act.

# 3.1.11. Availability of the licence for inspection

The Licensee must ensure that copies of this licence and any subsequent amendments or variations are available for inspection at any reasonable time by any authorised marine 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;
- c) any onshore premises directly associated with the Works; and
- d) aboard any vessel engaged in the Works.

Reason: To ensure the licence is available for the purpose of inspection, in accordance with s.29(2)(b) of the 2010 Act.

# 3.1.12. Inspection of the Works

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

Reason: To ensure access to the Site for the purpose of inspection, in accordance with s.29(2)(b) of the 2010 Act.

# 3.1.13. Emergencies

If the assistance of a Government Department (to include departments of Administrations other than the Scottish Government) 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.

Reason: To ensure the Licensee is aware of financial liabilities, in accordance with s.29(2)(b) of the 2010 Act.

# 3.2. <u>Conditions specific to the Works</u>

## 3.2.1. Conditions applicable to all phases of the Works

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

Except as otherwise required by the terms of this licence, the Works must be constructed and operated in accordance with the Application and the Environmental Statement submitted by the Company on 19th October 2016 and any other documentation lodged in support of the Application.

## 3.2.1.2. Project Environmental Monitoring Programme

The Company must, no later than 6 months prior to the Commencement of the Works or at such a time as agreed with the Scottish Ministers, submit a Project Environmental Monitoring Programme ("PEMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with Scottish Natural Heritage ("SNH"), Royal Society for the Protection of Birds ("RSPB") Scotland, Whale and Dolphin Conservation ("WDC") and any other ecological advisors or organisations as required at the discretion of the Scottish Ministers. The PEMP must be in accordance with the Application and the ES as it relates to environmental monitoring.

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

The Scottish Ministers must approve all initial methodologies for the above monitoring, in writing.

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

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

- a) pre-construction, construction (if considered appropriate by the Scottish Ministers) and post-construction monitoring or data collection as relevant in terms of the ES and any subsequent monitoring or data collection for:
  - birds. This should include, but not be limited to, a detailed entanglement monitoring and reporting schedule, as well as a postconsent monitoring plan for bird strike;
  - ii) marine mammals. This should include, but not be limited to, a detailed entanglement monitoring and reporting schedule, particularly of load on the moorings from derelict fishing gear; and
  - iii) onshore impacts of the development; and
- b) the participation and contribution to be made by the Company to data collection or monitoring of wider strategic relevance, identified and agreed by the Scottish Ministers, and may include but not necessarily be limited to:
  - i) the density and distribution of seabirds within the site-specific survey area; and
  - ii) the behaviour and interaction of marine mammals and seabirds around the platform and turbine structures.

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

The PEMP is a live document which will be regularly reviewed by the Scottish Ministers, at timescales to be determined by them to identify the appropriateness of on-going monitoring. Following such reviews, the Scottish Ministers may, in consultation with ecological advisors or organisations as required at the discretion of the Scottish Ministers, require the Company to amend the PEMP and submit such an amended PEMP, in writing, to the Scottish Ministers, for their written approval. Such approval may only be granted following consultation with the SNH, RSPB Scotland, WDC, and any other ecological advisors or organisations as may be required at the discretion of the Scottish Ministers.

The Company must submit written reports and associated raw data of such monitoring or data collection to the Scottish Ministers at timescales to be determined

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

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

# 3.2.1.3. Environmental Management Plan

The Company must, no later than 6 months prior to the Commencement of the Works, submit an Offshore Environmental Management Plan ("EMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, SEPA, The Highland Council ("THC"), RSPB Scotland and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The EMP must provide the over-arching framework for on-site environmental management during the phases of 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.

The OffEMP must be in accordance with the ES insofar as it relates to environmental management measures. The OffEMP must set out the roles, responsibilities and chain of command for the Company personnel, any contractors or sub-contractors in respect of environmental management for the protection of environmental interests during the construction and operation of the 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 preconstruction monitoring or data collection, and include the relevant parts of the Construction Method Statement ("CMS") (Conditions 3.2.2.4);
- b) a Pollution Prevention and Control Method Statement, including contingency plans;
- c) management measures to prevent the introduction of invasive non-native marine species;
- a site waste management plan (dealing with all aspects of waste produced during the construction period), including details of contingency planning in the event of accidental release of materials which could cause harm to the environment. Wherever possible the waste hierarchy of reduce, re-use and recycle should be encouraged;
- e) the reporting mechanisms that will be used to provide the Scottish Ministers and relevant stakeholders (including, but not limited to, SNH, SEPA, THC, RSPB Scotland,) with regular updates on construction activity, including any environmental issues that have been encountered and how these have been addressed.

The Company must, no later than 3 months prior to the Final Commissioning of the Works, submit an updated OffEMP in writing to cover the operation and maintenance activities for the Works, to the Scottish Ministers for their written approval. Such approval may be given only following consultation with SNH, SEPA, RSPB Scotland and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The OffEMP must be regularly reviewed by the Company and the Scottish Ministers, at intervals agreed by the Scottish Ministers. Reviews must include, but not be limited to, the reviews of updated information on construction methods and operations of the Works and updated working practices.

The OffEMP must be informed, so far as is reasonably practicable, by the baseline monitoring or data collection undertaken as part of the Application.

# 3.2.1.4. SpORRAn (Scottish Offshore Renewables Research Framework)

The Company must, to the satisfaction of the Scottish Ministers, participate in the monitoring requirements as laid out in the 'SpORRAn' (Scottish Offshore Renewables Research Framework), in particular the on for Diadromous Fish. The extent and nature of the Company's participation must be agreed by the Scottish Ministers.

**Reason:** To ensure effective monitoring of the effects on migratory fish at a local level.

## 3.2.1.5. Scottish Strategic Marine Environment Group

The Company must participate in any Scottish Strategic Marine Environment Group ("SSMEG") established by the Scottish Ministers for the purposes of advising the Scottish Ministers on research, monitoring and mitigation programmes for, but not limited to, ornithology, diadromous fish, marine mammals and commercial fish.

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

## 3.2.1.6. Serious Incident Reporting

In the event of any breach of health and safety or environmental obligations relating to the Works during the period of this licence, the Licensee must provide written notification of the nature and timing of the incident to the Licensing Authority, including confirmation of remedial measures taken and/or to be taken to rectify the breach, within 24 hours of the incident occurring.

Reason: To keep the Scottish Ministers informed of any such incidents which may be in the public interest, in accordance with s.29(3)(c) of the 2010 Act.

## 3.2.1.7. Bunding and storage facilities

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

Reason: To ensure pollution prevention is undertaken, in accordance with s.29(2)(b) of the 2010 Act.

# 3.2.1.8. 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 Works were undertaken, or to as close to its original condition as is reasonably practicable, in accordance with the PEMP and the Decommissioning Programme ("DP") to the satisfaction of the Licensing Authority. Should the Works be discontinued prior to Completion of the Works, the Licensee must inform the Licencing Authority in writing of the discontinuation of the Works. A separate marine licence application will be required for the removal of Works.

Reason: To mitigate the effects of the activity on the Site, in accordance with s.29(3)(e) of the 2010 Act.

# 3.2.1.9. Emergency Response Co-operation Plans ("ERCoP")

The Licensee must, in discussion with the Maritime and Coastguard Agency's ("MCA") Search and Rescue Branch, complete an Emergency Response Cooperation Plans ("ERCoP") for the construction and operation phases. The ERCoP should include full details for the construction and operation phases of the authorised scheme in accordance with MCA recommendations contained within Marine Guidance Notice ("MGN") 543 (or subsequent updates). A copy of the final plan must be submitted to the Licensing Authority no later than 6 calendar months, or at such a time as agreed with the Licensing Authority, prior to the Commencement of the Works.

Reason: To ensure the Licensing Authority is aware of the ERCoP, in accordance with s.29(3)(c) of the 2010 Act.

## 3.2.2. Prior to the Commencement of the Works

# 3.2.2.1. Bathymetry surveys

The Licensee must, prior to Commencement of the Works, complete a full sea floor coverage swath-bathymetry survey that meets the requirements of the International Hydrographic Organisation (IHO) Order 1a standard, with the final data set and survey report to the MCA Hydrography Manager.

Reason: To ensure all environmental and navigational issues are considered for the location and construction of the cable.

#### 3.2.2.2. Commencement date of the Works

The Licensee must, prior to and no less than 1 calendar month before the Commencement of the Works, notify the Licensing Authority, in writing, of the date of Commencement of the Works authorised under this licence.

Reason: To inform the Licensing Authority of the date of the Works, in accordance with s.29(3)(c) of the 2010 Act.

## 3.2.2.3. Decommissioning Programme

Where the Company has been given notice requiring them to submit to the appropriate authority, as defined in the Energy act 2004, 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 Company has submitted to the appropriate authority a DP in compliance with that notice.

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

## 3.2.2.4. Construction Programme

The Company must, no later than 6 months prior to the Commencement of the Works, (or at such a time as agreed with the Scottish Ministers) submit a Construction Programme ("CoP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the SNH, Ministry of Defence ("MOD"), MCA, SEPA, THC and Orkney Islands Council ("OIC") and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The CoP shall set out, but not be limited to:

- 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.

The Company must, prior to the Commencement of the Works, provide a copy of the final CoP, and any subsequent revisions as agreed by the Scottish Ministers, to the Defence Geographic Centre ("DGC").

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

#### 3.2.2.5. Construction Method Statement

The Company must, no later than 6 months prior to the Commencement of the Works, submit an Construction Method Statement ("CMS"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, SEPA, THC, OIC, MoD, MCA, NLB, Scottish Fishermen's Federation ("SFF"), WDC, Dounreay Site Restoration Limited ("DSRL") and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The CMS must include, but not be limited to:

- b) the construction procedures and good working practices for installing the Works;
  - details of the roles and responsibilities, chain of command and contact details of company personnel, any contractors or sub-contractors involved during the construction of the Works;
  - d) details of how the construction related mitigation steps proposed in the ES are to be delivered:
  - e) a waste management plan for the construction phase of the Works; and
  - f) continuous monitoring of radioactive particles.

The CMS must adhere to the construction methods assessed in the Application and ES. The CMS must also, 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 Cable Plan ("CaP") and the Lighting and Marking Plan ("LMP").

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

## 3.2.2.6. Vessel Management Plan

The Company must, no later than 6 months prior to the Commencement of the Works, submit a Vessel Management Plan ("VMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, MCA, WDC, THC and OIC and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

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

- a) the number, types and specification of vessels required;
- b) how vessel management will be co-ordinated, particularly during construction but also during operation;
- c) 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 during construction and operation of the Works;

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

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

Reason: To mitigate disturbance or impact to marine mammals and birds.

# 3.2.2.7. Traffic and Transportation Plan

The Company must, at least 6 months prior to the Commencement of the Development submit a Traffic and Transportation Plan ("TTP") in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with THC and any such other advisors as may be required at the discretion of the Scottish Ministers. The TTP must set out a mitigation strategy for the impact of road based traffic and transportation associated with the construction of the Development. The Development must be constructed and operated in accordance with the approved TTP.

**Reason**: To maintain the free flow and safety of the Trunk Road network

## 3.2.2.8. Navigational Safety Plan

The Company must, no later than 6 months prior to the Commencement of the Works or at such a time as agreed with the Scottish Ministers, submit a Navigational Safety Plan ("NSP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with MCA, NLB, RYA Scotland and any other navigational advisors or organisations as may be required at the discretion of the Scottish Ministers.

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

- a) navigational safety measures;
- b) construction exclusion zones;
- c) notice(s) to Mariners and Radio Navigation Warnings;
- d) anchoring areas;
- e) temporary construction lighting and marking;
- f) emergency response and coordination arrangements (ERCoP) for the construction, operation and decommissioning phases of the Works

The Company must confirm within the NSP that they have taken into account and adequately addressed all of the recommendations of the MCA in the current Marine Guidance Note 543 ("MGN 543"), and its annexes that may be appropriate to the Works, or any other relevant document which may supersede said guidance prior to approval of the NSP.

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

#### 3.2.2.9. Cable Plan

The Company must, no later than 6 months prior to the Commencement of the Works or at such a time as agreed with the Scottish Ministers, submit an Cable Plan ("CaP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, SEPA, SFF, MCA, NLB, DSRL and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The CaP must be in accordance with the ES.

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

- a) the location and cable laying techniques for the cables;
- b) the results of monitoring or data collection work (including geophysical, geotechnical and benthic surveys) which will help inform cable routing;
- c) technical specification of cables, including a desk based assessment of attenuation of electro-magnetic field strengths and shielding;
- d) a burial risk assessment to ascertain burial depths and, where necessary, alternative protection measures, including justification, in relation to disturbance of any radioactive contamination, for the method of cable laying chosen;
- e) methodologies for surveys and monitoring (e.g. over trawl) of the cables through the operational life of the Works where mechanical protection of cables laid on the sea bed is deployed;
- f) methodologies for cable inspection with measures to address and report to the Scottish Ministers any exposure of cables; and
- g) a Radioactive Particle Monitoring Strategy

Any consented cable protection works must ensure existing and future safe navigation is not compromised. Scottish Ministers will accept a maximum of 5% reduction in surrounding depth referenced to Chart Datum.

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

## 3.2.2.10. Environmental Clerk of Works

Prior to the Commencement of the Works, the Company must at its own expense, and with the approval of the Scottish Ministers in consultation with SNH and SEPA, appoint an independent Environmental Clerk of Works ("ECoW"). The ECoW must be appointed in time to review and approve the draft version of the first plan or programme submitted under this licence to the Scottish Ministers, and remain in post until agreed by the Scottish Ministers. The terms of appointment must be approved by Scottish Ministers, in consultation with SNH and SEPA.

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

- a) quality assurance of final draft versions of all plans and programmes required under this licence:
- b) responsibility for the monitoring and compliance of the licence conditions and the environmental mitigation measures;
- c) provision of on-going advice and guidance to the Company in relation to achieving compliance with licence conditions, including but not limited to the conditions relating to the CMS, the EMP, the CaP the PEMP, and the VMP;
- d) provision of reports on point c) above to the Scottish Ministers at timescales to be determined by the Scottish Ministers;
- e) inducting and toolbox talks to onsite construction teams on environmental policy and procedures and keeping a record of these;
- f) monitoring that the Works are being constructed according to the plans and this licence, the Application and ES and that is complies with all relevant legislation;
- g) reviewing and reporting incidents/near misses and reporting any changes in procedures as a result; and
- h) agreement of a communication strategy with the Scottish Ministers.

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

## 3.2.2.11. Fisheries Management and Mitigation Strategy

The Company must, no later than 6 months prior to the Commencement of the Works or at such a time as agreed with the Scottish Ministers, submit a Fisheries Management and Mitigation Strategy ("FMMS"), in writing, to the Scottish Ministers for their written approval.

In order to inform the production of the FMMS, the Company must monitor or collect data as relevant and agreed with Scottish Ministers in terms of the ES and any subsequent monitoring or data collection for:

- a) the impacts on the adjacent coastline;
- b) the effects on local fishermen; and
- c) the effects on other users of the sea.

As part of any finalised FMMS, the Company must produce and implement a mitigation strategy for each commercial fishery that can prove to the Scottish Ministers that they would be adversely affected by the Works. The Company must implement all mitigation measures committed to be carried out by the Company within the FMMS. Any contractors, or sub-contractors working for the Company, must co-operate with the fishing industry to ensure the effective implementation of the FMMS.

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

#### 3.2.2.12. Fisheries Liaison Officer

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

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

- a) establishing and maintaining effective communications between the Company, any contractors or sub-contractors, fishermen and other users of the sea concerning the overall project and any amendments to the CMS and site environmental procedures;
- b) the provision of information relating to the safe operation of fishing activity at the site of the Works; and
- ensuring that information is made available and circulated in a timely manner to minimise interference with fishing operations and other users of the sea.

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

#### 3.2.2.13. Navigation and Aviation Safety and Charting

The Licensee must, no later than 7 days prior to Commencement of the Works, notify the UK Hydrographic Office ("UKHO") of the proposed Works to facilitate the promulgation of maritime safety information and updating of Admiralty charts and publications through the national Notice to Mariners system.

The Licensee must, no later than 7 days prior to the Commencement of the Works, ensure that local mariners, fishermen's organisations and HM Coastguard, in this case Shetland Coastguard Operations Centre, are made fully aware of the Works 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, 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 and no later than one calendar month before the commencement of the Works, notify the Clyde Cruising Club of the vessel routes,

the timings and the location of the Works and of the relevant operations, to permit the updating of their Sailing Directions and Anchorages publications.

The Licensee must notify the Defence Geographic Centre ("DGC") (mail to dvof@mod.uk) of the locations, heights and lighting status of the turbines, the estimated dates of construction and the maximum height of any construction equipment to be used, at least 10 weeks prior to the Commencement of the Works, to allow for the appropriate notification to the relevant aviation communities. The DGC must be updated when the actual dates of construction are known.

The Licensee must, no later than 14 days prior to the Commencement of the Works, ensure that aviation stakeholders are made fully aware of the Works though a Notice to Airmen ("NOTAM"). To arrange an associated NOTAM, a developer should contact CAA Airspace Regulation (AROps@caa.co.uk); providing the same information as required by the DGC.

Reason: To reduce the navigational risk to other legitimate users of the sea, in accordance with s.29(2)(b) of the 2010 Act.

#### 3.2.2.14. Marine Archaeology Reporting Protocol

The Company must, no later than 6 months prior to the Commencement of the Works, or at such a time as agreed with the Scottish Ministers, submit a Written Scheme of Investigation ("WSI") which includes details of proposed micro-siting, buffer and exclusion zones during construction, operation, maintenance and monitoring of the Works, in writing to the Scottish Ministers for their written approval.

The Company must also submit a Marine Archaeology Reporting Protocol ("MARP") which sets out what the Company must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the Works, in writing, to the Scottish Ministers for their written approval.

Such approvals may be given only following consultation by the Scottish Ministers with Historic Environment Scotland ("HES") and any such advisors as may be required at the discretion of the Scottish Ministers. The MARP and WSI shall be implemented in full, at all times, by the Company.

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

#### 3.2.2.15. Noise Registry

The Licensee must complete and submit a Proposed Activity Form in the online Marine Noise Registry for all aspects of the Works that will produce loud, low to medium frequency (10Hz-10kHz) impulsive noise no later than 7 days prior to Commencement of the Works. If any aspects of the Works differ from the Proposed Activity Form in the online Marine Noise Registry, the Licensee must complete and submit a new Proposed Activity Form no later than 7 days prior to Commencement of the Works.

Reason: To ensure compliance with reporting requirements on marine noise, in accordance with s.29(3)(c) of the 2010 Act.

#### 3.2.3. During the Construction of the Works

#### 3.2.3.1. Operation and Maintenance Programme

The Company must, no later than 6 months prior to the Commissioning of the first Wind Turbine Generator ("WTG") or at such a time as agreed with the Scottish Ministers, submit an Operation and Maintenance Programme ("OMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, THC, OIC, SEPA, MCA, NLB, and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The OMP must set out the procedures and good working practices for operations and the maintenance of the WTG's and substructures 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 Cable Plan ("CaP") and the LMP.

**Reason:** To safeguard environmental interests during operation and maintenance of the offshore generating station.

#### 3.2.3.2. Transportation audit sheet

The Licensee must submit to the Licensing Authority a detailed transportation audit sheet for each calendar month during the period when construction of the Works is undertaken, this must be within 14 days of the end of each calendar month. It must cover all aspects of the construction of the Works. The transportation audit sheet must include, but not be limited to, information on the loading facility, vessels, equipment, shipment routes, schedules and all materials deposited (as described in Part 2 of this licence) in that calendar month. Where, following the submission of a transportation audit sheet to the Licensing Authority, any alteration is made to the component parts of the transportation audit sheet, the Licensee must notify the Licensing Authority of the alteration in the following month's transportation audit sheet.

If the Licensee becomes aware of any substances or objects on the transportation audit sheet that are missing, or becomes aware that an accidental deposit has occurred, the Licensee must contact the Licensing Authority as soon as practicable after becoming aware, for advice on the appropriate remedial action (which may include requiring charts to be amended to show such deposits). 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 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 following the giving of such a view by the Licensing Authority, and at the Licensee's expense.

Reason: To confirm that the deposits made were in accordance with the Application documentation, and that any accidental deposits are recovered or charted appropriately in accordance with s.29(3)(c) of the 2010 Act.

#### 3.2.3.3. Nature and quantity of deposited substances and objects

The Licensee must, in addition to the transportation audit sheets required to be submitted to the Licensing Authority under condition 3.1.7 following the Commencement of the Works, submit audit reports, in writing, 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 monthly intervals, with the first such report being required to be submitted on a date no later than 1 calendar month following the Commencement of the Works. Where appropriate, nil returns must be provided.

Reason: To confirm that the deposits made were in accordance with the Application documentation, in accordance with s.29(3)(c) of the 2010 Act.

# 3.2.3.4. Navigational safety

The Licensee must notify the UKHO of the progress of the Works to facilitate the promulgation of maritime safety information and updating of Admiralty 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 Shetland Coastguard Operations Centre, 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 that the cable landing site is marked by a Cable Marker Board.

The Licensee must, in the case of damage to, or destruction or decay of, the Works, notify the Licensing Authority, in writing, as soon as reasonably practicable following such damage, destruction or decay. The Licensee must carry out any remedial action as required by the Licensing Authority, and intimated to the Licensee in writing, which may include any requirement to display aids to navigation, following consultation with the MCA, the NLB or any such advisors as required by the Licensing Authority.

The Licensee must ensure that any vessels permitted to engage in the Works are marked in accordance with the International Rules for the Prevention of Collisions at

Sea whilst under way and in accordance with the UK Standard Marking Schedule for Offshore Installations if the vessel is secured to the seabed.

The Licensee must ensure that no radio beacon or radar beacon operating in the marine frequency bands is installed or used on the Works without the prior written approval of the Office of Communications ("OfCom").

The Licensee must ensure that navigable depth is not altered by more than 5% referenced to Chart Datum unless otherwise agreed in writing, with the Licensing Authority in consultation with the MCA and NLB.

Reason: To reduce the navigational risk to other legitimate users of the sea, in accordance with s.29(2)(b) of the 2010 Act.

# 3.2.3.5. Markings, lighting and signals of the Works and Jack up vessels

The Licensee must ensure that the Works are marked and lit in accordance with the requirements of the NLB at all times and such markings and/or lighting must be continued unless and until such time as the Licensing Authority, by notice, relevantly varies this licence under section 30(3)(c) of the 2010 Act.

The Licensee must not display any marks and lights additional to those required by virtue of this licence and as agreed in the LMP without the written approval of the Licencing Authority following consultation with the NLB.

The Licensee must ensure that the Works are marked and lit in accordance with International Association of Lighthouse Authorities ("IALA") Recommendation O-139.

Reason: To ensure safe appropriate marking and lighting of the offshore Works, in accordance with s.29(2)(b) of the Marine (Scotland) Act 2010.

#### 3.2.4. Conditions upon Completion of the Works

#### 3.2.4.1. Date of Completion of the Works

The Licensee must, no more than 1 calendar month following the Completion of the Works, notify the Licensing Authority, in writing, of the date of Completion of the Works.

Reason: To inform the Licensing Authority of the Completion of the Works, in accordance with s.29(3)(c) of the 2010 Act.

#### 3.2.4.2. Final Commissioning of the Works

The Licensee must, no more than 1 calendar month following the Final Commissioning of the Works, notify the Licensing Authority, in writing, of the date of the Final Commissioning of the Works.

Reason: To inform the Licensing Authority of the Final Commissioning of the Works, in accordance with s.29(3)(c) of the 2010 Act.

# 3.2.4.3. Navigational safety

The Licensee must notify the UKHO of the Completion of the Works to facilitate the promulgation of maritime safety information and updating of Admiralty charts and publications through the national Notice to Mariners system.

The Licensee must, within 1 calendar month of the Completion of the Works, provide the "as-built" positions and maximum heights of all WTGs, along with any sub-sea infrastructure, 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 Shetland Coastguard Operations Centre, 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, where any damage, destruction or decay is caused to the Works, notify the Licensing Authority, in writing, of such damage, destruction or decay as soon as reasonably practicable following such damage, destruction or decay. The Licensee must carry out any remedial action which the Licensing Authority advises the Licensee, in writing, as requiring to be taken, which may include requirement to display aids to navigation, following consultation with the MCA, the NLB or any such advisers as required.

The Licensee must ensure that no radio beacon or radar beacon operating in the Marine frequency bands is installed or used on the Works without the prior written approval of OfCom.

As per the requirements of MCA's MGN 543 and supplementary updates, the Licensee must complete post-installation hydrographic surveys of the consented area or subsections thereof, to the IHO Order 1a survey standard. On completion of these surveys the data and a corresponding report of survey must be supplied to the UKHO, with notification to the MCA Hydrography Manager.

The Licensee must not exhibit, alter and discontinue navigational lighting of the Works without the Statutory Sanction of the Commissioners of Northern Lighthouses. An 'Application for Statutory Sanction to Exhibit/Discontinue' form must be completed by the Licensee as fully as possible and returned to the NLB via e-mail to <a href="mailto:navigation@nlb.org.uk">navigation@nlb.org.uk</a> for the necessary sanction to be granted prior to exhibiting, altering or discontinuing navigational lighting.

Reason: To reduce the navigational risk to other legitimate users of the sea, in accordance with s.29(2)(b) of the 2010 Act.

# 3.2.4.4. Nature and quantity of deposited substances and objects

The Licensee must, no later than 1 calendar month following the Completion of the Works, submit a final audit report, in writing, to the Licensing Authority stating the nature and quantity of all substances and objects deposited below MHWS within the Scottish marine area under the authority of this licence. Where appropriate, nil returns must be provided.

Reason: To confirm that the deposits made were in accordance with the Application documentation, in accordance with s.29(3)(c) of the 2010 Act.

# 3.2.4.5. Noise registry Close Out

The Licensee must complete and submit a Close-out Report for all aspects of the Works that produced loud, low to medium frequency (10Hz-10kHz) impulsive noise in the online Marine Noise Registry no later than 12 weeks from the Completion of the Works.

Reason: To ensure compliance with reporting requirements on marine noise, in accordance with s.29(3)(c) of the 2010 Act.

#### 3.2.4.6. Operation and Maintenance of the Works

The Licensee must operate and maintain the Works in accordance with the approved OMP. The Licensing Authority must be notified at least 6 calendar months in advance of any maintenance of the Works where any additional deposits are required. In the event that these works are were not assessed in the Application and are considered by the Licencing Authority as being material they will require further marine licences.

Reason: To ensure compliance with the approved OMP to prevent decay of the Works and to ensure that any maintenance work is carried out under an appropriate licence in accordance with s.29(3)(b) of the 2010 Act.

#### 3.2.4.7. Removal of the Works

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

The Licensee must, no later than 3 months prior to any proposed removal works, submit a plan for the Removal of the Works, in writing, to the Licensing Authority, along with a marine license application for the Removal of the Works.

Removal of the Works must not occur until the Licensing Authority has given its prior written approval to the plan and issued a marine licence.

**Reason**: To ensure that removal of works is carried out under an appropriate licence, in accordance with s.29(3)(a) of the 2010 Act.

# 3.2.4.8. Decommissioning

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

Reason: To ensure that decommissioning is carried out according to the approved Decommissioning Programme under an appropriate licence, in accordance with s.29(3)(d) of the 2010 Act

#### ANNEX 3 SECTION 36 CONDITIONS

The number of the conditions has been kept the same as those in the section 36 consent decision letter for ease of cross referencing. The definitions of terms is included in the decision letter.

#### CONDITIONS

The consent granted under Section 36 of the Electricity Act 1989 and direction that planning permission be deemed to be granted under section 57 of the Town and Country Planning (Scotland) Act 1997 are subject to the following conditions:

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

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

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

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

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

#### 1. Duration of the Consent

The consent is for a period of 25 years from the date of the Final Commissioning of the first Wind Turbine Generator ("WTG").

Written confirmation of the date of the Final Commissioning of the first WTG must be provided by the Company to the Scottish Ministers, THC and SNH no later than one calendar month after the Final Commissioning of the first WTG.

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

#### 2. Commencement of Development

The Commencement of the Development must be no later than five years from the date of this consent, or in substitution such other period as the Scottish Ministers

may hereafter agree and confirm in writing. Written confirmation of the intended date of Commencement of Development must be provided to THC, OIC and Scottish Ministers no later than one calendar month before that date or at such as time as agreed with Scottish Ministers.

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

# 3. Assignation

This consent may not be assigned without the prior written authorisation of the Scottish Ministers. The Scottish Ministers may authorise the assignation of the consent or refuse assignation as they may see fit. The consent is not capable of being assigned, alienated or transferred otherwise than in accordance with the foregoing procedure. The Company must notify the THC in writing of the name of the assignee, the principal named contact and contact details within 14 days of written confirmation from the Scottish Ministers of an assignation having been granted.

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

#### 4. Redundant turbines

In the event that for a continuous period of 6 months or more any WTG installed and commissioned and forming part of the Development fails to produce electricity on a commercial basis to the National Grid then, unless otherwise agreed in writing by the Scottish Ministers and after consultation with the Company and any advisors as required at the discretion of the Scottish Ministers, any such WTG may be deemed by the Scottish Ministers to cease to be required. If so deemed, the WTG (together with any related infrastructure) must, within the period of 12 months from the date of the deeming decision by the Scottish Ministers, be decommissioned and the area of the Site upon which the WTG is located must be reinstated by the Company in accordance with the procedures laid out within the Company's Decommissioning Plan.

**Reason:** To ensure that any redundant wind turbine generators are removed from the Site, in the interests of safety, amenity and environmental protection.

#### 5. Incident Reporting

In the event of any breach of health and safety or environmental obligations relating to the Development during the period of this consent, the Company must provide written notification of the nature and timing of the incident to the Scottish Ministers, including confirmation of remedial measures taken and/ or to be taken to rectify the breach, within 24 hours of the incident occurring.

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

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

Except as otherwise required by the terms of this consent and its associated deemed planning permission, the Development must be constructed and operated in accordance with the Application and the Environmental Statement submitted by the Company on 19<sup>th</sup> October 2016 and any other documentation lodged in support of the Application.

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

# 7. Transportation for site inspections

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

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

#### 8. Construction Programme

The Company must, no later than 6 months prior to the Commencement of the Development, or at such a time as agreed with the Scottish Ministers, submit a Construction Programme ("CoP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the SNH, MCA, NLB, SEPA, THC and OIC and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The CoP must set out, but not be limited to, the following:

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

The Company must, prior to the Commencement of the Development, provide a copy of the final CoP, and any subsequent revisions as agreed by the Scottish Ministers, to the Defence Geographic Centre ("DGC").

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

#### 9. Offshore Construction Method Statement

The Company must, no later than 6 months prior to the Commencement of the Development, or at such a time as agreed with the Scottish Ministers, submit an Offshore Construction Method Statement ("OffCMS"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, SEPA, THC, OIC, Dounreay Site Restoration Limited ("DSRL") and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

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

- a) the construction procedures and good working practices for installing the Development;
- details of the roles and responsibilities, chain of command and contact details of company personnel, any contractors or sub-contractors involved during the construction of the Development;
- c) details of how the construction related mitigation steps proposed in the ES are to be delivered:
- d) a waste management plan for the construction phase of the Development; and
- e) continuous monitoring of radioactive particles.

The OffCMS must adhere to the construction methods assessed in the Application and ES. The OffCMS must also, so far as is reasonably practicable, be consistent with the Design Statement ("DS"), the Offshore Environmental Management Plan ("OffEMP"), the Vessel Management Plan ("VMP"), the Navigational Safety Plan ("NSP"), and conditions contained within Marine Licences 06178/17/0 and 06174/17/0.

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

#### 10. Development Specification and Lavout Plan

The Company must, no later than 6 months prior to the Commencement of the Development, or at such a time as agreed with the Scottish Ministers, submit a Design Specification and Layout Plan ("DSLP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, SEPA, MoD, CAA, MCA, NLB, NATS, MCC, THC and OIC and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

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

 a) a plan showing the location of the floating platform (subject to any required micro-siting), including WTG identification/numbering, seabed conditions, bathymetry, confirmed anchor and mooring system for the platform and any key constraints recorded on the Site;

- a list of latitude and longitude coordinates accurate to three decimal places of minutes of arc for each anchor point. This should also be provided as a Geographic Information System ("GIS") shapefile using the World Geodetic System 1984 ("WGS84") format;
- c) a table or diagram of each WTG dimensions including height to blade tip (measured above Lowest Astronomical Tide ("LAT")) to the highest point, height to hub (measured above LAT to the centreline of the generator shaft), rotor diameter and maximum rotation speed;
- d) the generating capacity of each WTG used on the Site, and a confirmed generating capacity for the Site overall;
- e) the finishes for each WTG (and in accordance with conditions contained within Marine Licences 06178/17/0 and 06174/17/0); and
- the length and proposed arrangements on the seabed of the anchor and mooring system.

Reason: To confirm the final Development specification and layout.

#### 11. Design Statement

The Company must, no later than 6 months prior to the Commencement of the Development, or at such a time as agreed with the Scottish Ministers, submit a Design Statement ("DS"), in writing, to the Scottish Ministers. The DS, which must be signed off by at least one qualified landscape architect as instructed by the Company prior to submission to the Scottish Ministers, must include representative wind farm visualisations from key viewpoints as agreed with the Scottish Ministers, based upon the final DSLP as approved by the Scottish Ministers as updated or amended. The Company must provide the DS, for information only, to SNH, THC, OIC, HES, MCC and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

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

#### 12. Offshore Environmental Management Plan

The Company must, no later than 6 months prior to the Commencement of the Development, or at such a time as agreed with the Scottish Ministers, submit an Offshore Environmental Management Plan ("OffEMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, SEPA, and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

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

- a) all construction as required to be undertaken before the Final Commissioning of the Development; and
- b) the operational lifespan of the Development from the Final Commissioning of the Development until the cessation of electricity generation. (in

accordance with conditions contained within Marine Licences 06178/17/0 and 06174/17/0).

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

- a) mitigation measures to prevent significant adverse impacts to environmental interests, as identified in the ES and pre-consent and preconstruction monitoring or data collection, and include the relevant parts of the Offshore and Onshore CMS;
- a Pollution Prevention and Control Method Statement, including contingency plans;
- management measures to prevent the introduction of invasive non-native marine species;
- a site waste management plan (dealing with all aspects of waste produced during the construction period), including details of contingency planning in the event of accidental release of materials which could cause harm to the environment. Wherever possible the waste hierarchy of reduce, re-use and recycle should be encouraged;
- e) the reporting mechanisms that will be used to provide the Scottish Ministers and relevant stakeholders (including, but not limited to, SNH and SEPA) with regular updates on construction activity, including any environmental issues that have been encountered and how these have been addressed.

The Company must, no later than 3 months prior to the Final Commissioning of the Development, or at such a time as agreed with the Scottish Ministers, submit an updated OffEMP to cover the operation and maintenance activities for the Development, in writing to the Scottish Ministers for their written approval. Such approval may be given only following consultation with SNH, SEPA and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The OffEMP must be regularly reviewed by the Company and the Scottish Ministers, at intervals agreed by the Scottish Ministers. Reviews must include, but not be limited to, the reviews of updated information on construction methods and operations of the Development and updated working practices.

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

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

# 13. Vessel Management Plan

The Company must, no later than 6 months prior to the Commencement of the Development, or at such a time as agreed with the Scottish Ministers, submit a Vessel Management Plan ("VMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, WDC and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

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

- a) the number, types and specification of vessels required;
- b) how vessel management will be co-ordinated, particularly during construction but also during operation; and
- c) 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 during construction and operation of the Development;

The confirmed individual vessel details must be notified to the Scottish Ministers, in writing, no later than 14 days prior to the Commencement of the Development, or at such a time as agreed with the Scottish Ministers, and thereafter, any changes to the details supplied must be notified to the Scottish Ministers, as soon as practicable, prior to any such change being implemented in the construction or operation of the Development.

The VMP must, so far as is reasonably practicable, be consistent with the OffCMS, the OffEMP, the PEMP, the NSP and conditions contained within Marine Licences 06178/17/0 and 06174/17/0.

**Reason:** To mitigate disturbance or impact to marine mammals and birds.

#### 14. Offshore Operation and Maintenance Programme

The Company must, no later than 6 months prior to the Commissioning of the first WTG or at such a time as agreed with the Scottish Ministers, submit an Offshore Operation and Maintenance Programme ("OffOMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, THC, OIC, SEPA, and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

The OffOMP must set out the procedures and good working practices for operations and the maintenance of the WTGs and substructures of the Development.

The OffOMP must, so far as is reasonably practicable, be consistent with the OffEMP, the PEMP, the VMP, the NSP,) and conditions contained within Marine Licences 06178/17/0 and 06174/17/0.

**Reason:** To safeguard environmental interests during operation and maintenance of the offshore generating station.

# 15. Navigational Safety Plan

The Company must, no later than 6 months prior to the Commencement of the Development or at such a time as agreed with the Scottish Ministers, submit a Navigational Safety Plan ("NSP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with MCA, NLB, RYA Scotland and any other navigational advisors or organisations as may be required at the discretion of the Scottish Ministers.

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

- 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 coordination arrangements (ERCoP) for the construction, operation and decommissioning phases of the Development and to be in accordance conditioned in Marine Licences 06178/17/0 and 06174/17/0: and
- g) buoyage.

The Company must confirm within the NSP that they have taken into account and adequately addressed all of the recommendations of the MCA in the current Marine Guidance Note 543 ("MGN 543"), and its annexes that may be appropriate to the Development, or any other relevant document which may supersede said guidance prior to approval of the NSP.

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

#### 16. Project Environmental Monitoring Programme

The Company must, no later than 6 months prior to the Commencement of the Development or at such a time as agreed with the Scottish Ministers, submit a Project Environmental Monitoring Programme ("PEMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, RSPB Scotland, WDC and any other ecological advisors or organisations as required at the discretion of the Scottish Ministers. The PEMP must be in accordance with the Application and the ES as it relates to environmental monitoring.

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

The Scottish Ministers must approve all initial methodologies for the above monitoring, in writing.

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

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

- a) pre-construction, construction (if considered appropriate by the Scottish Ministers) and post-construction monitoring or data collection as relevant in terms of the ES and any subsequent monitoring or data collection for:
  - birds. This should include, but not be limited to, a detailed entanglement monitoring and reporting schedule, as well as a postconsent monitoring plan for bird strike;
  - ii) marine mammals. This should include, but not be limited to, a detailed entanglement monitoring and reporting schedule, particularly of load on the moorings from derelict fishing gear; and
  - iii) onshore impacts of the development; and
- b) the participation and contribution to be made by the Company to data collection or monitoring of wider strategic relevance, identified and agreed by the Scottish Ministers, and may include but not necessarily be limited to:
  - i) the density and distribution of seabirds within the site-specific survey area; and
  - ii) the behaviour and interaction of marine mammals and seabirds around the platform and turbine structures.

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

The PEMP is a live document which will be regularly reviewed by the Scottish Ministers, at timescales to be determined by them to identify the appropriateness of on-going monitoring. Following such reviews, the Scottish Ministers may, in consultation with ecological advisors or organisations as required at the discretion of the Scottish Ministers, require the Company to amend the PEMP and submit such an amended PEMP, in writing, to the Scottish Ministers, for their written approval. Such approval may only be granted following consultation, by the Scottish Ministers, with the SNH, RSPB Scotland, WDC and any other ecological advisors or organisations as may be required at the discretion of the Scottish Ministers.

The Company must submit written reports and associated raw data of such monitoring or data collection to the Scottish Ministers at timescales to be determined by them. Subject to any legal restrictions regarding the treatment of the information,

the results will be made publicly available by the Scottish Ministers or by such other party appointed at their discretion.

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

# 17. Fisheries Management and Mitigation Strategy

The Company must, no later than 6 months prior to the Commencement of the Development or at such a time as agreed with the Scottish Ministers, submit a Fisheries Management and Mitigation Strategy ("FMMS"), in writing, to the Scottish Ministers for their written approval.

In order to inform the production of the FMMS, the Company must monitor or collect data as relevant and agreed with Scottish Ministers in terms of the ES and any subsequent monitoring or data collection for:

- a) the impacts on the adjacent coastline;
- b) the effects on local fishermen; and
- c) the effects on other users of the sea.

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

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

#### 18. Environmental Clerk of Works

Prior to the Commencement of the Development, the Company must at its own expense, and with the approval of the Scottish Ministers in consultation with SNH and SEPA, appoint an independent Onshore and Offshore Environmental Clerk of Works ("ECoW"). The ECoW must be appointed in time to review and approve the draft version of the first plan or programme submitted under this consent to the Scottish Ministers, and remain in post until agreed by the Scottish Ministers. The terms of appointment must be approved by Scottish Ministers, in consultation with SNH, SEPA and THC.

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

- a) quality assurance of final draft versions of all plans and programmes required under this consent;
- b) responsibility for the monitoring and compliance of the consent conditions and the environmental mitigation measures;
- c) provision of on-going advice and guidance to the Company in relation to achieving compliance with consent conditions, including but not limited to

- the conditions relating to the Offshore and Onshore CMS, the Offshore and Onshore EMP, the CaP, the PEMP, and the VMP:
- d) provision of reports on point c) above to the Scottish Ministers at timescales to be determined by the Scottish Ministers;
- e) inducting and toolbox talks to onsite construction teams on environmental policy and procedures and keeping a record of these;
- f) monitoring that the Development is being constructed according to the plans and this consent, the Application and ES and compliance with all relevant legislation;
- g) reviewing and reporting incidents/near misses and reporting any changes in procedures as a result; and
- h) agreement of a communication strategy with the Scottish Ministers.

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

#### 19. Fisheries Liaison Officer

Prior to the Commencement of the Development, a Fisheries Liaison Officer ("FLO") must be appointed by the Company and approved, in writing, by the Scottish Ministers following consultation with SFF, the East Coast and Northern Inshore Fisheries Group and any other advisors or organisations as may be required at the discretion of Scottish Ministers. The FLO must be appointed by the Company for the period from Commencement of the Development until the Final Commissioning of the Development. The identity and credentials of the FLO must be included in the OffEMP. The FLO must establish and maintain effective communications between the Company, any contractors or sub-contractors, fishermen and other users of the sea during the construction of the Development, and ensure compliance with best practice guidelines whilst doing so.

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

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

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

# 20. SpORRAn (Scottish Offshore Renewables Research Framework)

The Company must, to the satisfaction of the Scottish Ministers, participate in the monitoring requirements as laid out in the Scottish Offshore Renewables Research Framework (SpORRAn), in particular for diadromous fish. The extent and nature of the Company's participation must be agreed by the Scottish Ministers.

Reason: To ensure effective monitoring of the effects on migratory fish at a local level.

#### 21. Fisheries Working Group

The Company must participate in a Fisheries Working Group ("FWG"), or any successor group, formed to facilitate commercial fisheries dialogue, for the purposes of defining and finalising a Fishing Management and Mitigation Strategy ("FMMS"). The FWG must adhere to the working group protocol.

**Reason:** To mitigate the impacts on commercial fishermen

# 22. Scottish Strategic Marine Environment Group

The Company must participate in any Scottish Strategic Marine Environment Group (SSMEG) established by the Scottish Ministers for the purposes of advising the Scottish Ministers on research, monitoring and mitigation programmes for, but not limited to, ornithology, diadromous fish, marine mammals and commercial fish.

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

# ANNEX 4 MARINE LICENCE – **CONDITIONS OF THE DIRECTION**FOR THE GRANT OF DEEMED PLANNING PERMISSION

The number of the conditions has been kept the same as those in the decision letter for ease of cross referencing. The definitions of terms is included in the decision letter.

The Direction given in accordance with section 57(2) of the Town and Country Planning (Scotland) Act 1997 (as amended) is subject to the following conditions:

#### 23. Commencement of Development

The Commencement of the Development must be no later than 5 years from the date of this consent, or in substitution such other period as the Scottish Ministers may hereafter direct in writing. Written confirmation of the intended date of Commencement of Development must be provided to the Local Authority and Scottish Ministers no later than one calendar month before that date.

Reason: In accordance with s.58 of the Town and Country Planning (Scotland) Act 1997. To avoid uncertainty and ensure that the consent is implemented within a reasonable period.

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

Except as otherwise required under this consent and deemed planning permission, the Development must be undertaken in accordance with the Application, the ES, and other documentation lodged in support of the application.

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

#### 25. Design of sub-station and ancillary development

There must be no Commencement of Development before final details of the external appearance, dimensions, and surface materials of the onshore substation building, associated compounds, any construction compound, welfare facilities, any areas of hard standing, turning areas, access tracks, material stockpiles, oil storage, boundary fencing, walls external lighting, parking areas landscaping, screening, bunding paths and any other ancillary elements of the development, have been submitted to, and approved in writing by, the Scottish Ministers. Such approval may only be granted following consultation by the Scottish Ministers with the THC and HES and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. All onshore Development must be constructed in accordance with the approved details.

**Reason**: To ensure that the environmental impacts of the sub-station forming part of the Development conform to the impacts assessed in the environmental statement and in the interests of the visual amenity of the area.

#### 26. Construction Hours

Construction work which is audible from any noise-sensitive receptor must only take place on the site between the hours of 07.00 to 19.00 on Monday to Friday inclusive and 07.00 to 16.00 on Saturdays, with no construction work permitted to take place on a Sunday or on national public holidays. Outwith these specified hours, only works relating to turbine erection, maintenance, emergency works, dust suppression, and the testing of plant and equipment, may take place without the need for prior approval to be given, in writing, by the planning authority (THC). Other works may take place outwith these specified hours, but only following prior approval being given, in writing, by the Local Planning Authority (THC).

HGV movements to, and from, the site (excluding abnormal loads) during construction of the wind farm is only permitted between 07.00 to 19.00 Monday to Friday, and 07.00 to 16.00 on Saturdays, with no HGV movements (other than abnormal loads) permitted to, or from, the site taking place on a Sunday or on national public holidays.

**Reason**: In the interests of local amenity.

# 27. Traffic and Transportation Plan

The Company must, at least 6 months prior to the Commencement of the Development submit a Traffic and Transportation Plan ("TTP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with THC and any such other advisors as may be required at the discretion of the Scottish Ministers. The TTP must set out a mitigation strategy for the impact of road based traffic and transportation associated with the construction of the Development. The Development must be constructed and operated in accordance with the approved TTP.

**Reason**: To maintain the free flow and safety of the Trunk Road network

#### 28. Noise

The rating level of noise emissions from the wind farm, including the application of any tonal penalty when determined in accordance with best practice as set out in ETSU-R-97 and the Institute of Acoustics Good Practice Guide and Supplementary Guidance Notes, must not exceed 35dB LA90 10 minute at wind speeds up to and including 10m/s at the curtilage of any dwelling which is lawfully existing or has planning permission at the date of this permission. Noise limits expressed in dB LA90, 10 minute as a function of the standardised wind speed (mls) at 10 metre height as determined at the turbine location averaged over 10 minute periods.

Within 21 days from receipt of a written request from the Local Planning Authority (THC) following a complaint to it from an occupant of a dwelling alleging noise disturbance at that dwelling, the wind farm operator must, at its expense, employ a consultant approved by the Local Planning Authority to assess the level of noise emissions from the wind farm at the complainant's property. The written request from the Local Planning Authority must set out at least the date, time and location that the complaint relates to and any identified atmospheric conditions, including wind direction, and include a statement as to whether, in the opinion of the Local Planning Authority, the noise giving rise to the complaint contains or is likely to contain a tonal component.

The assessment of the rating level of noise emissions must be undertaken by an independent noise consultant in accordance with best practice as set out in ETSU-R-97 and the Institute of Acoustics Good Practice Guide and Supplementary Guidance Notes over the relevant range of conditions.

The wind farm operator must provide to the Local Planning Authority the independent consultant's assessment of the rating level of noise immissions within 2 months of the date of the written request of the Local Planning Authority. All data collected for the purposes of undertaking the compliance measurements must be made available to the Planning Authority on request.

Time periods above may only be extended following written agreement by the Local Planning Authority.

If the assessment concludes that noise from the wind farm is not complying with the limit stipulated in condition 1, the wind farm must cease operation immediately until a mitigation scheme, approved in writing by the Local Planning Authority, is implemented.

Noise arising from within the operational land of the sub-station when measured and/or calculated as an Leq, 5 min, in the 100Hz one third octave frequency band must not exceed 30 dB, at noise sensitive premises.

The Rating Level of noise arising from the use of plant, machinery or equipment installed or operated within the operational land of the sub-station, hereby permitted, must not exceed the current background noise levels at noise sensitive premises. The Rating Level must be calculated in accordance with BS 4142: 2014: Methods for rating and assessing industrial and commercial sound.

Reason: To ensure that noise levels can be measured to assess whether or not agreed noise limits have been breached and where such noise limits have been breached, suitable mitigation is undertaken. To protect nearby residents from undue noise and disturbance. To ensure that noise limits are not exceeded and to enable prompt investigation of complaints.

#### 29. Onshore Construction Method Statement

The Company must, no later than 6 months prior to the Commencement of the Development, or at such a time as agreed with the Scottish Ministers, submit an Onshore Construction Method Statement ("OnCMS"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, SEPA, THC and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers.

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

- a) the construction procedures and good working practices for installing the Development;
- details of the roles and responsibilities, chain of command and contact details of company personnel, any contractors or sub-contractors involved during the construction of the Development;
- c) details of how the construction related mitigation steps proposed in the ES are to be delivered; and
- d) a waste management plan for the construction phase of the Development.

The OnCMS must adhere to the construction methods assessed in the Application and in the ES. The OnCMS must also, so far as is reasonably practicable, be consistent with the DS and all other onshore Plans.

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

#### 30. Onshore Environmental Management Plan

The Company must, no later than 6 months or at such a time as agreed with the Scottish Ministers, prior to the Commencement of the Onshore Works, submit an Onshore Construction Environmental Management Plan ("OnEMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with THC, SEPA, SNH, DSRL and any such other advisors as may be required at the discretion of the Scottish Ministers.

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

- a) a site waste management plan (dealing with all aspects of waste produced during the construction period), including details of contingency planning in the event of accidental release of materials which could cause harm to the environment. Wherever possible the waste hierarchy of reduce, reuse and recycle should be encouraged;
- b) continuous monitoring of radioactive particles;
- c) acknowledgement that the Company have registered with SEPA to receive flood alerts for the Caithness area;
- d) a Flood Risk Assessment;

- e) environmental management identification of mechanisms to ensure subcontractors are well controlled and are aware of relevant environmental issues. This must include details of on-going monitoring and emergency procedures / pollution response plans and the provision of spillage kits;
- f) a pollution prevention and control method statement, including arrangements for the storage and management of oil, fuel and chemicals on the site which must comply with the Water Environment (Oil Storage) (Scotland) Regulations 2006;
- g) a drainage management strategy, demonstrating the use of sustainable drainage systems (SUDs) in line with Scottish Planning Policy for all surface water runoff or details of the means whereby surface water will discharge directly to coastal waters;
- sewage disposal and treatment in the event of permanent toilet facilities or kitchen which are connected to the public sewer;
- i) temporary site illumination; and
- j) timing of works.

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

#### 31. Onshore Cable Plan

The Company must, no later than 6 months prior to the Commencement of the Development, or at such a time as agreed with the Scottish Ministers submit an Onshore Cable Plan ("OnCaP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with SNH, SEPA, and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The OnCaP must be in accordance with the ES.

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

- a) the location and cable laying techniques for the cables;
- b) the results of monitoring or data collection work (including geophysical, geotechnical information) to help inform cable routing;
- c) technical specification of cables;
- d) a burial risk assessment to ascertain burial depths and, where necessary, alternative protection measures;
- e) methodologies for surveys and monitoring of the cables through the operational life of the wind farm where protection of cables is deployed; and
- f) methodologies for cable inspection with measures to address and report to the Scottish Ministers any exposure of cables.

Any consented cable protection works must ensure that safe navigation is not compromised.

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