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Our ref: MS-00009834

14 March 2023

Dear Ms Lee

## **MARINE (SCOTLAND) ACT 2010**

### **THE MARINE WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017**

#### **DECISION NOTICE FOR A MARINE LICENCE TO CONSTRUCT, ALTER OR IMPROVE ANY WORKS FOR THE FORTHWIND DEMONSTRATION PROJECT, APPROXIMATELY 1.5 KILOMETRES FROM THE COAST OF METHIL**

##### **1. Application and description of the Works**

On 29 April 2022, Forthwind Limited (Company Number SC470580) having its registered office at The Boathouse Hawkcraig, Aberdour, Burntisland, Fife, KY3 0TZ (“the Applicant”), submitted to the Scottish Ministers an application under Part 4 of the Marine (Scotland) Act 2010 (“the 2010 Act”) for a marine licence (“the Marine Licence”) to construct the marine renewable energy works and offshore transmission infrastructure (“the Works”) associated with the Forthwind Demonstration Project (“the Project”).

- 1.1 The Application was accompanied by an Environmental Impact Assessment (“EIA”) report (“EIA Report”) as required under the Marine Works (Environmental Impact Assessment) Regulations 2017 (“the 2017 MW regulations”) and information to inform the Habitats Regulations Appraisal (“HRA”) as required under the Conservation (Natural Habitats, & c.)

Regulations 1994 and the Conservation of Habitats and Species Regulations 2017 (together, “the Habitats Regulations”).

- 1.2 In addition to the Application, the Applicant has also applied for consent under section 36 of the Electricity Act 1989 (“the s.36 consent”) to construct and operate an offshore generating station, as well as a declaration under section 36A (“s.36A”) of the Electricity Act 1989 to extinguish public rights of navigation so far as they pass through those places within the Scottish marine area where structures forming part of the Project are to be located. A separate decision notice will be issued in respect of these applications.
- 1.3 The Works comprises the construction of an offshore energy generating station, with a maximum generating capacity of 20 megawatts (“MW”) of electricity. The offshore generating station shall comprise:
1. A single three-bladed horizontal axis wind turbine generator (“WTG”) with:
    - a) A maximum hub height of 156 metres (“m”) above highest astronomical tide (“HAT”);
    - b) A maximum height to blade tip of up to 280m above HAT;
    - c) A maximum rotor diameter of 255m;
    - d) A minimum blade tip clearance of 25m above HAT;
    - e) A blade width of up to 5.8m;
  2. A meteorological mast (“metmast”) with a height of 160m above HAT;
  3. Foundation for the WTG (either a jacket with a maximum of 4 pin piles or a monopile);
  4. Foundation for the metmast (monopile);
  5. Approximately 625m of communications cable between the turbine and the metmast;
  6. Approximately 625m of power cable between the turbine and the metmast;
  7. A subsea export cable running from the turbine to shore, approximately 1.5km; and
  8. Scour and cable protection,
- all as described in the Application.
- 1.4 The total area within the Works site boundary is 9639m<sup>2</sup>. The location and boundary of the Works site is shown in Figure 1 of Annex 1.

**This decision notice contains the Scottish Ministers’ decision to grant regulatory approval for the Works detailed above, in accordance with regulation 23 of the 2017 MW regulations.**

## 2. Summary of environmental information

- 2.1 The environmental information provided was an [EIA Report](#) which assessed impacts on a range of receptors, as well as information to inform the HRA.

2.2 In August 2021, the Applicant submitted a [scoping report](#) and a request for a scoping opinion in respect of the Works to the Scottish Ministers. Following consultation with statutory and other consultees, a [scoping opinion](#) was issued by Scottish Ministers on 22 December 2021, advising on the scope of the impacts to be addressed and the methods of assessment to be used within the EIA Report. The EIA Report assessed the impact pathways identified in the scoping opinion and was prepared in accordance with the terms of the 2017 MW Regulations.

2.3 A summary of the environmental information provided in the EIA Report is given below.

#### 2.4 Seascape, Landscape and Visual Effects

2.4.1 The EIA Report considered the effect of the Works from vessels, cranes, construction plant and materials at the sub-station and control building during the construction and decommissioning phases. Cable trenching at the landfall location of the export cable was also considered during the construction phase. The construction and decommissioning effects of the Works were found to be not significant in EIA terms due to the short duration of the activity.

2.4.2 It further considered the effects of the wind turbine and metmast on aesthetic and perceptual aspects of landscape resources and visual resources during the operational phase. The Works was assessed to have a significant effect on the seascape and landscape character within specific geographical areas. The height of the turbine and the movement of its rotor will result in it being a noticeably new feature in the seascape and landscape.

2.4.3 Cumulative impacts on visual amenity arising from views of the Works in addition to other developments was found to be not significant given the distance between the offshore wind farms and the limited intervisibility with the Works.

2.4.4 The residual effects of these potential impacts remain significant in EIA terms since no additional mitigation measures beyond the embedded mitigation were identified.

#### 2.5 Offshore Ornithology

2.5.1 Impacts during the construction, operational and decommissioning phases of the Works were assessed in the EIA Report. Impacts scoped in to the EIA Report were: collision risk, displacement, barrier effects and indirect effects including the loss of supporting habitat and disturbance of prey during the operational phase; temporary disturbance impacts during the construction and

decommissioning phases; and cumulative effects arising from nearby similar developments.

- 2.5.2 The EIA Report considered that ornithological receptors, and their prey, may be disturbed during the construction and decommissioning phases of the Works given the increased presence of vessels and the generation of noise. It was concluded that the impact would be negligible due to the scale of the Works and subsequently the activities being short term and temporary in nature.
- 2.5.3 The EIA Report considered the risk of collision, displacement and barrier effects during the operational phase of the Works. Collision risk was assessed using collision risk modelling adopting a worst case scenario and the effect was found to be not significant. Within the EIA Report, the Applicant commits to the infrastructure of the turbine comprising a tubular tower structure over a lattice tower structure noting that the latter has been documented to increase the collision risk as it offers a perch that attracts birds in close proximity to the rotor blades. The Applicant also undertook a displacement assessment using displacement matrices for each species and concluded that the effect was not significant. Barrier effects were also considered and concluded that given the small scale of the Works the effect was not considered to be significant. Further to this, the effects on prey species and loss of supporting habitat were considered as an indirect impact pathway on ornithological receptors. It was concluded that the impact was very limited and therefore not significant.
- 2.5.4 The EIA Report concluded that, in respect of the Works alone and cumulatively, the residual impacts on ornithological receptors were considered to be negligible or minor in significance.
- 2.5.5 HRA requirements were addressed within the EIA Report which contained an assessment that included the qualifying interests of the Outer Firth of Forth and St Andrews Bay Complex Special Protected Area ("SPA"), Forth Islands SPA and Firth of Forth SPA. The assessment concluded that the Works would not adversely affect the integrity of these protected sites alone or in combination with other plans or projects.

## 2.6 Marine Mammals

- 2.6.1 Disturbance from underwater noise generated during the construction and decommissioning phases of the Works was identified as the key impact pathway in the EIA Report. Increased vessel presence during construction and decommissioning was also identified as likely to disturb marine mammal receptors.
- 2.6.2 The installation of the piles is considered to be the noisiest activity associated with construction of the Works. The Applicant has committed to drilling the

piles as opposed to the noisier method of impact piling in order to reduce the impact on marine mammal receptors. This activity is expected to take up to one week in total. Additionally, there may be noise generated during the installation of cable protection which is also estimated to take up to one week. It is likely that marine mammals will be disturbed during these activities however due to the localised area and short duration it is not deemed to result in effects to the receptors at population level or to impact population viability. The effects during the decommissioning phase of the Works are deemed to be lesser than that during construction and as such it is not deemed to effect the receptors at population level or to impact population viability. The Applicant has committed to the implementation of an environmental management plan, a decommissioning plan and a Vessel Management Plan (“VMP”) to guide activities as a mitigation measure to reduce disturbance to individual marine mammals. Further to this, soft-start techniques will be employed and cables will be buried where possible to reduce any Electromagnetic Field (“EMF”) effects.

2.6.3 Due to scale of the Works and therefore the limited duration of construction and decommissioning, the cumulative effect is not deemed to be significant. As such, the residual effect from the Works, alone and cumulatively, is not considered to be significant.

2.6.4 Within the EIA Report, consideration was given to the HRA and the impacts of the Works on the harbour seal qualifying interest of: the Firth of Tay and Eden Estuary Special Area of Conservation (“SAC”); the grey seal qualifying interest of the Isle of May SAC and Berwickshire and North Northumberland Coast SAC; and the bottlenose dolphin qualifying interest of the Moray Firth SAC. The assessment concluded that there would be no population level effects or impacts to population viability as a result of the Works alone or in combination with other plans or projects.

## 2.7 Commercial Fisheries

2.7.1 The EIA Report considered the effect of the Works on commercial fisheries. The main impact pathways were identified as vessel displacement and disruption to fishing activities during construction and decommissioning phases. Impacts on safety of fishing vessels were considered separately within the Shipping and Navigation chapter below.

2.7.2 The Works is within an area of importance to local fishing vessels, particularly those targeting lobster, crabs, squid, nephrops and scallops. During construction and decommissioning, vessels may be completely excluded from the area, however these periods will be relatively short and mitigation through adherence to Fishing Liaison with Offshore Wind and Wet Renewables Group Best Practice Guidance and promulgation of information should reduce the level of disruption. The significance of these impacts is considered moderate.

After construction is completed, fishing activity can resume in close proximity to the Works however there is the potential for complete loss or restricted access to fishing grounds. Due to the small scale of the Works the magnitude of the impact during operation is assessed as low and therefore minor in EIA terms. The Applicant has committed to burial of all cables where possible and to install cable protection where this cannot be achieved. Fishing methods susceptible to snagging will be impacted if cables cannot be buried. Over trawl surveys on export cables will be undertaken allowing areas not occupied by the turbine and metmast to be fished post-construction, reducing the loss of fishing grounds.

2.7.3 Additionally, the Applicant has also committed to appointing a Fisheries Liaison Officer (“FLO”) to facilitate engagement post consent.

2.7.4 An assessment of cumulative effects was presented in the EIA Report taking into consideration the effect of the Works cumulatively with other developments including Seagreen Alpha and Bravo, Inch Cape and Neart na Gaoithe offshore wind farms. During the operational phase, the contribution made by the Works to the overall cumulative effect in relation to fishing of scallops, nephrops, crab and lobster is assessed to be minor when taking into consideration the scale of the Works in relation to the overall fishing grounds in the region. There is the potential for construction timings of the Works to coincide with construction activities at all aforementioned sites. As construction will be limited to a short period of time over a localised area, contribution to the cumulative effect as a result of construction of the Works is not considered to be significant.

2.7.5 The potential residual effects of the Works, alone and cumulatively, were considered to be minor and therefore not significant.

## 2.8 Cultural Heritage

2.8.1 The EIA Report considers the impact on the setting of terrestrial cultural heritage assets during the construction, operational and decommissioning phases of the Works.

2.8.2 The EIA Report considers the potential indirect impacts to the setting of cultural heritage features including six scheduled monuments, 141 listed buildings, one garden and designed landscape and six conservation areas. These were identified as potentially being indirectly impacted as a result of the Works and were further assessed due to being located within the zone of theoretical visibility and within 15km of the Works.

2.8.3 No mitigation was proposed in the EIA Report in respect of the indirect effects on terrestrial cultural heritage assets as the likelihood of a significant effect resulting from this was assessed to be minor. However, the schedule of



mitigation within the EIA Report proposed the implementation of a Written Scheme of Investigation (“WSI”) and Protocol for Archaeological Discoveries (“PAD”) to address the potential for the discovery of unknown archaeological remains.

2.8.4 The EIA Report concluded that no significant effects in EIA terms are anticipated during the construction or decommissioning phases of the Works. The EIA Report further concluded that the likelihood of indirect impact on the setting of terrestrial cultural heritage assets was minor and not significant in EIA terms and considered to be fully reversible upon decommissioning of the Works.

## 2.9 Fish and Shellfish

2.9.1 In relation to marine fish, shellfish and diadromous fish the EIA Report considers the impact of disturbance as a result of underwater noise generated during the construction phase and the potential operational impact of EMF emissions. Further to this, the EIA Report gives consideration to the impact of underwater noise during the operational and decommissioning phases of the Works on diadromous fish receptors.

2.9.2 Within the EIA Report, the Applicant has committed to the the use of drilled pin-piled foundations for the turbine and metmast over noisier impact piling. Drilling of the foundations is considered to be the noisiest activity associated with the Works; it is estimated to take up to a week and likened to noise generated by a moderately sized shipping vessel. The EIA Report also commits to the agreement and implementation of a Construction Environmental Management Plan (“CEMP”) as a mitigation measure to reduce the impact to fish receptors.

2.9.3 The residual impact of construction noise on marine fish and shellfish was deemed to be negligible and not significant in EIA terms. Additionally, it concluded the impact of EMF on marine fish and shellfish to be negligible and not significant.

2.9.4 In HRA terms the Applicant considered there to be no likely significant effect on the Atlantic salmon or sea lamprey qualifying interests of nearby SACs.

## 2.10 Airborne Noise

2.10.1 The EIA Report considers the impact of airborne noise during the operational phase of the Works. Potential sources were identified as aerodynamic noise from the movement of the rotating blades and mechanical noise emanating from the components within the nacelle of the WTG. The potential effects on onshore residential receptors of noise generated through these impact pathways was assessed in the EIA Report. Noise impact during the

construction and decommissioning phases of the Works was scoped out of the EIA Report.

2.10.2 The EIA Report details that the final WTG will be selected on the basis that it does not exceed acceptable noise limits and therefore no further mitigation is proposed for the Works in isolation. The predicted noise levels emitted as a result of the Works cumulatively with two single WTGs in the Methil Docks area and the Levenmouth Demonstration Turbine (“LDT”) was also further considered in the EIA Report. This identified that operational noise levels from the Works and LDT could exceed acceptable noise limits. The EIA Report proposed a compliance monitoring and reporting procedure and an agreement between the operators of the Works and the LDT to ensure acceptable cumulative noise levels were achieved.

2.10.3 The EIA Report concludes that the impact of airborne noise during the operational phase of the Works in isolation is considered to be negligible and therefore not significant. It is further concluded that, with the proposed mitigation, the impact of cumulative operational noise is also not significant.

## 2.11 Shadow Flicker

2.11.1 The EIA Report considers the effect of shadow flicker from the operational phase of the Works on surrounding properties. A desk based assessment was undertaken to assess the likely significant impact which included 32 representative properties chosen due to their close proximity and unobstructed view of the Works. These included permanent two storey dwellings situated along the Buckhaven and Methil shorefronts, Randolph Wemyss Hospital, Denbeath Primary School, multiple storey buildings and all receptors assessed as part of the Environmental Statement for the LDT. No assessment of impacts during the construction and decommissioning phases of the Works was undertaken due to shadow flicker only occurring during operation.

2.11.2 The assessment confirmed that a number of receptors will be affected by shadow flicker however this will be below the recommended thresholds and as such no mitigation is proposed. The assessment further identified that cumulative shadow flicker effects will impact a number of receptors as a result of the Works and LDT, noting that LDT is the main contributor of these effects in isolation and, as such, no mitigation is proposed. However, should it be proven that a receptor is impacted by shadow flicker attributed to the Development, then control measures can be implemented in the event that the impact is considered a statutory nuisance.

2.11.3 The EIA Report concludes that shadow flicker effects as a result of the Works are not significant in EIA terms both alone and cumulatively.

## 2.12 Shipping and Navigation



2.12.1 The impact pathways of the Works on shipping and navigation receptors during the operational phase were considered in the EIA Report to be: vessel displacement; collision risk and port access restrictions for third party vessels; allision risk and increased risk of grounding for third party vessels; disruption to emergency response and SAR operations; disruption to pilotage services; and prevention of use of existing aids to navigation. The impacts identified for the construction and decommissioning phases were identified as: vessel displacement; collision risk; restrictions on port access for third party vessels; and disruption to pilotage services.

2.12.2 In an effort to reduce the impact the Applicant commits to a number of development design mitigation measures in the EIA Report including:

- Cable burial risk assessment;
- Charting of infrastructure;
- Compliance with MGN 654;
- Development within a VTS area;
- Use of a guard vessel as required by risk assessment;
- Lighting and marking in agreement with Northern Lighthouse Board (“NLB”);
- Minimum blade tip clearance of 25m above HAT;
- Promulgation of information in relation to vessel routes, timings and locations via Kingfisher Bulletins; and
- Ongoing consultation with Forth Ports as the competent harbour authority.

2.12.3 The impact of potential effects was assessed using a worst case scenario for each shipping and navigation effect. All effects were assessed as being of minor significance in EIA terms once mitigation is applied.

2.12.4 Cumulative effects were not considered as it was considered that no future developments will have the potential to affect shipping and navigation receptors cumulatively with the Works.

## 2.13 Socio-Economic Assessment

2.13.1 A Socio-Economic assessment was conducted to identify the potential impacts of the Works in which the following impact pathways were considered: community effects; employment and local economic effects; effects on commercial fisheries; effects on local tourism economy and wider economic effects.

2.13.2 The EIA Report predicted no significant negative socio-economic effects on the community during the construction phase of the Works due to the scale and location of the works. Further to this, the EIA Report estimated that

construction of the Works would create six local jobs in project management and development and up to 60 jobs during the six month construction period.

- 2.13.3 The EIA Report included a review to assess the potential opportunity for the Scottish supply chain as a result of the Works, concluding that there is an opportunity for Scottish companies to contribute to the project, equating to 44% of the total project costs. It concluded that the effects of construction of the Works on employment and the local supply chain economy would be positive.
- 2.13.4 In relation to the operational phase of the Works, the EIA Report estimated that six full time jobs would be generated for maintenance and administration. The skills development and experience gained through working on the Works would directly benefit employees and contractors and support further development of the Scottish supply chain. The secondary socio-economic effect of airborne noise and the visual impact was assessed to be minor in significance. Additionally, the visual impact on tourism was assessed and concluded to be negligible.
- 2.13.5 The EIA Report concluded that there would be no negative socio-economic effects associated throughout all phases of the Works and that positive effects are predicted in relation to employment, skills and training and the development of the Scottish supply chain.

## 2.14 Benthic Ecology

- 2.14.1 The EIA Report considered that the Works has the potential to directly and indirectly impact benthic ecological receptors at all phases. An assessment of the impact of the Works was undertaken using a worst case scenario.
- 2.14.2 The assessment considered that activities that are likely to impact benthic ecological receptors during the construction and decommissioning phases in the offshore region and intertidal zone include: direct habitat disturbance; increase in suspended sediment; sediment deposition and smothering; releases of sediment contaminants; noise and vibration; intertidal temporary direct seabed habitat disturbance; intertidal temporary increased suspended solid concentrations, sediment deposition and release of contaminants; and accidental spillages of chemicals.
- 2.14.3 Further to this, the operational effects of the Works include: loss of original habitat; introduction of new hard substrate for colonisation including non-native species; changes to hydrodynamic regime; seabed habitat disturbance, accidental spills of chemicals; and EMF and heat effects from cables.
- 2.14.4 The EIA Report contained a cumulative effect assessment to assess the impact of the Works with Neart na Gaoithe, Inch Cape and Seagreen offshore

wind farms. It identified that cumulative effects may occur where plumes of suspended sediments from activities at the individual developments may produce a greater spatial extent of sediment plume affecting the seabed and water quality. It was concluded that any plumes associated with these developments are unlikely to extend as far as the Works. Additionally, cumulative effects during the operational phase resulting from EMF effects, operational noise and the introduction of new habitat and loss of baseline habitat was considered. It was considered that the magnitude of these potential cumulative effects will not have a significant effect on benthic ecology receptors.

2.14.5 The Applicant committed to a range of development design mitigation measures including: using material from ground preparation works as either in-fill material/ballast or removing and disposing of such material off-site; drilling of foundation piles as opposed to driven through impact piling; operation of a pollution/spill prevention plan and cable burial where ground conditions allow or cable protection to reduce the heat and EMF effects.

2.14.6 The EIA Report concluded that the residual impact of the Works will not be significant, alone or cumulatively, and no additional mitigation is required.

## 2.15 Miscellaneous Issues

2.15.1 The EIA report considered the impact on the potential effects of the Works on a number of other miscellaneous issues including: health and safety considerations; radio links; major accidents and/or disasters; and climate change and greenhouse gases (“GHGs”).

2.15.2 Consideration is given to health and safety relevant to the construction and operation of the Works. The Works will be operated in accordance with the relevant health and safety guidelines and a health and safety plan will be implemented during the construction phase. Site safety and navigation is further considered within the Shipping and Navigation chapter of the EIA Report.

2.15.3 The impact of the Works on radio links was assessed, however, British Telecommunications (“BT”) advised that no potential problems were foreseen and this was therefore not subject to further assessment.

2.15.4 The potential impact of natural disasters and major accidents on the Works was considered and severe weather and high wind speeds was assessed as the most likely natural disaster that could cause an impact. Wind turbines are installed with brake mechanisms which will ensure the turbine is shut down during high wind speeds when it is not safe for the turbine to operate. The EIA Report states that a remote operational control system would be used during the operational phase of the Works, which allows for automated operation and remote user shutdown to protect the assets in extreme weather conditions.

Likewise, the system is fitted with a fire detection and warning system to alert the operator and automatically shut down the turbine. There is not considered to be significant residual impact associated with accidents and disasters once this mitigation is applied.

2.15.5 The EIA Report considered the potential impacts of climate change on the Works, specifically in relation to coastal erosion. The cable landfall and duct has been designed taking this in to consideration and will not be impacted by localised erosion due to climate change within the operational life of the Works.

2.15.6 The EIA Report also considered the potential impacts of GHGs emitted throughout all phases (pre-construction, construction, operation and decommissioning) of the Works based on a life cycle assessment approach further considering the impacts on supply chain and benefits beyond the life cycle of the Works. The majority of GHG emission production occurs in the pre-construction phase during manufacturing. The EIA Report concluded that there is considered to be a minor adverse effect predicted to arise during construction and installation of the Works and no negative significant GHG emissions predicted to arise during the operational phase. The decommissioning phase is assumed to be the reverse of installation involving the removal of the infrastructure and its transportation to either landfill disposal, incineration or recycling. Further to this, beyond the licensed period, the EIA Report considers the potential of the Works to contribute to the development of more efficient low carbon technology and further contribute to the growth of the offshore wind industry.

## 2.16 Other Marine Users

2.16.1 The impact from the Works on other marine users was assessed in a desk-based assessment. The receptors included in the assessment were disposal sites, recreation and tourism, military activities and other renewable energy activity.

2.16.2 Potential impacts on military maritime activities and civilian aviation activities were assessed, however, no mitigation additional to aviation safety lighting was proposed as no impact is expected to arise. Recreation and tourism (principally in relation to sailing) was scoped out for further assessment as navigational safety is addressed within the Shipping and Navigation chapter of the EIA Report. Potential cumulative effect with the LDT in relation to overlap of vessel displacement has been scoped out as any displacement will be minimal. Similarly, loss of seabed area or resource is likely to be minimal in comparison to the wider area.

2.16.3 The EIA Report concluded that the Works would not have a significant impact on other marine user receptors throughout the construction, operational and decommissioning phases, alone and cumulatively with other plans or projects.

**3. Consultation**

3.1 In accordance with the 2017 MW Regulations and the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (“2017 EW Regulations”), on 29 April 2022, the Applicant submitted an EIA Report describing the Works and providing an analysis of its environmental effects.

3.2 Advertisement of the Application was made in the local and national press and on the Applicant’s website. The notices were placed in the public domain and the opportunity was given to those wishing to make representations.

3.3 The dates of the consultation exercise are given below. The regulatory requirements regarding consultation and public engagement have been met and the responses received taken into consideration. Where matters have not been fully resolved, conditions have been included to ensure appropriate action is taken.

<b>Document</b>	<b>Date Received</b>	<b>Dates of consultation</b>	<b>Publication</b>
EIA Report and Application	29 April 2022	07 June 2022 to 15 July 2022	Fife Courier (08 and 15 June 2022)
	Update to volume 2 of EIA Report received 18 May 2022	07 June 2022 to 26 September 2022 (for planning authorities)	Edinburgh Gazette (10 June 2022)
	Update to volume 4 of EIA report received 12 May 2022		Fishing News (15 June 2022)
			The Herald (15 June 2022)
			<a href="#">Applicant's Website</a> (06 June 2022)

**4. Summary of statutory consultee consultation**

4.1 Under the 2017 MW Regulations, the statutory consultees are as follows:

- NatureScot (operating name of Scottish Natural Heritage);
- Scottish Environment Protection Agency (“SEPA”); and
- Historic Environment Scotland,

4.2 The planning authorities whom the Scottish Ministers considered appropriate to consult in respect of the Works are City of Edinburgh Council, East Lothian Council and Fife Council.

4.3 In addition, the Maritime and Coastguard Agency (“MCA”) and NLB, alongside SEPA and NatureScot, are statutory consultees in relation to marine licence applications under the Marine Licensing (Consultees) (Scotland) Order 2011.

#### 4.4 East Lothian Council

4.4.1 In terms of landscape and visual impacts, East Lothian Council commented that the visuals contained within the EIA Report of viewpoints from Fife and East Lothian were taken during hazy weather conditions and therefore the visuals were not representative of the worst case scenario. However, despite this, East Lothian Council indicated that the turbine did not appear to have a significant impact on views of East Lothian from Fife.

4.4.2 East Lothian Council considered the impact on viewpoints located within its jurisdiction. It stated that the Works will not have an impact on viewpoint 19. However, from viewpoint 18 and 21, East Lothian Council highlighted that the Works may result in a locally significant effect.

4.4.3 The Works will be in view from viewpoint 20 but will not break the skyline during daylight hours. The lighting on the metmast will break the skyline during the night view, however East Lothian Council stated the lights will be inkeeping with the lighting of the existing structures in view.

4.4.4 East Lothian Council concluded that, overall, the Works will read with the existing structures in the area and therefore will not have a significant visual impact on East Lothian.

4.4.5 To ensure that the Works create a minimal impact on the night views from the East Lothian coast, East Lothian Council recommended a candela rating of 200 candela in normal conditions with the 2000 candela setting only applied when visibility is below 5km. East Lothian Council also requested the lighting be set to minimum with the removal or reducing of the lighting if no longer needed. East Lothian Council further encouraged consultation with the Civil Aviation Authority, aircraft operators and operators of tall structures to establish if the warning lights are required for the Works.

4.4.6 In terms of biodiversity, East Lothian Council supported NatureScot’s views on whether the Works would have a significant effect on the qualifying interests of



the Firth of Forth SPA, the Forth Islands SPA and the Outer Firth of Forth and St Andrews Bay Complex SPA.

- 4.4.7 East Lothian Council welcomed the assessment provided in the EIA Report in which the indirect effects on GHG emission reductions will be greater due to the Works being a demonstration project. However, East Lothian Council noted that the assessment compared the Works with a combined cycle gas turbine and so encouraged a comparison to be made with other WTGs to fully understand the impact of the Works. As there are no comparisons made to other projects of this nature, East Lothian Council cannot determine the impact of the level of emissions projected for the Works.
- 4.4.8 The EIA Report stated that the Works will reduce emissions, however East Lothian Council clarified that it will produce emissions but not at the level of other means of electricity generation.
- 4.4.9 East Lothian Council recognised the importance of developing lower emitting ways of generating electricity and therefore did not object to the Application.
- 4.4.10 A condition has been attached to the marine licence to require that the Applicant prepares, consults on (including with East Lothian Council) and adheres to a Lighting and Marking Plan (“LMP”).

#### 4.5 Edinburgh Council

- 4.5.1 Edinburgh Council had no objection to the Application.

#### 4.6 Fife Council

- 4.6.1 Fife Council commented that the location of the Works is in an area with existing large structures already in place and therefore will blend into the view.
- 4.6.2 Furthermore, as there were no adverse comments raised by Royal Society for the Protection of Birds (“RSPB”) Scotland or NatureScot in relation to environmental considerations, and NATS Safeguarding had no adverse comments to make on the potential impacts to Edinburgh Airport traffic, Fife Council had no objection to the Application.
  - 4.6.1 Fife Council had no comments to make from a harbours perspective.
  - 4.6.2 To protect the interests of nearby residents from noise and disturbance, Fife Council requested the WTG be of a design to permit controlled operation or shut down at specific wind speeds and directions and further to this recommended that the Company commit to a Noise Measurement and Mitigation Scheme (“NMMS”). Additionally, for Scottish Ministers to secure a

condition to ensure that the operational noise of the WTG does not exceed agreed noise limits.

4.6.3 A condition has been attached to the s.36 consent to require that the Applicant prepares, consults on (with Fife Council) and adheres to a NMMS prior to the WTG becoming operational. A further condition has been attached to the consent to ensure that the operational noise of the WTG alone, or in combination with any other consented or built developments, does not exceed agreed noise limits.

#### 4.7 Historic Environment Scotland

4.7.1 HES commented that the assessment provided for setting impacts on terrestrial heritage assets is limited in its approach and scope, with no visualisations or wireframes provided in support of the EIA Report conclusions. However, HES concluded that the Works will not raise historic environment issues of national significance and therefore did not object to the Application.

4.7.2 HES provided recommendations should an updated assessment be submitted for setting impacts on terrestrial heritage assets.

4.7.3 Furthermore, HES acknowledged the provisional drafts of the WSI and PAD provided in the EIA Report, however advised that the following changes should be made:

- The WSI and PAD should be presented as two separate documents, or the PAD should form an annex to the WSI;
- The WSI document should provide details on the logical process, the investigative steps already undertaken, the conclusions drawn, as well as detailing any further works necessary;
- The PAD should detail the procedures that will be implemented if an object is discovered such as:
  - The reporting of the object to the Receiver of Wreck;
  - Details on the conservation and examination of the artefact; and
  - Disposal or retention protocols.

4.7.4 HES further noted that the processes referred to throughout the EIA Report, for example the need for a licence from the Ministry of Defence if human remains are found, must be checked to confirm whether such processes are a requirement in Scotland.

4.7.5 A condition has been attached to the marine licence to require that the Applicant prepares, consults on (including with HES) and adheres to a WSI and PAD.

#### 4.8 Maritime and Coastguard Agency (“MCA”)

- 4.8.1 The MCA noted incorrect references made throughout the EIA Report to the marking of Man-Made Structure, the misspelling of MEPC (Marine Environmental Protection Committee), and the conflicting information on the distance to Kinghorn. Furthermore, the MCA recommended changing the reference to 'under-keel clearance' throughout the EIA Report to 'surrounding depth'. The Applicant have noted these errors.
- 4.8.2 Provided all maritime safety legislation is adhered to, the MCA had no objection to the Application, however recommended adding a number of conditions to the consent to maintain navigational safety throughout the Works.
- 4.9 NatureScot
- 4.9.1 Ornithology
- 4.9.1.1 NatureScot supported the species, seasons and SPAs identified in the EIA Report as requiring full assessment. NatureScot highlighted the incorrect approach taken by the Applicant in using apportioning to identify likely significant effects ("LSE"), however concluded that there would be no adverse effects on site integrity for any qualifying interest of any SPA and no significant effects in EIA terms on ornithological receptors. NatureScot did however note that there may be residual impacts upon SPA species.
- 4.9.1.2 NatureScot presented advice on inshore wintering waterfowl and divers and also highlighted the gap in knowledge as regards the impact of visual disturbance from offshore WTGs on inshore wintering waterfowl and divers.
- 4.9.1.3 NatureScot requested to work alongside the Applicant and Marine Scotland to design an ornithological post-consent monitoring package, collating knowledge on how sensitive species respond to large WTGs in an inshore location and using this to inform future marine industry development proposals. NatureScot provided advice on the questions post-consent monitoring should seek to answer and how this could be achieved.
- 4.9.1.4 Furthermore, with the outbreak of Highly Pathogenic Avian Influenza ("HPAI"), NatureScot advised the post-consent monitoring package should contain the most up-to-date information on HPAI. The Applicant confirmed that NatureScot and Marine Scotland would be consulted on the draft Project Environmental Monitoring Plan prior to the commencement of the works.
- 4.9.2 Marine Mammals
- 4.9.2.1 NatureScot confirmed that the Works would not result in adverse effects on site integrity for any qualifying interest of any SAC with regard to marine

mammals. NatureScot also supported the conclusion that the Works would not have a significant impact on any of the marine mammals assessed in the EIA Report, however highlighted that drilling the foundations instead of impact piling is key in reaching this conclusion as this method reduces the generation of underwater noise.

4.9.2.2 NatureScot confirmed there would be no effect upon the Favourable Conservation Status of European Protected Species.

#### 4.9.3 Fish and Shellfish

4.9.3.1 NatureScot confirmed that the Works will not result in adverse effects on site integrity for any qualifying interest of any SAC with regard to fish and shellfish.

4.9.3.2 NatureScot noted that there are Priority Marine Features (“PMF”) present in the area of the Works and highlighted that the Applicant would be willing to contribute findings towards a wider study on the impact of EMF emissions on PMF, other marine fish and shellfish. NatureScot encouraged Marine Scotland to secure this contribution in a Project Environmental Monitoring Plan (“PEMP”).

4.9.3.3 The Applicant is content to support any research on the potential impacts of EMF on fish and shellfish and will consult relevant stakeholders prior to finalising the PEMP.

#### 4.9.4 Benthic Ecology

4.9.4.1 The EIA Report concluded that there will be no significant impacts upon any benthic ecology receptors. NatureScot supported this conclusion based on the use of a worst case scenario of impacts, the relatively small works area, and the biotope types identified during survey work.

#### 4.9.5 Marine Invasive Non-Native Species (“mINNS”)

4.9.5.1 The EIA Report states that the risk of mINNS is not significant, however this conclusion is subject to uncertainty. NatureScot recommended the Applicant produce and adhere to a biosecurity plan to mitigate any risk of mINNS. Furthermore, the biosecurity plan should include Japanese Wakame, a mINNS which has been documented in the Firth of Forth. The Applicant confirmed the biosecurity plan will be updated to reflect this.

#### 4.9.6 Hydrodynamic processes and coastal geomorphology

4.9.6.1 NatureScot acknowledged the consideration of climate change impacts and the considerations of the project design of the Dynamic Coast project outputs.

4.9.7 Seascape, landscape and visual impacts

4.9.7.1 NatureScot advised that the Works would impact the character of the landscapes of the Firth of Forth as the WTG would be noticeably taller and closer to the coast than other developments and that there will be significant cumulative issues resulting from the greater overall scale of the Works in relation to the existing and consented turbines and with other tall structures in the area. However, the Works would not appear entirely incongruous as it would be seen in the context of existing turbines and other eye-catching, tall structures widely seen in and across the Firth of Forth.

4.9.7.2 NatureScot noted that red aviation lighting would be required which would be seen at night but that this would be seen in the context of the existing night time lighting, including in particular the red lights on the existing tall structures.

4.9.7.3 The Applicant confirmed a LMP would be consulted on prior to commencement of the Works.

4.9.7.4 To conclude, NatureScot did not object to the Works but advised Marine Scotland to secure the following management plans:

- VMP;
- CEMP;
- PEMP to include considerations of operation and decommissioning activities; and
- Decommissioning Programme (“DP”).

4.9.7.5 NatureScot provided recommendations to the Applicant on what should be included in these plans, as well as the post consent monitoring.

4.9.7.6 The Applicant commented that a draft Post-Consent Monitoring Plan would be consulted on with the relevant stakeholder prior to works commencing and it would work with NatureScot to implement the best methods and techniques to reduce environmental impacts throughout the lifetime of the Works.

4.9.7.7 Conditions have been attached to the marine licence to require that the Applicant prepares, consults on and adheres to a VMP, CEMP, PEMP and DP.

4.10 Northern Lighthouse Board

4.10.1 The NLB had no objection to the Application. NLB noted that the Works are within the Forth Ports harbour limits and NLB is content with the Forth Ports recommendation of the deployment of three buoys around both the WTG and metmast. NLB specified the buoys should be Special Mark buoys, set to display one yellow flash every five seconds with a nominal range of two

nautical miles, and are to be evenly spread out around the circular 250m construction sites.

4.10.2 The Applicant confirmed that the draft LMP would be updated with these recommendations and would be consulted on prior to commencement of the Works. A condition has been attached to the marine licence to require that the Applicant prepares, consults on and adheres to a LMP.

4.11 Scottish Environment Protection Agency

4.11.1 SEPA had no site-specific comments to make on the Application and referred to the 'SEPA Standing Advice for the Department for Business Energy and Industrial Strategy and Marine Scotland on marine consultations', with the following points considered during determination.

4.11.2 SEPA's standing advice highlighted the presence of mINNS as a risk for water body degradation, with the introduction of mINNS shown to occur when construction equipment is moved from one area to another. SEPA therefore advised that the Applicant propose mitigation measures to minimise the risk to mINNS throughout all stages of the Works.

4.11.3 Additionally, to prevent pollution and preserve marine ecology interests, SEPA highlighted the requirement to ensure good working practice is implemented and steps taken to prevent marine pollution or disturb sensitive species.

4.11.4 A condition included in the marine licence requires the Applicant to address pollution prevention in the CEMP and Marine Pollution Contingency Plan, as well as the introduction of mINNS and the conservation of water bodies in the CEMP.

4.11.5 During the decommissioning of the Works, SEPA require the devices and support infrastructure be removed from the seabed where possible, and deposited at an appropriate onshore location. The seabed and shoreline must be restored to the original pre-construction condition, or as close to the original condition as reasonably practical.

4.11.6 A condition attached to the marine licence requires a Decommissioning Programme is submitted by the Applicant to the Scottish Ministers for approval.

5. **Summary of non-statutory consultee responses**

5.1 British Telecommunication's Radio Network Protection

5.1.1 BT's Radio Network Protection stated that the Works is not likely to cause interference to BT's current and planned radio network.



5.2 Edinburgh Airport

5.2.1 Edinburgh Airport assessed the Application against its aerodrome safeguarding criteria and was satisfied that there would be no impact and therefore had no further comments to make.

5.3 Forth Ports

5.3.1 Forth Ports requested that an exclusion zone and buoyage be confirmed with them prior to commencement of the works. The Applicant must send through details of all installation vessels and method statements, as well as work with Forth Ports to establish and agree upon a communications procedure. Forth Ports will be consulted on the CEMP, Navigational Safety Plan (“NSP”) and LMP prior to the commencement of the Development and conditions have been included for a communications procedure to be established and Forth Ports to be notified of vessels.

5.3.2 The Applicant confirmed that, following consultation with Forth Ports, it was agreed that during the construction phase a 250m buffer around the WTG and metmast as well as two sets of three buoys is appropriate.

5.4 Ministry of Defence (“MOD”)

5.4.1 The MOD stated that the Works falls within Low Flying Area 16 in which aircrafts may conduct low level flight training and that the Works may therefore present a physical obstruction to low flying aircraft operating in the area.

5.4.2 To maintain aviation safety, the MOD requested conditions be added to the consent that require the Works to be fitted with aviation safety lighting and the MOD to be notified 14 days prior to commencement of the works, with details of the WTGs, construction equipment and dates of the works to be included in the notification. The MOD also requested it be notified of any changes to the details and of the completion of construction of the Works. The Applicant commented that an aviation lighting scheme would be submitted and the Works would be equipped with MOD recommended aviation safety lighting.

5.4.3 Subject to the conditions detailed, which have been included on the marine licence, the MOD had no objection to the Application.

5.5 NATS Safeguarding

5.5.1 NATS Safeguarding had no objection to the Application.

5.6 Royal Society for the Protection of Birds Scotland

5.6.1 RSPB Scotland had no comments to make on the Application, however highlighted the importance of monitoring the impacts on seabirds of demonstration projects. RSPB would be grateful to receive any data gathered from the Works and noted concerns about HPAI in relation to the cumulative and in combination impact of offshore wind on seabirds.

5.6.2 The Applicant confirmed that the draft PEMP would be consulted on with the relevant stakeholders prior to the commencement of the Works.

5.7 Royal Yachting Association (“RYA”)

5.7.1 The RYA had no comments to make on the Application.

5.8 Scottish Water

5.8.1 Scottish Water confirmed that the Works would not lie within any designated Drinking Water Protected Areas under the Water Framework Directive and had no objection the Application.

5.9 UK Chamber of Shipping

5.9.1 The UK Chamber of Shipping had no comments to make on the application.

5.10 Whale and Dolphin Conservation (“WDC”)

5.10.1 WDC had no comments to make on the Application.

**6. Representations from other organisations and members of the public**

6.1 One public representation was received from a fisherman who raised concerns on the location of the Works. No longer having access to the area to fish would reduce their income significantly.

6.2 The Applicant consulted Forth Ports and came to an agreement on an exclusion area of 250m around the WTG and metmast during the construction phase. Construction impacts will be temporary and once operational, the area excluded to other users including fishers will be limited to the installed infrastructure.

**7. Advice from third parties**

7.1 Marine Scotland – Licensing Operations Team (“MS-LOT”) sought advice from the Marine Analytical Unit (“MAU”) Marine Scotland Science (“MSS”), and Transport Scotland (“TS”) on the Application.

7.2 Marine Analytical Unit

7.2.1 Socio-Economics

- 7.2.1.1 The MAU was content with the assessment of socio-economic impacts contained with the EIA Report. While the MAU highlighted that there was a lack of information provided on stakeholder engagement, and the socio-economic chapter contained mainly qualitative assessments of the possible impacts, this was considered adequate in relation to the size and scale of the Works.
- 7.2.1.2 The MAU noted that monitoring had not been mentioned within the EIA Report and advised that it would be beneficial to receive follow-up information on the training and employment opportunities included in the EIA Report, as well as any other impacts that arise throughout the lifetime of the Works.
- 7.2.1.3 The Applicant stated that it would consider, where practicable, undertaking post-consent monitoring on the socio-economic benefits of the Works.

7.3 Marine Scotland Science

7.3.1 Marine Ornithology

- 7.3.1.1 MSS reviewed the EIA Report and considered the consultation responses from NatureScot and RSPB in providing its advice.
- 7.3.1.2 MSS noted its agreement with NatureScot in relation to the inappropriate approach taken to identifying LSEs on SPAs using an apportioning approach. However, MSS noted its agreement with the additional analyses undertaken by NatureScot concluding that the predicted impacts from the Works would not result in significant effects in EIA terms or have an adverse effect on site integrity in HRA terms on the listed SPAs and bird species considered.
- 7.3.1.3 MSS advised that a VMP should be implemented for use during construction and operational phases of the Works to mitigate against residual impacts from vessel disturbance to SPA species, particularly sensitive wintering waterfowl in agreement with NatureScot. MSS further advised, in agreement with NatureScot and RSPB, that post-consent monitoring should be implemented to address any residual impacts on sensitive species.
- 7.3.1.4 MSS noted that both NatureScot and RSPB acknowledged the current outbreak of HPAI impacting seabirds in Scotland and agreed that any post-consent monitoring plans should take this into consideration.
- 7.3.1.5 MSS noted the inclusion of an indicative schedule of construction activities however further noted the lack of information regarding seasonal timings

which is important when assessing the potential for impacts on ornithological receptor species.

### 7.3.2 Marine Mammals

7.3.2.1 MSS agreed that the Works would not have a significant impact on local populations of marine mammals as concluded within the EIA Report. Further to this, MSS agreed with the species included in the assessment and the impacts scoped in and out as summarised in the EIA Report.

7.3.2.2 MSS noted that a quantitative assessment is not required for any of the impact pathways, however expected densities of marine mammal species in the area have not been presented as part of the baseline characterisation in the EIA Report.

7.3.2.3 MSS agreed that there is unlikely to be significant effects on marine mammals from noisy activities during construction arising from the Works alone and cumulatively with other plans or projects given the short duration of such activities. MSS advised that a mitigation plan would assist in minimising any effects during pile drilling of the foundations.

7.3.2.4 MSS are content with the embedded mitigation measures and post construction surveys described in the EIA Report. However, MSS further advised that in advance of the surveys commencing, it would be useful to have more information to ensure they yield useful data and are comparable to previous surveys.

7.3.2.5 With regards to the Marine Mammal Observer Protocol set out in the EIA Report, MSS sought clarity regarding the planned procedure in the event of a marine mammal being observed within the 500m mitigation zone, particularly in relation to the required length of time between the departure of the animal and the resumption of noisy activities. The Applicant committed to consulting with MSS to finalise the Marine Mammal Observer Protocol prior to commencement of the works. An updated Marine Mammal Observer Protocol must be submitted for approval of Scottish Ministers prior to the Commencement of the Works, as per the CEMP condition attached to the marine licence.

### 7.3.3 Marine Fish Ecology

7.3.3.1 MSS advised that it is broadly in agreement with the conclusions presented in the EIA Report. Given the short duration and relatively low impact noise levels from the drilling of the single turbine, MSS was content with the conclusion of negligible and non-significant in EIA terms, impacts of underwater noise on marine fish and shellfish species. Given the burial of the cable and the relatively short length of the single cable, MSS are content with the conclusion

of negligible and non-significant in EIA terms, impacts of EMF on marine fish and shellfish species.

7.3.3.2 MSS welcomed the Applicant's offer of recording measurements of *in situ* EMF emissions as part of the ScotMER study and advise that this should be reflected within the PEMP as suggested by NatureScot in its representation.

#### 7.3.4 Commercial Fisheries

7.3.4.1 MSS noted that it is content with the identified potential impacts and conclusions within the EIA Report noting the Applicant's commitment to cable burial where conditions allow and over-trawl surveys post construction as additional mitigation to reduce the impact to trawlers.

#### 7.3.5 Diadromous Fish

7.3.5.1 MSS noted its agreement with the conclusions presented in the EIA Report that the Works will not impact diadromous fish populations.

7.3.5.2 MSS noted the lack of evidence to support the conclusion that EMF would not act as a barrier to Atlantic salmon, sea lamprey and European eel. Additionally, MSS noted the lack of evidence to support that sparring and Allis shad are not sensitive to EMF.

7.3.5.3 MSS noted that the EIA Report highlighted that the lack of knowledge on distribution of diadromous fish in the Firth of Forth, which reduces the confidence in assessments on developments.

7.3.5.4 MSS welcomed the Applicant's commitment to recording *in situ* EMF measurements and advised that this would be beneficial to the ScotMER project. MSS further advised that it should be consulted on any proposed EMF monitoring plans to ensure the quality of the data for informing impacts to diadromous fish receptors.

#### 7.3.6 Benthic Ecology

7.3.6.1 MSS noted that the EIA Report considers the effect of EMF on benthic ecology receptors to be negligible and not significant in EIA terms due to the proposal for the cable to be buried and low sensitivity of receptors. However, MSS advised that although cable burial provides a physical barrier between the cable and some mobile or epifaunal species that live on the seabed, this does not protect infaunal species which may be located within the sediment closer to the cable. Additionally, MSS advised that reducing the EMF may not reduce the impact due to different species responding to the EMF at differing levels.

7.3.6.2 MSS noted that research on the impact of EMF on benthic species is ongoing and welcomed involvement from the Applicant in future strategic research of EMF.

7.3.6.1 MSS agreed that the risk of mINNS in relation to the Development alone is low due to its relatively small scale. However, the cumulative effect with other wind farms in the wider area due to an increase in hard structures in the seabed could enhance the “stepping-stone effect”, allowing a pathway for the spread of mINNS.

7.3.6.2 MSS welcome the commitment to a Biosecurity Management Plan and agree with NatureScot that strict adherence to this is key to mitigating the risk of mINNS. There should be clarity regarding methods to be employed to monitor subtidal structures and the frequency of such monitoring.

#### 7.4 Transport Scotland

7.4.1 TS referred to its advice provided during scoping in which it recommended that a detailed assessment of traffic effects could be scoped out of the EIA Report due to the limited traffic that would likely be produced by the Works. Furthermore, TS noted that the offshore element of the proposal would not cause any environmental impacts on the trunk road network.

7.4.2 TS confirmed that its advice provided during scoping remains valid and that it therefore had no further comment to make.

#### 7.5 Summary

7.5.1 The Scottish Ministers have considered the advice provided in reaching their decision.

### 8. **Public Inquiry (“PI”)**

8.1 The Scottish Ministers did not require a PI to be held.

### 9. **The Scottish Ministers Considerations**

#### 9.1 Environmental Matters

9.1.1 The Scottish Ministers are satisfied that an EIA has been carried out. Environmental information including the EIA Report has been produced and the applicable procedures regarding publicity and consultation laid down in regulations have been followed. The environmental impacts of the Works have been assessed and the Scottish Ministers have taken the environmental information into account when reaching their decision.



9.1.2 In accordance with their obligations under paragraph 3(2) of Schedule 9 of the Electricity Act 1989, the Scottish Ministers have considered and are satisfied that: (a) the Applicant, when formulating its proposal to construct the generating station, has had sufficient regard to the desirability of preserving natural beauty, of conserving flora, fauna, and geological and physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic, or archaeological interest and; (b) the Applicant, in having regard to these matters, has reasonably sought to mitigate any effect which its proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.

9.1.3 The Scottish Ministers have considered fully and carefully the Application, EIA Report, Non-Technical Summary and all relevant representations from consultees, and advice from MSS, MAU and TS.

## 9.2 Main Determinative Issues

9.2.1 The Scottish Ministers, having taken account of all relevant information, consider that the main determining issues are:

- The extent to which the Works accords with and is supported by Scottish Government policy and the terms of the National Marine Plan (“NMP”) and relevant local development plans;
- Renewable energy generation and associated policy benefits;
- Economic impacts; and
- The main effects of the Works on the environment, which are in summary impacts on:
  - Seabirds, marine mammals and diadromous fish and shellfish including impacts on European sites and European offshore marine sites;
  - Commercial fisheries;
  - Seascape, landscape and visual amenity; and
  - Aviation and defence.

## 9.3 Scottish Government Policy Context

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

9.3.2 Of particular relevance to this proposal are:

- Chapter 4 policies ‘GEN 1-21’, which guide all development proposals;
- Chapter 6 Sea Fisheries, policies ‘FISHERIES 1-3’ and 5;
- Chapter 8 Wild Salmon and Diadromous fish, policy ‘WILD FISH 1’;

- Chapter 11 Offshore Wind and Marine Renewable Energy, policies ‘RENEWABLES 1, 3-10’;
- Chapter 12 Recreation and Tourism, policies ‘REC & TOURISM 2 and 6’;
- Chapter 13 Shipping, Ports, Harbours and Ferries, policies ‘TRANSPORT 1 and 6’;
- Chapter 14 Submarine Cables, policies ‘CABLES 1 – 4’; and
- Chapter 15 Defence, policy ‘DEFENCE 1’.

9.3.3 The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 commits us to reach net zero emissions of all GHGs by 2045, ahead of the UK target of 2050. It includes bold interim targets to reduce emissions by 75% by 2030, against a 1990 baseline, and to reduce emissions by 90% by 2040. These targets are in line with what is required to meet Scotland’s commitments under the 2015 Paris Agreement, to limit global average temperature increases to 1.5 degrees Celsius or less. The Glasgow Climate Pact keeps alive this target of limiting global warming to 1.5 degrees.

9.3.4 The Works will provide wider benefits to the offshore wind industry which are reflected within Scotland’s Offshore Wind Policy Statement. Offshore wind is seen as an integral element in Scotland’s contribution towards action on climate change. Our Offshore Wind Policy Statement sets out the Scottish Government’s ambitions for offshore wind in Scotland, including an ambition to achieve 8-11 GW of offshore wind in Scotland by 2030. Officials recognise that this ambition needs to be reviewed in light of the market ambition expressed in response to the ScotWind leasing round, and are currently consulting on setting a further offshore wind deployment ambition, including establishing a 2045 ambition for offshore wind in Scotland, through the draft Energy Strategy and Just Transition Plan.

9.3.5 Scotland’s National Planning Framework (“NPF4”) was adopted on 13 February 2023. It sets out a long-term spatial plan including regional priorities and 18 national developments, as well as a full suite of 33 national planning policies. NPF4 replaces NPF3 and Scottish Planning Policy.

9.3.6 On adoption of NPF4, the provisions in the Planning (Scotland) Act 2019 commenced making NPF4 part of the statutory development plan. NPF4 sets out our proposals for future consideration of planning matters and as such it may be taken into account by planning authorities on a case-by-case basis.

9.3.7 NPF4 signals a turning point for planning, placing climate and nature at the centre of the planning system and making clear Scottish Government support for all forms of renewable, low-carbon and zero emission technologies, including transmission and distribution infrastructure. This includes onshore infrastructure that supports offshore renewable development. Potential impacts on communities, nature and other receptors remain important considerations

in the decision-making process. All applications are already, and will continue to be, subject to full site-specific assessments.

## 10. Impacts of the Development on the environment

### 10.1 *Impacts on marine mammals, seabirds, diadromous fish and shellfish, and European sites and European offshore marine sites*

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

10.1.2 NatureScot was of the view that the Works would have a LSE on the qualifying interests of the Outer Firth of Forth and St Andrews Bay Complex SPA, Forth Islands SPA and Firth of Forth SPA. Additionally, NatureScot was of the view that the Development would have a LSE on the harbour seal qualifying interest of the Firth of Tay and Eden Estuary SAC, the grey seal qualifying interest of the Isle of May SAC and Berwickshire and North Northumberland Coast SAC, the bottlenose dolphin qualifying interest of the Moray Firth SAC and also the Atlantic salmon and sea lamprey qualifying interests of the River Teith SAC. Therefore, MS-LOT, on behalf of the Scottish Ministers as the “competent authority”, was required to carry out an Appropriate Assessment (“AA”).

10.1.3 NatureScot advised that there could be LSE on the qualifying interests of the aforementioned SPAs due to risk of collision and displacement as a result of the Works. Further to this, barrier effects and the loss of supporting habitat could also cause LSE.

10.1.4 The AA considered the conservation objectives, the predicted levels of effect and population consequences and the advice from NatureScot and concluded that the Works would not adversely affect the site integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA, Forth Islands SPA and Firth of Forth SPA. This is due to:

- Estimated impacts on these features being low and representing a very small proportion of the respective populations;
- the location of the Works being close inshore within the Firth of Forth whilst most of the seabird species forage offshore and are not present within the site of the Works in significant numbers (relative to the SPA population as a whole); and
- seabird species tend to be wide-ranging and as such they are able to easily access alternative habitat if displaced from the relatively small site of the Works.

- 10.1.5 In relation to marine mammal species, NatureScot advised that harbour seal, grey seal and bottlenose dolphin could be disturbed as a result of underwater noise and vessel presence during construction. However, as construction would be short in duration over a localised area and as a marine mammal observer would be in place during noisy activities to observe a 500m mitigation zone, disturbance to marine mammals would not result in mortality or impacts on productivity. Vessel presence as a result of the Works would not be significant in the context of existing background levels of vessel activity in this area. As a result the Scottish Ministers concluded that there would be no adverse effect on site integrity of the Berwickshire and North Northumberland Coast SAC, Firth of Tay and Eden Estuary SAC, Isle of May SAC, and Moray Firth SAC.
- 10.1.6 In relation to the River Teith SAC, NatureScot advised that the Atlantic salmon and sea lamprey qualifying interests could potentially be at risk of disturbance as a result of underwater noise generated during construction, operation and decommissioning of the Works, specifically in relation to noise generated by drilling of piles, operation of the turbine, vessel movement and decommissioning of the Works. In addition to this NatureScot advised that these qualifying interests may be sensitive to EMF from the proposed export cable. However, NatureScot further advised that noise generated as a result of construction of the Works poses no risk of injury to diadromous fish and as decommissioning noise would be lower in magnitude, this again poses no risk to diadromous fish. In relation to noise generated during the operational phase from the turbine and vessel movement, this is not significant in the context of background levels of noise in this area. In addition to this, NatureScot advised that EMF does not pose a risk of acting as a barrier to migration due to the relatively short length of and burial of the cable. As such the Scottish Ministers concluded in the AA that there would be no adverse effect on site integrity of the River Teith SAC.
- 10.1.7 The AA considered the cumulative impacts of the Works in combination with other developments and identified that there is the potential for in combination effects. However, provided all projects are undertaken in line with the conditions in the respective marine licences and s.36 consents, the Scottish Ministers concluded that in combination effects would not have an adverse impact on site integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA, Forth Islands SPA, Firth of Forth SPA, Firth of Tay and Eden Estuary SAC, Isle of May SAC, Berwickshire and North Northumberland Coast SAC, Moray Firth SAC and also the River Teith SAC.
- 10.1.8 The Scottish Ministers consider that, having taken into account the information provided by the Applicant and the responses of the consultative bodies, there are no concerns in relation to the impact of the Works alone or in combination with other developments on seabirds, marine mammals, diadromous fish,

European sites or European offshore marine sites which would require regulatory approval to be withheld.

## 10.2 *Impacts on commercial fisheries*

10.2.1 Moderate significant effects no commercial fisheries were identified by the Applicant during the construction and decommissioning phases of the Works due to vessel displacement and disruption to fishing activities. However, due to the scale of the Works this would be limited to a localised area over a short period of time.

10.2.2 A public representation was received from a local fisherman objecting to the Works on the basis that they would lose almost 10,000m<sup>2</sup> of fishing ground that they utilise for 12 months of the year, accounting for 40% of their total income. Additionally, they would be negatively impacted through loss of income as a result of being able to sell less lobsters and brown crab to restaurants throughout Edinburgh.

10.2.3 This objection was founded on the basis that almost 10,000m<sup>2</sup> of fishing ground would be lost as a result of the Works for the duration of the licensable period. This takes into consideration the area of the cables which would be buried and as such would not exclude other users from the area. In consultation with Forth Ports, the Applicant has agreed to a 250m exclusion zone surrounding the WTG and metmast during the construction phase. The area excluded to fishers and other users once operational would be limited to the installed infrastructure. Therefore, the area excluded to fishers and other users would be much less than the 10,000m<sup>2</sup> on which the objection is based.

10.2.4 Scottish Ministers have taken account of the terms of the NMP, conditions requiring the Applicant to prepare, consult on and adhere to a Fisheries Management and Mitigation Strategy and a NSP have been attached to the marine licence to mitigate the impact of the Works on commercial fisheries. Furthermore, the Applicant has committed to appointing a FLO to establish and maintain communication with the fishing industry.

10.2.5 Scottish Ministers consider that, having taken into account the information provided by the Applicant, the responses of the consultative bodies and public representation, and having regard to the conditions attached to the marine licence, there are no outstanding concerns in relation to the impact of the Works on commercial fisheries which would require regulatory approval to be withheld.

## 10.3 *Impacts on seascape, landscape and visual amenity*

- 10.3.1 A Seascape, Landscape and Visual Impact Assessment (“SLVIA”) was undertaken which identified that there would be significant effects from the Works on landscape and visual receptors.
- 10.3.2 East Lothian Council advised that, whilst the Applicant would have an adverse impact on views of and from East Lothian, it was not considered to be significant. Fife Council advised that although the Works is a large structure, it will be read in the landscape as being similar in design to the LDT.
- 10.3.3 East Lothian Council requested that a condition be placed on any consent granted to include maximum and minimum lighting requirements and that the candela rating should be altered to reflect visibility conditions. Additionally, it requested aviation lighting be kept under review and reduced or removed should it no longer be required. NatureScot advised that the photomontages underplayed the likely visibility of the red lights on the turbine and metmast. The Applicant confirmed that it would review the LMP in accordance with these requirements.
- 10.3.4 A condition requiring the Applicant to prepare, consult on and adhere to an updated LMP has been attached to the marine licence. East Lothian Council and NatureScot will be consulted.
- 10.3.5 The Scottish Ministers consider that, having taken into account the information provided by the Applicant, the responses of the consultative bodies and having regard to the conditions attached to the marine licence, there are no outstanding concerns in relation to the impact of the Works on seascape, landscape and visual amenity which would require regulatory approval to be withheld.

10.4 *Impacts on Aviation and Defence*

- 10.4.1 The MOD highlighted that the Works is located within Low Flying Area 16 within which aircraft may operate as low as 76.2m. The WTG has a maximum height of 280m above HAT and the metmast has a maximum height of 160m above HAT, therefore the Works has the ability to impact low flying aircraft in this area. To mitigate the impact the MOD requested conditions be attached to the consent to ensure the Works is fitted with aviation safety lighting in accordance with the Air Navigation Order 2016 and to ensure that sufficient data is submitted to accurately chart the Works to allow deconfliction. The requirements for aviation and navigational lighting will be implemented through the LMP which is attached as a condition to the marine licence.
- 10.4.2 The Scottish Ministers consider that, having taken into account the information provided by the Applicant, the responses of the consultative bodies and having regard to the conditions attached to the marine licence, there are no



outstanding concerns in relation to the impact of the Works on aviation and defence which would require regulatory approval to be withheld.

## 10.5 *Economic benefits*

10.5.1 SPP advises that economic benefits are material issues which must be taken into account as part of the determination process. SPP also confirms the Scottish Ministers' aim of achieving a thriving renewables industry in Scotland. Further, national policy and strategies, such as NPF4 the draft Energy Strategy, Just Transition Plan and The Scottish Energy Strategy: The Future of Energy in Scotland (Scottish Government, 2017), support the role of renewable energy development in achieving socio-economics benefits and supporting the growth of the low carbon economy. The EIA Report reported that the Works would support the development of the domestic renewable energy industry and offsetting of GHG emissions.

10.5.2 The Applicant assessed the impact on tourism as a result of the Works within the socio-economics chapter of the EIA Report. The Works comprises a single WTG and is situated within an area of multiple wind farm developments and as such it is anticipated that it will not have a negative effect on local tourism.

10.5.3 The Applicant has estimated that net additional employment from the Works is estimated to be up to 60 FTE ("Full Time Equivalent") construction jobs and six FTE maintenance and administrative jobs.

10.5.4 MAU commented on the socio-economic chapter offering a largely qualitative assessment however considered this to be appropriate given the scale of the Works and further highlighted the benefit of monitoring the potential socio-economic impacts of the Works.

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

## 10.6 *Renewable energy generation and associated policy benefits*

10.6.1 As a test and demonstration project, the Works will enable technological advances in the energy generation capabilities of future offshore wind farms contributing to the security of the UK's domestic energy supply and ultimately contributing towards the ambitious Scottish and UK renewable energy targets.

## 11. **The Scottish Ministers' Determination**



- 11.1 The Scottish Ministers are satisfied that an EIA has been carried out, and that the applicable procedures regarding publicity and consultation in respect of the Application have been followed.
- 11.2 The Scottish Ministers have weighed the impacts of the Works, and the degree to which these can be mitigated, against the economic and renewable energy benefits which would be realised. The Scottish Ministers have undertaken this exercise in the context of national and local policies.
- 11.3 The Scottish Ministers have considered the extent to which the Works accords with and is supported by Scottish Government policy, the terms of the SPP, the NMP, local development plans and the environmental impacts of the Works, in particular: impacts on seabirds and marine mammals (including impacts on European sites and European offshore marine sites), impacts on commercial fisheries, impacts on seascape, landscape and visual amenity and impacts on aviation and defence. The Scottish Ministers have also considered the socio-economic and the renewable energy benefits of the Works.
- 11.4 The Scottish Ministers are satisfied that the environmental issues have been appropriately addressed by way of the design of the Works and through mitigation measures, and that the issues which remain are, on balance, outweighed by the benefits of the Works. In particular, the Scottish Ministers are satisfied that the proposal would not adversely affect the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA, Forth Islands SPA, Firth of Forth SPA, Firth of Tay and Eden Estuary SAC, Isle of May SAC, Berwickshire and North Northumberland Coast SAC, Moray Firth SAC and the River Teith SAC.
- 11.5 In their consideration of the environmental impacts of the Works, the Scottish Ministers have identified conditions to be attached to the marine licence to reduce and monitor environmental impacts (these conditions are outlined in Annex 2). These include a requirement for post-consent monitoring of birds, a CEMP, Operation and Maintenance Programme (“OMP”) and a VMP.
- 11.6 A condition requiring the appointment of an Environmental Clerk of Works (“ECoW”) and defining the terms of the ECoWs appointment has been attached to the marine licence. The ECoW will be required to monitor and report on compliance with all consent conditions and to monitor the construction of the Works in accordance with plans and the terms of the Application, the marine licence and all relevant regulations and legislation. The ECoW will also be required to provide quality assurance on the final draft versions of any plans and programmes required under the marine licence.
- 11.7 The Scottish Ministers are satisfied, having regard to current knowledge and methods of assessment, that this reasoned conclusion, as required under the 2017 MW Regulations, is valid.

- 11.8 The Scottish Ministers grant a marine licence under Part 4 of the Marine (Scotland) Act 2010, to construct, alter or improve the Forthwind Demonstration Project in the Scottish marine area. The marine licence is available in Annex 1.
- 11.9 The embedded mitigation and any additional mitigation identified in the EIA Report has been incorporated into the conditions of this marine licence and/or s.36 consent. The conditions also capture monitoring measures required under Regulation 24 of the 2017 MW Regulations.
- 11.10 In accordance with the 2017 MW Regulations, the Applicant must publicise notice of this determination and provide that a copy of this decision letter may be inspected: (a) on the Application website; (b) in the Edinburgh Gazette; and (c) in a newspaper circulating in the locality to which the Application relates or such newspaper as is likely to come to the attention of those likely to be affected by the Works. The Applicant must provide copies of the public notices to the Scottish Ministers.
- 11.11 Copies of this letter have been sent to the public bodies consulted on the Application, including the relevant planning authorities, NatureScot, SEPA and HES. This letter has also been published on the [Marine Scotland Information](#) website.
- 11.12 The Scottish Ministers' decision is final, subject to the right of any aggrieved person to apply to the Court of Session for judicial review. Judicial review is the mechanism by which the Court of Session supervises the exercise of administrative functions, including how the Scottish Ministers exercise their statutory function to determine applications for regulatory approval. The rules relating to the judicial review process can be found on the [Scottish Courts and Tribunals](#) website.
- 11.13 Your local Citizens' Advice Bureau or your solicitor will be able to advise you about the applicable procedures.

Yours sincerely,

**Gayle Holland**

Section Head (Consenting), Marine Scotland Licensing Operations Team

A member of staff of the Scottish Ministers

14 March 2023

## **DEFINITIONS AND GLOSSARY OF TERMS**

“the Application” means the Application letter, marine licence applications and EIA Report including appendices submitted to the Scottish Ministers by Forthwind Limited on 29 April 2022;

“AA” means Appropriate Assessment;

“Commencement of the Works” means the date on which the first construction activity occurs in accordance with the EIA Report submitted by the Applicant on 29 April 2022;

“the Applicant” means Forthwind Limited, The BoatHouse Hawkcraig, Aberdour, Burntisland, Fife, KY3 0TZ, Company Registration No. SC470580;

“the Works” means the Forthwind Demonstration Project, approximately 1.5km off the coast of Methil, as described in Annex 1;

“ECoW” means Ecological Clerk of Works;

“EIA” means Environmental Impact Assessment;

“EIA Report” means Environmental Impact Assessment Report;

“EMF” means Electromagnetic Field;

“FLO” means Fisheries Liaison Officer;

“FTE” means Full Time Equivalent;

“GHGs” means Greenhouse Gasses;

“HAT” means Highest Astronomical Tide;

“HPAI” means Highly Pathogenic Avian Influenza;

“km” means kilometres;

“LDT” means Levenmouth Demonstration Turbine;

“LSE” means Likely Significant Effect;

“m” means metres;

“metmast” means meteorological mast;

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“MGN 654” means Marine Guidance Note 654;

“mINNS” means Marine Invasive Non-Native Species;

“MW” means megawatt;

“PLI” means Public Local Inquiry;

“PMF” means Priority Marine Features;

“s.36” means Section 36 of the Electricity Act 1989;

“s.36A” means Section 36A of the Electricity Act 1989;

“SAC” means Special Area of Conservation;

“ScotMER” means Scottish Marine Energy Research;

“SLVIA” means Seascape, Landscape and Visual Impact Assessment;

“SPA” means Special Protected Area;

“VTS” means Vessel Traffic Service;

“WTG” means Wind Turbine Generator.

## **Organisations and Companies**

“BT” means British Telecommunications;

“HES” means Historic Environment Scotland;

“MAU” means Marine Analytical Unit;

“MCA” means Maritime and Coastguard Agency;

“MOD” means Ministry of Defence;

“MS-LOT” means Marine Scotland – Licensing Operations Team;

“MSS” means Marine Scotland Science;

“NLB” means Northern Lighthouse Board;

“RSPB” means Royal Society for the Protection of Birds;

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“RYA” means Royal Yachting Association;

“SEPA” means Scottish Environmental Protection Agency;

“TS” means Transport Scotland;

“WDC” means Whale and Dolphin Conservation.

### **Plans, Programmes and Statements**

“CEMP” means Construction Environmental Management Plan;

“DP” means Decommissioning Programme;

“HRA” means Habitats Regulations Appraisal;

“LMP” means Lighting and Marking Plan;

“NSP” means Navigational Safety Plan;

“NMMS” means Noise Measurement and Mitigation Scheme

“NMP” means National Marine Plan;

“NSP” means Navigational Safety Plan;

“NPF4” means Scotland’s National Planning Framework 4;

“NRIP” means National Renewables Infrastructure Plan;

“OMP” means Operation and Maintenance Programme;

“PAD” means Protocol for Archaeological Discoveries;

“PEMP” means Project Environmental Management Plan;

“SPP” means Scottish Planning Policy 2014;

“VMP” means Vessel Management Plan;

“WFD” means Water Framework Directive;

“WSI” means Written Scheme of Investigation.

**Legislation**

“the Electricity Act” means the Electricity Act 1989;

“the Habitats Regulations” means the Conservation (Natural Habitats, & c.) Regulations 1994 and the Conservation of Habitats and Species Regulations 2017;

“the 2017 EW Regulations” means the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017;

“the 2017 MW Regulations” means the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

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**ANNEX 1 – Marine Licence**



**MARINE (SCOTLAND) ACT 2010, PART 4 MARINE LICENSING**

**LICENCE TO CONSTRUCT, ALTER OR IMPROVE WORKS IN THE SCOTTISH MARINE AREA**

Licence Number: **MS-00009834**

The Scottish Ministers (hereinafter referred to as "the Licensing Authority") hereby grant a marine licence authorising:

**Forthwind Limited  
The Boathouse Hawkcraig  
Aberdour  
Burntisland  
Fife  
KY3 0TZ**

to construct, alter or improve works as described in Part 2. The licence is subject to the conditions set out, or referred to, in Part 3.

The licence is valid from **15 March 2023** until **31 October 2049** or until the Works have been decommissioned in accordance with an approved Decommissioning Programme prior to this date and for which a separate marine licence is required.

Signed: .....  
Gayle Holland

For and on behalf of the Licensing Authority

Date of issue: 14 March 2023



## 1. PART 1 - GENERAL

### 1.1 Interpretation

In the licence, terms are as defined in Section 1, 64 and 157 of the Marine (Scotland) Act 2010, and

1. **“CAA”** means Civil Aviation Authority;
2. **“CaP”** means Cable Plan;
3. **“CEMP”** means Construction Environmental Management Plan;
4. **“Commencement of the Licensed Activity”** means the date on which the first vehicle or vessel arrives on the site to begin carrying on any activities in connection with the Licensed Activity;
5. **“Completion of the Licensed Activity”** means the date on which the Licensed Activity has been installed in full, or the Licensed Activity has been deemed complete by the Licensing Authority, whichever occurs first;
6. **“CoP”** means Construction Programme;
7. **“Decommissioning Programme”** means the programme for decommissioning the Works, to be submitted by the Licensee to the Licensing Authority under section 105(2) of the Energy Act 2004;
8. **“EcoW”** means Environmental Clerk of Works;
9. **“EMF”** means Electromagnetic Fields;
10. **“F-Gas Regulation”** means Regulation No 517/2014 of the European Parliament and of the Council of 16 April 2014 on Fluorinated Greenhouse Gases;
11. **“Final Commissioning of the Works”** means the date on which all the Works have been used to supply electricity on a commercial basis to the National Grid, or such earlier date as the Licensing Authority deem the Works to be fully commissioned;
12. **“FLO”** means Fisheries Liaison Officer;
13. **“FMMS”** means Fisheries Management and Mitigation Strategy;
14. **“FTCFWG”** means Forth and Tay Commercial Fisheries Working Group;
15. **“HAT”** means Highest Astronomical Tide;
16. **“HES”** means Historic Environment Scotland;
17. **“IALA”** means International Association of Marine Aids to Navigation and Lighthouse Authorities;
18. **“km”** means kilometres;
19. **“LAT”** means Lowest Astronomical Tide;
20. **“Licensed Activity”** means any activity or activities listed in section 21 of the 2010 Act which is or are authorised under the licence;
21. **“Licensee”** means Forthwind Limited (Company Number SC470580) having its registered office at The Boathouse, Hawkcraig, Aberdour, Burntisland, Fife, KY3 0TZ;
22. **“Licensing Authority”** means the Scottish Ministers;
23. **“LMP”** means Lighting and Marking Plan;
24. **“m”** means metres;
25. **“MCA”** means Maritime and Coastguard Agency;
26. **“Mean High Water Springs”** means any area submerged at mean high water spring tide;
27. **“MGN”** means Marine Guidance Note;
28. **“MMO”** means Marine Mammal Observer;
29. **“MOD”** means Ministry of Defence;
30. **“NLB”** means Northern Lighthouse Board;
31. **“NSP”** means Navigational Safety Plan;
32. **“OMP”** means Operation and Maintenance Programme;
33. **“PAD”** means Protocol for Archaeological Discoveries;
34. **“PEMP”** means Project Environment Monitoring Plan;
35. **“RYA”** means Royal Yachting Association Scotland;
36. **“ScotMER”** means Scottish Marine Energy Research;
37. **“SFF”** means Scottish Fishermen’s Federation;
38. **“the Reports”** means vessel reports detailing the operators, vessels and vehicles engaging in the Licensed Activity;
39. **“the Works”** means the works as described in Part 2 of this licence;
40. **“the 2010 Act”** means the Marine (Scotland) Act 2010;
41. **“TPC”** or **“TPV”** means Third Party Certification or Third Party Verification;
42. **“UKHO”** means United Kingdom Hydrographic Office;
43. **“VMP”** means Vessel Management Plan;
44. **“WSI”** means Written Scheme of Investigation;
45. **“WTG”** means Wind Turbine Generator.

All geographical co-ordinates contained within the licence are in World Geodetic System 84 ("WGS84") format (latitude and longitude degrees and minutes to three decimal places) unless otherwise stated.

## **1.2 Contacts**

All correspondence or communications relating to the licence should be addressed to:

Marine Scotland  
Licensing Operations Team  
Marine Laboratory  
375 Victoria Road  
Aberdeen  
AB11 9DB  
Email: MS.MarineRenewables@gov.scot

## **1.3 Other authorisations and consents**

The Licensee is deemed to have satisfied itself that there are no barriers or restrictions, legal or otherwise, to the carrying on of the Licensed Activity in connection with the Licensed Activity. The issuing of the licence does not absolve the Licensee from obtaining such other authorisations and consents, which may be required under statute.

## **1.4 Variation, suspension, revocation and transfer**

Under section 30 (1) of the 2010 Act, the Licensing Authority may by notice vary, suspend or revoke the licence granted by them if it appears to the Licensing Authority that there has been a breach of any of its provisions or for any such other reason that appears to be relevant to the Licensing Authority under section 30(2) or (3) of the 2010 Act. Under the 2010 Act, variations, suspensions, revocations and transfers of licences are subject to the procedures set out in section 31 of the Act.

Under section 30 (7) of the 2010 Act, on an application made by a licensee, the Licensing Authority may vary a licence if satisfied that the variation being applied for is not material.

Under section 30 (8) of the 2010 Act, on an application made by the licensee, the Licensing Authority may transfer the licence from the Licensee to another person.

## **1.5 Breach of requirement for, or conditions of, licence**

Under section 39 of the 2010 Act it is an offence to carry on a Licensable Marine Activity (as defined in the 2010 Act) without a marine licence and it is also an offence to fail to comply with any condition of a marine licence.

## **1.6 Defences: actions taken in an emergency**

Under section 40 of the 2010 Act it is a defence for a person charged with an offence under section 39(1) of the 2010 Act in relation to any activity to prove that: (a) the activity was carried out for the purpose of saving life, or for the purpose of securing the safety of a vessel, aircraft or marine structure ('force majeure'); and (b) that the person took steps within a reasonable time to inform the Licensing Authority of the matters set out in section 40(2) of the 2010 Act.

## **1.7 Offences relating to information**

Under section 42 of the 2010 Act it is an offence for a person to make a statement which is false or misleading in a material way, knowing the statement to be false or misleading or being reckless as to whether the statement is false or misleading, or to intentionally fail to disclose any material information for the purpose of procuring the issue, variation or transfer of a marine licence or for the purpose of complying with, or purporting to comply with, any obligation imposed by either Part 4 of the 2010 Act or the provisions of this licence.

## **1.8 Appeals**

Under Regulation 3(1) of the Marine Licensing Appeals (Scotland) Regulations 2011 a person who has applied for a marine licence may by summary application appeal to a sheriff against a decision taken by the Licensing Authority under section 29(1) of the 2010 Act.

## **2. PART 2 – PARTICULARS**

### **2.1 Agent**

As per Licensee.

### **2.2 Location of the Licensed Activity**

The project includes the marine elements (which are all elements of the project other than the onshore infrastructure) of the Works to, to be sited within the Scottish marine area, approximately 1.5 kilometres (“km”) from the Fife coastline, off Methil, within the area bounded by joining the following points:

56° 10.383' N 03° 01.333' W  
56° 09.883' N 03° 00.167' W  
56° 09.867' N 03° 00.167' W  
56° 09.750' N 03° 00.517' W  
56° 09.667' N 03° 00.651' W  
56° 09.667' N 03° 00.667' W  
56° 09.751' N 03° 00.533' W  
56° 09.883' N 03° 00.183' W  
56° 10.367' N 03° 01.333' W

Wind Turbine Generator (“WTG”) located at the point: 56° 09.875' N 03° 00.177' W (subject to 100 metres (“m”) micro-siting around the centre point of the WTG)

Meteorological Mast (“metmast”) located at the point: 56° 09.670' N 03° 00.653' W (subject to 100m micro-siting around the centre point of the metmast)

The total area within the Works site boundary is 9,639 square metres. The location and boundary of the Works are shown in Annex One.

## **2.3 Description of the Works**

The construction of:

1. A single three-bladed horizontal axis WTG with:
  - (a) A maximum hub height of 156 metres (“m”) above Highest Astronomical Tide (“HAT”);
  - (b) A maximum height to blade tip of up to 280m above HAT;
  - (c) A maximum rotor diameter of 255m;
  - (d) A minimum blade tip clearance of 25m above HAT;
  - (e) A blade width of up to 5.8m;
2. A metmast with a height of 160m above HAT;
3. Foundation for the WTG (either a jacket with a maximum of 4 pin piles or a monopile);
4. Foundation for the metmast (monopile);
5. Approximately 625m of communications cable between the turbine and the metmast;
6. Approximately 625m of power cable between the turbine and the metmast;
7. A subsea export cable running from the WTG to shore, approximately 1.5 km;
8. Scour and cable protection,

(referred to in this licence as “the Works”).

The Works are to be as described in the application dated 29 April 2022 (as updated on 12 May 2022) and correspondence submitted in support of the application (“the Application”).

## **2.4 Descriptions of the materials to be used during the Works**

This licence authorises the use of the undernoted construction materials required in connection with the Licensed Activity, subject to the indicative amounts as specified below:

Steel/iron – 5888 tonnes  
Concrete – 874 cubic metres  
Stone/rock/gravel – 1,297 cubic metres  
Concrete bags/mattresses – 34,034 cubic metres  
Cable – 2,425 metres  
Composite materials – 190 tonnes  
Copper – 30 tonnes  
Aluminium – 21.6 tonnes  
Wood – 11.6 tonnes  
Polymers – 4.5 tonnes

## **2.5 Contractor and Vessel Details**

To be confirmed.

### **3. PART 3 – CONDITIONS**

#### **3.1 General Conditions**

3.1.1 The Licensee must only construct the Works in accordance with this licence, the Application and any plans or programmes approved by the Licensing Authority unless otherwise authorised by the Licensing Authority.

3.1.2 The Licensee must maintain the Works in accordance with this licence, the Application and any plans or programmes approved by the Licensing Authority unless otherwise authorised by the Licensing Authority.

3.1.3 All conditions attached to the licence bind any person who for the time being owns, occupies or enjoys any use of the Works, whether or not the licence has been transferred to that person.

3.1.4 Only the materials listed in Part 2 of the licence may be used during the execution of the Licensed Activity.

3.1.5 All materials, substances and objects used during the execution of the Licensed Activity must be inert and must not contain toxic elements which may be harmful to the marine environment, the living resources which it supports or human health.

3.1.6 The Licensee must ensure that the Licensed Activity does not encroach on any recognised anchorage, either charted or noted in nautical publications, within the licensed area as described in Part 2 of the Licence.

3.1.7 Where any damage, destruction or decay is caused to the Works, the Licensee must notify the Licensing Authority, Maritime and Coastguard Agency (“MCA”), Northern Lighthouse Board (“NLB”), Kingfisher Information Services of Seafish and the UK Hydrographic Officer, in writing, of such damage, destruction or decay as soon as reasonably practicable but no later than 24 hours after becoming aware of any such damage, destruction or decay. The Licensee must carry out any remedial action as required by the Licensing Authority, following consultation with the MCA, NLB or any such advisors as required by the Licensing Authority.

The Licensee must remove the materials, from below the level of Mean High Water Springs, or make such alterations as advised by the Licensing Authority, at timescales to be determined by the Licensing Authority at any time it is considered necessary or advisable for the safety of navigation, and not replace those materials without further approval by the Licensing Authority. The Licensee shall be liable for any expense incurred.

3.1.8 If governmental assistance is required (including UK governmental assistance or the assistance of any UK devolved government) to deal with any emergency arising from:

- a) the failure to mark and light the Works as required by the licence;
- b) the maintenance of the Works; or
- c) the drifting or wreck of the Works, to include the broadcast of navigational warnings

then the Licensee is liable for any expenses incurred in securing such assistance.

3.1.9 The Licensee must take all measures which are technically and economically feasible to minimise leakage of fluorinated greenhouse gases. Where 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 Licensed Activity that contains fluorinated greenhouse gases in quantities of five tonnes or more of CO<sub>2</sub> equivalent and not contained in foams is checked for leakage in accordance with Article 4 of the F-Gas Regulation. Records of these checks must be kept in accordance with Article 6 of the F-Gas Regulation. These records must be submitted to the Licensing Authority annually and immediately in the event of discovery of leakage.

Where the equipment is subject to checks for leakage under Article 4(1) of the F-Gas Regulation and leakage in the equipment has been repaired, the Licensee must ensure that the equipment is checked by a suitably 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.

3.1.10 The Licensee must seek prior written approval from the Licensing Authority for any chemicals in an open system which are to be utilised in the construction, operation and maintenance of the Licensed Activity. Requests for approval must be submitted in writing to the Licensing Authority no later than one month prior to its intended use or such other period as agreed by the Licensing Authority. The Licensee must ensure that no chemicals are used in an open system without the prior written approval of the Licensing Authority.

If the proposed chemical is on the Offshore Chemical Notification Scheme list, the approval request must include the chemical name, volume or quantity to be used, the Offshore Chemical Notification Scheme list grouping or rank and the proposed frequency of use.

If the proposed chemical is not on the Offshore Chemical Notification Scheme list, the approval request must include details of chemicals to be used, including safety data sheet, depth and current at the site of the Works, quantities or volumes and the proposed frequency of use.

The Licensee must notify the Licensing Authority of the types of chemicals to be used in a closed containment system prior to use.

The Licensee should take all practicable steps to avoid leakages from a closed containment system into the Scottish marine area. Any such leakages must be reported to the Licensing Authority as soon as practicable.

3.1.11 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 there may be a delay in the submission of the reports or notifications to the Licensing Authority, 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 or notifications 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 will, subject to any rules permitting non-disclosure, be made publicly available by the Licensing Authority or by any such party appointed at its 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 Marine Mammal Observer ("MMO") records and all appropriate reports stipulated within the Project Environment Monitoring Plan ("PEMP").

3.1.12 The Licensee must operate and maintain the Works in accordance with the approved Operation and Maintenance Programme ("OMP") (see condition 3.2.13). The Licensing Authority must be notified at least three calendar months, or such other period as agreed by the Licensing Authority in advance, of any maintenance of the Licensed Activity not included in the OMP and involving licensable marine activities not covered under this licence.

3.1.13 In the event of the Licensed Activity being discontinued the materials used under the authority of this licence must be removed to the satisfaction of the Licensing Authority.

3.1.14 The Licensee must ensure that the Works are maintained at all times in good repair.

3.1.15 The Licensee must ensure that the Licensed Activity is only carried out at the location of the Licensed Activity specified in Part 2 of this licence. The WTG and metmast must be constructed only at the locations specified in Part 2 of this licence.

3.1.16 No activity authorised under this licence may take place until a Decommissioning Programme ("DP"), as defined in any section 105 notice served by the appropriate Minister, has been approved under section 106 of the Energy Act 2004 by the appropriate Minister.

3.1.17 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 Licensed Activity, in writing, to the Licensing Authority for its 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.

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

Any updates or amendments made to the approved plans must be submitted, in writing, to the Licensing Authority for its prior written approval. The Works must, at all times, be constructed and operated in accordance with the approved plans.

3.1.18 Should the Licensee proceed to undertake the Licensed Activity under the authority of this licence, the Licensed Activity authorised under the previous marine licence in favour of Forthwind Ltd, dated 30 May 2019 (reference 05632/19/0) shall not be permitted.

3.1.19 The Licensee must ensure that any debris or waste materials arising during the course of the Licensed Activity are removed for disposal at an approved location above the tidal level of Mean High Water Springs.

3.1.20 The Licensee must ensure that copies of this licence are available for inspection by any authorised marine enforcement officer at:

- a) the premises of the Licensee;
- b) the premises of any agent acting on behalf of the Licensee; and
- c) the site of the Licensed Activity.

3.1.21 Any person authorised by the Licensing Authority must be permitted to inspect the Works at any reasonable time. The Licensee must, on being given reasonable notice by the Licensing Authority (of at least 72 hours), provide transportation to and from the site for any persons authorised by the Licensing Authority to inspect the site of the Works. The Licensee shall be liable for any expense incurred.

### 3.2 Prior to the Commencement of the Licensed Activity

3.2.1 The Licensee must, prior to and no less than one calendar month before the Commencement of the Licensed Activity, notify the Licensing Authority, in writing, of the proposed date of the Commencement of the Licensed Activity authorised under this licence.

3.2.2 The Licensee must ensure that at least five days prior to its engagement in the Licensed Activity, the name and function of any vessel (including the master's name, vessel type, vessel international maritime organisation number and vessel owner or operating company), agent, contractor or subcontractor appointed to engage in the Licensed Activity are fully detailed in contractor and vessel reports ("the Reports") which the Licensee must make available on its website: <https://forthwind.co.uk/>.

Any changes to the supplied detailed must be uploaded to the Reports and the Licensing Authority and Forth Ports Limited must be notified, in writing, prior to any vessel, agent, contractor or sub-contractor which has not yet been notified to the Licensing Authority engaging in the Licensed Activity.

Only those vessels, agents, contractors or sub-contractors detailed in the Reports are permitted to carry out any part of the Licensed Activity. Any vessels involved in drilling and deposit of drilling arisings must be notified to the Licensing Authority.

The Licensee must satisfy itself that any masters of vessels or vehicle operators, agents, contractors or sub-contractors are aware of the extent of the Licensed Activity and the conditions of this licence.

All masters of vessels or vehicle operators, agents, contractors and sub-contractors permitted to engage in the Licensed Activity must abide by the conditions of 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 Licensed Activity and must ensure that the licence and any such variations are read and understood by those persons.



3.2.3 The Licensee must complete and send a Marine Emergency Action Card for the Licensed Activity to [oelo@mcga.gov.uk](mailto:oelo@mcga.gov.uk) at least 10 working days prior to Commencement of the Licensed Activity.

3.2.4 The Licensee must contact the local statutory harbour authority, in this case Forth Ports Limited, prior to Commencement of the Licensed Activity to discuss the requirements for navigational warnings and a works licence.

The Licensee must ensure that a communications procedure is established and agreed with Forth Ports Limited prior to the Commencement of the Licensed Activity.

3.2.5 The Licensee must ensure that all personnel adhere to the Scottish Marine Wildlife Watching Code where appropriate during the Licensed Activity.

3.2.6 There must be no Commencement of the Licensed Activity until the Licensee has satisfied the Licensing Authority, by consultation with the MCA, that it has taken into account and adequately addressed all of the recommendations of the MCA in the current Marine Guidance Note ("MGN") 654, and its annexes, or any other relevant document which may supersede this guidance.

3.2.7 Prior to the Commencement of the Licensed Activity, the Licensee must appoint a MMO. When appointed, the MMO must, as a minimum, maintain a record of any sightings of marine mammals and maintain a record of the action taken to avoid any disturbance being caused to marine mammals during noisy activities.

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

3.2.8 The Licensee must, no later than 10 days prior to Commencement of the Licensed Activity, notify the UK Hydrographic Office ("UKHO") at [sdr@ukho.gov.uk](mailto:sdr@ukho.gov.uk), of the proposed Licensed Activity. The notification must include the start and end date of the Licensed Activity, a description of the Works, positions of the area of the Works (WGS84), and details of any marking arrangements. A copy of the notification must be sent to the Licensing Authority within 5 working days of the notification being sent.

The Licensee must ensure that local mariners and fishermen's organisations are made fully aware of the Works through a local notification. This must be issued at least 5 days before the Commencement of the Licensed Activity. Marine Scotland must be sent a copy of this notification within 24 hours of issue.

The Licensee must, no later than 7 days prior to the Commencement of the Licensed Activity, notify [Zone4@hmcg.gov.uk](mailto:Zone4@hmcg.gov.uk) and [renewables@hmcg.gov.uk](mailto:renewables@hmcg.gov.uk) of the proposed Licensed Activity. A copy of the notification must be sent to the Licensing Authority within 5 working days of the notification being sent.

The Licensee must ensure that details of the Licensed Activity are promulgated in the Kingfisher Fortnightly Bulletin, no later than 7 days prior to the Commencement of the Licensed Activity to inform the Sea Fish Industry of the vessel routes, the timings and the location of the Licensed Activity and of the relevant operations.

3.2.9 The Licensee must, no later than 3 calendar months prior to the Commencement of the Licensed Activity, provide the Licensing Authority with Third Party Certification or Verification ("TPC" or "TPV") (or a suitable alternative as agreed in writing with the Licensing Authority) that covers the entirety of the Works for the lifespan of the Works.

In this condition, the term "lifespan" means the entire period that this licence remains in force.

The TPC or TPV should follow the guidance provided in the Offshore wind, wave and tidal energy applications: consenting and licensing manual <https://www.gov.scot/publications/marine-licensing-applications-and-guidance/> or any other relevant document which may supersede this. There must be no Commencement of the Licensed Activity unless the TPC or TPV is provided as described above unless otherwise agreed with the Licensing Authority.

3.2.10 The Licensee must, no later than six months prior to the Commencement of the Licensed Activity, submit a Construction Programme ("CoP"), in writing, to the Licensing Authority for their written approval. Commencement of the Licensed Activity cannot take place until such approval is granted. Such approval may only be granted following consultation by the Licensing Authority with NatureScot, Civil Aviation Authority ("CAA"), MOD, Forth Ports Limited, and any such other advisors or organisations as may be required at the discretion of the Licensing Authority.

The CoP must set out;

a. The proposed date for Commencement of the Licensed Activity;

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- 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 final CoP must be sent to City of Edinburgh Council, East Lothian Council, Fife Council, Forth Ports, MCA and NLB for information only.

3.2.11 The Licensee must, no later than six months prior to the Commencement of the Licensed Activity, submit an updated Construction Environmental Management Plan ("CEMP"), in writing, to the Licensing Authority for their written approval. Commencement of the Licensed Activity cannot take place until such approval is granted. Such approval may only be granted following consultation by the Licensing Authority with NatureScot, Forth Ports Limited, MCA, NLB and any such other advisors or organisations as may be required at the discretion of the Licensing Authority.

The CEMP must include a construction method statement which adheres to the construction methods assessed in the Application and which includes, but is not limited to:

- a. Methods of construction as they relate to all aspects of the Works; and
- b. Details of the working areas and good working practices for constructing the Works.

The CEMP must be in accordance with the Application insofar as it relates to environmental management measures.

The CEMP must set out the roles, responsibilities and chain of command for the Licensee's 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.

The CEMP must include, but not be limited to, the following over-arching requirements for environmental management during construction and operation:

- a. Mitigation measures to prevent significant adverse impacts on the environment, as identified in the Application and pre-consent and pre-construction monitoring or data collection, including details of expected noise levels and any mitigation and monitoring to be employed during the installation of drilled piles;
- b. An updated Marine Mammal Observer Protocol;
- c. Marine Pollution Contingency Plan;
- d. An updated Biosecurity Management Plan; and
- e. 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.

The CEMP must be informed, so far as is reasonably practicable, by the baseline monitoring or data collection undertaken as part of the Application and the PEMP. The CEMP must, so far as is reasonably practicable, be consistent with the Vessel Management Plan ("VMP"), the Navigational Safety Plan ("NSP"), the Cable Plan ("CaP") and the Lighting and Marking Plan ("LMP").

The approved CEMP must be sent to City of Edinburgh Council, East Lothian Council and Fife Council for information only.

3.2.12 The Licensee must, no later than six months prior to the Commencement of the Licensed Activity, submit a VMP, in writing, to the Licensing Authority for their written approval. Commencement of the Licensed Activity cannot take place until such approval is granted. Such approval may only be granted following consultation by the Licensing Authority with NatureScot, MCA, Forth Ports Limited, SFF and any such other advisors or organisations as may be required at the discretion of the Licensing Authority.

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

- a. The number, types and specification of vessels required;
- b. How vessel management will be coordinated, particularly during construction but also during operation;

c. Location of working port(s), the routes of passage, the frequency with which vessels will be required to transit between port(s) and the site and indicative vessel transit corridors proposed to be used during construction and operation of the Works.

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

Construction and vessel activity should be restricted during the wintering period from September to March. The VMP should refer to the Scottish Marine Wildlife Watching Code and Guide to Best Practice for Watching Marine Wildlife for guidance on how vessels should behave around aggregations of birds on the water.

The VMP must, so far as is reasonably practicable, be consistent with the CEMP, the Fisheries Management and Mitigation Strategy ("FMMS"), the PEMP, the NSP, and the LMP.

3.2.13 The Licensee must, no later than three months prior to the Final Commissioning of the Works, submit an OMP in writing, to the Licensing Authority for their written approval. Such approval may only be granted following consultation by the Licensing Authority with NatureScot, Forth Ports Limited, MCA, NLB, Fife Council and any such other advisors or organisations as may be required at the discretion of the Licensing Authority.

The OMP must set out the procedures and good working practices for operations and the maintenance of the WTG, metmast, substructures and cable network of the Works. Environmental sensitivities which may affect the timing of the operation and maintenance activities must be considered in the OMP.

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

The approved OMP must be sent to City of Edinburgh Council and East Lothian Council for information only.

3.2.14 The Licensee must, no later than six months prior to the Commencement of the Licensed Activity, submit a NSP, in writing, to the Licensing Authority for their written approval. Commencement of the Licensed Activity cannot take place until such approval is granted. Such approval may only be granted following consultation by the Licensing Authority with MCA, NLB, Forth Ports Limited, RYA, SFF and any other navigational advisors or organisations as may be required at the discretion of the Licensing Authority.

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

- a. Navigational safety measures;
- b. Construction exclusion zones;
- c. Notice(s) to mariners and radio navigation warnings;
- d. Anchoring areas;
- e. Temporary construction lighting and marking;
- f. Buoyage.

3.2.15 The Licensee must, no later than six months prior to the Commencement of the Licensed Activity, submit an updated CaP, in writing, to the Licensing Authority for their written approval. Commencement of the Licensed Activity cannot take place until such approval is granted. Such approval may only be granted following consultation by the Licensing Authority with NatureScot, MCA, SFF, Fife Council and any such other advisors or organisations as may be required at the discretion of the Licensing Authority. The CaP must be in accordance with the Application.

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

- a) The location, duration and cable laying techniques for 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 the cables, including a desk based assessment of attenuation of electro-magnetic field strengths and shielding;
- d) A Cable Burial Risk Assessment to ascertain burial depths and where necessary alternative protection measures;

- e) Methodologies for post construction and operational surveys (e.g. over trawl) of the cables where mechanical protection of cables laid on the sea bed is deployed; and
- f) Methodologies for cable inspection with measures to address and report to the Licensing Authority any exposure of cables.

Any consented cable protection works must ensure existing and future safe navigation is not compromised. The Licensing Authority will accept a maximum of 5% reduction in surrounding depth referenced to Chart Datum. Any greater reduction in depth must be agreed in writing by the Licensing Authority.

3.2.16 The Licensee must, no later than six months prior to the Commencement of the Licensed Activity, submit an updated LMP, in writing, to the Licensing Authority for their written approval. Commencement of the Licensed Activity cannot take place until such approval is granted. Such approval may only be granted following consultation by the Licensing Authority with NatureScot, MCA, NLB, Forth Ports Limited, CAA, MOD, East Lothian Council and any such other advisors or organisations as may be required at the discretion of the Licensing Authority.

The LMP must provide that the Works be lit and marked in accordance with the current CAA and MOD aviation lighting policy and guidance that is in place as at the date of the Licensing Authority approval of the LMP, or any such other documents that may supersede this guidance prior to the approval of the LMP. Consideration should be given in the LMP to reducing the luminous intensity of aviation lighting in certain visibility conditions but only where this is in accordance with the current CAA and MOD aviation lighting policy and guidance that is in place. The LMP must define how the Works will be lit throughout its life to maintain civil and military aviation safety requirements as determined necessary for aviation safety by the MOD and, accordingly, must set out:

- a) details of any construction equipment and temporal structures with a total height of 50m or greater (above mean sea level) that will be deployed during the construction of the Works and details of any aviation warning lighting that they will be fitted with; and
- b) the locations and heights of the WTG and metmast featured in the Works identifying those that will be fitted with aviation warning lighting identifying the position of the lights on the WTG; the type(s) of lights that will be fitted and the performance specification(s) of the lighting type(s) to be used.

The LMP must also detail the navigational lighting requirements detailed in the International Association of Marine Aids to Navigation and Lighthouse Authorities ("IALA") G1162 Ed 1.0 or any other documents that may supersede this guidance prior to approval of the LMP.

The final approved LMP must be sent to City of Edinburgh Council and Fife Council for information only.

3.2.17 The Licensee must, no later than six months prior to the Commencement of the Licensed Activity, submit an updated PEMP, in writing, to the Licensing Authority for their written approval. Commencement of the Licensed Activity cannot take place until such approval is granted. Such approval may only be granted following consultation by the Licensing Authority with NatureScot, RSPB and any other environmental advisors or organisations as required at the discretion of the Licensing Authority. The PEMP must be in accordance with the Application as it relates to environmental monitoring.

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

The Licensing Authority must approve all initial methodologies for the above monitoring, in writing and, where appropriate, in consultation with NatureScot and any other environmental advisors or organisations as required at the discretion of the Licensing Authority.

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. In the event that further potential adverse environmental effects are identified, for which no predictions were made in the Application, the Licensing Authority may require the Licensee to undertake additional monitoring.

The PEMP must cover the following matters:

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- a) Pre-construction and post-construction monitoring or data collection for impact on birds, including monitoring of inshore wintering waterfowl and diver species and other seabird species;
- b) The participation by the Licensee to contribute to data collection or monitoring of wider strategic relevance, identified and agreed by the Licensing Authority; and
- c) Post-construction monitoring on Electromagnetic Fields (“EMF”) produced by the constructed cables.

In relation to EMF, the Licensee must monitor and provide a report on the EMF produced by the works to the Licensing Authority. The Licensee must agree the methodologies and timescales for monitoring with the Licensing Authority prior to the Commencement of the Licensed Activity as part of wider strategic monitoring on EMF. Any agreement must be adhered to unless otherwise agreed and approved by the Licensing Authority.

Due consideration must be given to the Scottish Marine Energy Research (“ScotMER”) programme, or any successor programme formed to facilitate these research interests.

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

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

The Licensee must submit written reports and associated raw and processed data of such monitoring or data collection to the Licensing Authority at timescales to be determined by them. Consideration should be given to data storage, analysis and reporting and be to Marine Environmental Data and Information Network standards.

Subject to any legal restrictions regarding the treatment of the information, the Licensing Authority, or any such other party appointed at the Licensing Authority’s discretion, may make the results publicly available.

The Licensing Authority may agree, in writing, that monitoring may be reduced or ceased before the end of the lifespan of the Works.

3.2.18 The Licensee must no later than six months prior to the Commencement of the Licensed Activity, submit an updated FMMS, in writing, to the Licensing Authority for their written approval, in consultation with SFF. Commencement of the Licensed Activity cannot take place until such approval is granted. The FMMS must be defined and finalised in consultation with the Forth and Tay Commercial Fisheries Working Group (“FTCFWG”).

In order to inform the production of the FMMS, the Licensee must monitor or collect data as relevant and agreed with the Licensing Authority.

As part of any finalised FMMS, the Licensee must produce and implement a mitigation strategy for each commercial fishery that can prove to the Licensing Authority that they would be adversely affected by the Works. The Licensee and any contractors or sub-contractors working for the Licensee must implement the mitigation measures committed to be carried out by the Licensee within the FMMS. The Licensee must participate in and remain a member of the FTCFWG or any successor group formed to facilitate commercial fisheries dialogue.

3.2.19 Prior to the Commencement of the Licensed Activity, the Licensee must at its own expense, and with the approval of the Licensing Authority in consultation with NatureScot, appoint an independent Environmental Clerk of Works (“ECoW”). The ECoW must be appointed in time to review and approve the draft version of the first plan or programme submitted under this consent to the Licensing Authority, in sufficient time for any pre-construction monitoring requirements, and remain in post until a date agreed by the Licensing Authority. The terms of appointment must also be approved by the Licensing Authority in consultation with NatureScot.

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 marine licence;

- b. Responsible for the monitoring and reporting of compliance with the marine licence conditions and the environmental mitigation measures for all wind farm infrastructure;
- c. Provision of on-going advice and guidance to the Licensee in relation to achieving compliance with marine licence conditions, including but not limited to the conditions relating to and the implementation of the CEMP, the PEMP, the CaP and the VMP;
- d. Provision of reports on point b & c above to the Licensing Authority at timescales to be determined by the Licensing Authority;
- e. Induction and toolbox talks to onsite construction teams on environmental policy and procedures, including temporary stops and keeping a record of these;
- f. Monitoring that the Works is being constructed in accordance with the plans and this marine licence, the Application and in compliance with all relevant regulations and legislation;
- g. Reviewing and reporting incidents/near misses and reporting any changes in procedures as a result to the Licensing Authority; and
- h. Agreement of a communication strategy with the Licensing Authority.

3.2.20 Prior to the Commencement of the Licensed Activity, a Fisheries Liaison Officer (“FLO”), must be appointed by the Licensee and approved, in writing, by the Licensing Authority, following consultation with SFF and the FTCFWG. The FLO must be appointed by the Licensee for the period from Commencement of the Licensed Activity until the Final Commissioning of the Works. The identity and credentials of the FLO must be included in the CEMP (referred to in condition 3.2.11. The FLO must establish and maintain effective communications between the Licensee, any contractors or sub-contractors, fishermen and other users of the sea during the construction of the Works, and ensure compliance with best practice guidelines whilst doing so.

The responsibilities of the FLO must include:

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

3.2.21 The Licensee must, no later than six months prior to the Commencement of the Licensed Activity, submit an updated Protocol for Archaeological Discoveries (“PAD”) and Written Scheme of Investigation (“WSI”) which sets out what the Licensee must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the Works, in writing, to the Licensing Authority for their written approval. Commencement of the Licensed Activity cannot take place until such approval is granted. Such approval may be given only following consultation by the Licensing Authority with Historic Environment Scotland (“HES”) and any such advisors as may be required at the discretion of the Licensing Authority. The reporting protocol must be implemented in full, at all times, by the Licensee.

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

### **3.3 During the Licensed Activity**

3.3.1 Only those persons acting on behalf of, and authorised by, the agent or the Licensee shall undertake the Licensed Activity.

3.3.2 The Licensee must ensure that a copy of the licence is given to each contractor and sub-contractor employed to undertake the Licensed Activity.

3.3.3 The Licensee must notify the UK Hydrographic Office of the progress of the construction 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 ensure that progress of the Licensed Activity is promulgated regularly in the Kingfisher Fortnightly Bulletin.



3.3.4 The Licensee must ensure the best method of practice is used to minimise re-suspension of sediment during the Licensed Activity.

3.3.5 The Licensee must ensure appropriate steps are taken to minimise damage to the seabed by the Licensed Activity.

3.3.6 If the Licensee becomes aware that an accidental deposit has occurred, the Licensee must notify the Licensing Authority as soon as practicable. The Licensee must undertake such survey as directed by the Licensing Authority to locate the materials. If the Licensing Authority is of the view that any accidental deposits have occurred and should be removed, then the substances, objects and/or materials must be removed by the Licensee as soon as is practicable and at the Licensee's expense.

3.3.7 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 need not be removed from the seabed.

### **3.4 Upon Completion of the Licensed Activity**

3.4.1 The Licensee must send notification to the Source Data Receipt team, UK Hydrographic Office, (email: [sdr@ukho.gov.uk](mailto:sdr@ukho.gov.uk)) no later than 10 working days after the Completion of the Licensed Activity. The information provided must include: latitude and longitude coordinates in WGS84 (ETRS89) datum of the Works, as installed, on and/or above the seabed, any changes to engineering drawings, post dredge surveys, and details of new or changed aids to navigation where applicable. A copy of the notification must be sent to the Licensing Authority within 5 working days of the notification being sent.

The Licensee must, following installation, notify the Kingfisher Information Service Offshore Renewables and Cable Awareness and the International Cable Protection Committee of the 'as laid' cable corridor and a 500m zone either side of it as a hazardous area for anchoring.

The Licensee must ensure the seabed is returned to the original profile, or as close as reasonably practicable, following the Completion of the Licensed Activity. The Licensee must complete post-installation hydrographic surveys of the site of the Works or subsections thereof, and periodic hydrographic surveys thereafter, to the IHO Order 1a survey standard as per the MCA's MGN 654 and supplementary updates. The data and a corresponding report of the survey findings must be supplied to the UK Hydrographic Office on completion of these surveys, with notification to the MCA hydrography manager and the Licensing Authority.

The Licensee must ensure that local mariners, fishermen's organisations and HM Coastguard, in this case the National Maritime Coastguard Centre, are made fully aware of the Completion of the Licensed Activity.

The Licensee must ensure that the Completion of the Licensed Activity is promulgated in the soonest Kingfisher Fortnightly Bulletin following Completion of the Licensed Activity to inform the commercial fishing industry.

The Licensee must ensure that the WTG and metmast are actively monitored throughout the lifetime of the Works. The Licensee must ensure that a contingency plan is in place to respond to any reported catastrophic failures which may result in the WTG, or part(s) thereof, breaking loose and becoming a buoyant hazard. This contingency plan should include the transmission of local radio navigation warnings.

The Licensee must not exhibit, alter or discontinue navigational lighting of the Licensed Activity without the statutory sanction of the Commissioners of Northern Lighthouses.

3.4.2 The Licensee must take all reasonable, appropriate and practicable steps at the end of the operational life of the Licensed Activity to restore the site of the Works to its original pre-construction condition, or to as close to its original condition as is reasonably practicable, in accordance with the PEMP and the DP and to the satisfaction of the Licensing Authority.

Should the Licensed Activity be discontinued prior to expiry date of the licence, the Licensee must inform the Licensing Authority in writing of the discontinuation of the Licensed Activity. A separate marine licence will be required for the removal of the Licensed Activity.



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3.4.3 The Licensee must notify the Licensing Authority, in writing, of the date of the Completion of the Licensed Activity, no more than one calendar month following the Completion of the Licensed Activity.

3.4.4 The Licensee must, within one month of the Completion of the Licensed Activity, provide the coordinates accurate to three decimal places of minutes of arc for the WTG and metmast and position and maximum height of the WTG and metmast to the Defence Geographic Centre, MOD, and any other such advisers or organisations as may be required for nautical charting and aviation purposes.

3.4.5 The Licensee must, no later than one calendar month following the Completion of the Licensed Activity submit a report, in writing, to the Licensing Authority stating the date of Completion of the Licensed Activity, the nature and quantity of all substances and/or objects placed below Mean High Water Springs and all materials used in construction under the authority of this licence.

3.4.6 The Licensee must, within three months after the completion of the Licensed Activity, provide the following information to the Maritime and Coastguard Agency and the Licensing Authority:

- a) A list of latitude and longitude co-ordinates accurate to three decimal places of minutes of arc for the WTG and metmast. This should also be provided as a Geographic Information System shape file using WGS84 format; and
- b) A table or diagram of the dimensions of the WTG and metmast 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.

3.4.7 The Licensee must undertake and submit to the Licensing Authority, within eight weeks of the completion of the Licensed Activity, an assessment of any risks posed by the final sub-sea cable route, burial depths and un-trenched areas where mechanical and any other protection measures were used within the cable route, to the satisfaction of the Licensing Authority, the purpose of which is to ensure that the safety of navigation and other legitimate users of the sea is not compromised. Where the assessment identifies risks, the Licensee must submit a plan for addressing these to the Licensing Authority and ensure that the plan is fully implemented, subject to the approval of the Licensing Authority.

3.4.8 The Licensee must provide the Licensing Authority with the MMO records no later than two months following Completion of the Licensed Activity.

## NOTES

1. You are deemed to have satisfied yourself that there are no barriers, legal or otherwise, to the carrying out of the Licensed Activity. The issue of this licence does not absolve the Licensee from obtaining such authorisations, consents etc which may be required under any other legislation.
2. In the event that the Licensee wishes any of the particulars set down in the Schedule to be altered, the Licensing Authority must be immediately notified of the alterations. It should be noted that changes can invalidate a licence, and that an application for a new licence may be necessary.