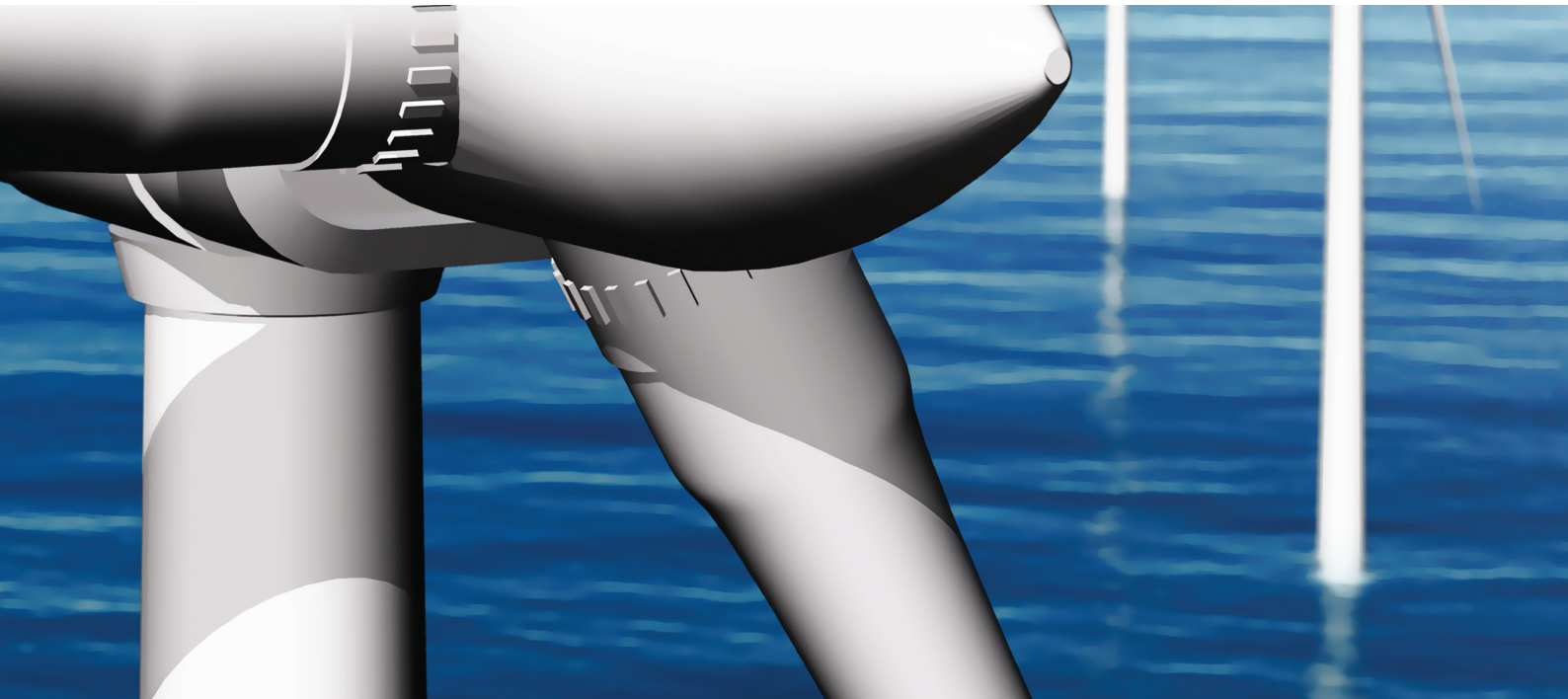
MARCH 2018

Seagreen Phase 1
Offshore Consents Variation Application Report
Project Alpha Offshore Wind Farm and Project Bravo Offshore Wind Farm

(A4MR-SEAG-Z-DEV210-SRP-345)



OFFSHORE CONSENTS VARIATION APPLICATION REPORT

PROJECT ALPHA AND PROJECT BRAVO OFFSHORE WIND FARMS

March 2018

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GLOSSARY OF TERMS

Abbreviation	Definition
AA	Appropriate Assessment
CfD	Contract for Difference
EIA	Environmental Impact Assessment
ES	Environmental Statement
HRA	Habitats Regulations Appraisal
MS-LOT	Marine Scotland Licensing Operations Team
MHWS	Mean High Water Springs
MW	Mega Watt
OSP	Offshore Substation Platform
OWF	Offshore Wind Farm
SEIS	Supplementary Environmental Information Statement
WTG	Wind Turbine Generator(s)

PROJECT INFORMATION

Introduction

1.1 This Report has been produced to support the applications to vary the section 36 consents for the Seagreen Alpha Offshore Wind Farm (OWF) and Seagreen Bravo OWF, which together form the Seagreen Phase 1 project.

1.2 Seagreen Wind Energy Limited (Company number 06873902) ("SWEL"), on behalf of Seagreen Alpha Wind Energy Limited (Company number 07185533) and Seagreen Bravo Wind Energy Limited (Company number 07185543), applied for and was granted two section 36 consents and associated Marine Licences for the construction and operation of the Project Alpha and Project Bravo OWFs on 10th October 2014.

1.3 SWEL, on behalf of Seagreen Alpha Wind Energy Limited and Seagreen Bravo Wind Energy Limited are now applying for variation of these extant consents under section 36C of Electricity Act 1989.

1.4 SWEL are also requesting that should the variation of the section 36 consents be granted, the associated Marine Licences are also varied by the Scottish Ministers under section 72 of the Marine and Coastal Access Act 2009 and section 30 of the Marine (Scotland) Act 2010.

Project Description

1.5 The Seagreen Phase 1 Project comprises:

- Two OWFs designated Seagreen Alpha OWF (hereafter referred to as 'Project Alpha') and Seagreen Bravo OWF (hereafter referred to as 'Project Bravo'); and
- The 'Transmission Asset Project' which includes the offshore substation platforms (OSPs) and export cables to transport the power generated by the OWFs to the Grid.

1.6 Projects Alpha and Bravo will be the first projects to be taken forward for development by Seagreen in the Firth of Forth Zone. At its closest point Project Alpha lies approximately 27 km offshore, east of the Angus coastline in the North Sea, in the outer Firth of Forth and Firth of Tay region. In total the Projects cover an area of approximately 391km^2.

1.7 In October 2014 Seagreen also obtained a Marine Licence for the Transmission Asset Project from Scottish Ministers (Licence No. 04678/14/0). The licence permits the installation of offshore transmission infrastructure, including up to five OSPs with connecting high voltage cables and high voltage export cables, from the OSPs within the Seagreen Project area to Mean High Water Springs (MHWS) at the landfall at Carnoustie.

1.8 It should be noted that the OSPs have been considered within the detailed assessments in the 2012 Offshore ES for each of Project Alpha and Project Bravo respectively. However, the OSPs form part of the consent application for the Transmission Asset Project which remains as consented and no changes are proposed to this Marine Licence. Details of the Transmission Asset Infrastructure are included below in the summary of Project parameters for context only, but are not considered further in this report.

1.9 While the OWFs are both located outwith the Scottish territorial sea and therefore fall within the jurisdiction of the Marine and Coastal Access Act 2009, some of the material to be deposited under those licences will be loaded within the territorial area of Scotland and therefore falls within the jurisdiction of the Marine (Scotland) Act 2010. The Marine Licences for the project were accordingly granted under both Acts and will require to be varied under both. The Scottish Ministers have the necessary authority to vary these licences under both acts.

1.10 The location of the two consented OWFs and the associated offshore Transmission Asset Infrastructure is shown in Appendix 1 to this report.

1.11 Table 1 below provides a summary of the consented design envelope for each of the OWFs and the Transmission Asset Project infrastructure consented under a separate Marine Licence (as described above). No maximum capacity for individual WTGs was assessed in the ES, and no S36 consent or Marine Licence conditions state a maximum MW capacity for WTGs.

Table 1. Consented Design Envelope for Projects Alpha and Bravo

Design Parameter	**2014 Consented Design Envelope**		
	Project Alpha	**Project Bravo**	**Combined**
Area (km^2)	197	194	391
Distance from shore (closest point) (km)	27	38	-
Total maximum installed capacity (MW)	525	525	1050
Wind Turbine Generators (WTGs)			
Number of WTGs	75	75	150
Maximum rotor diameter	167	167	-
Maximum hub height above Lowest Astronomical Tide (LAT) (m)	126.2	126.2	-
Maximum tip height above LAT (m)	209.7	209.7	-
Minimum blade tip clearance above LAT (m)	29.8	29.8	-
Minimum separation distance between WTGs (m)	1000	1000	-
Foundations			
Gravity Base	75	75	150
Pin pile jacket	75	75	150
Suction caisson jacket	75	75	150
Monopile	-	-	-
Other Infrastructure			
Meteorological masts	Up to six (three in each wind farm)		
Wave buoys	Up to six (three in each wind farm)		
Transmission Asset Project			
Number of OSPs (not to exceed five across all projects)	2 - 5		
Number of export cables	2 - 6		
Indicative total export cable length (all high voltage cables)	up to 530km		

1.12 The project design envelope summarised above is as outlined in the;

- 2014 section 36 consents and Marine Licences;
- 2012 Offshore Environmental Statement (ES); and
- the 2013 Supplementary Environmental Information Statement (SEIS). This SEIS document contains the Seagreen Phase 1 Offshore Habitat Regulations Appraisal – Information to inform the Appropriate Assessment (hereafter referred to as 'HRA Report') and five Erratum notifications.

1.13 Two design envelope adjustments were made by Seagreen during the two year determination of consents following the 2012 submission of offshore applications and the 2012 Offshore ES. During this period the Seagreen projects, and the Inch Cape and Neart na Gaoithe OWFs were all being determined in parallel. As there was an unresolved cumulative effects issue, Seagreen committed to an increased minimum blade tip clearance (29.8m) in order to further reduce predicted collision impacts, reducing predicted gannet and kittiwake mortalities. At the same time, in order to reduce displacement effects, Seagreen committed to a minimum WTG separation of 1000m (increased from the 2012 design envelope value of 610m), reducing predicted auks displacement. The Seagreen projects were consented on this basis.

CAPACITY VARIATION

Overview of Consented Parameters and Variations Sought

Consented Parameters

1.14 Annex 1 Description of the Development in each section 36 consent provides that "the Development, located as shown on Figure 1 below, shall have a permitted generating capacity not exceeding 525MW..."

1.15 Condition 7 of each of the section 36 consents provides that "the Development must be constructed and operated in accordance with the terms of the Application and related documents, including the accompanying ES, the SEIS and Appendix 2 of this report, except in so far as amended by the terms of this section 36 consent".

1.16 Chapter 5, Project Description of the 2012 Offshore ES provides each project will have "a maximum generating capacity of 525MW". The SEIS provides that the maximum capacity of each wind farm will be 525MW.

1.17 The description of the works in each of the Marine Licences provides that each of the Alpha and Bravo developments will have "a maximum generating capacity of up to 525MW".

Variation Sought

1.18 Following the conclusion in November 2017 of legal challenge proceedings by the RSPB against the grant of the existing section 36 consents and Marine Licences granted in 2014, Seagreen has reviewed its consenting strategy. That review has also had regard to the Contract for Difference (CfD) auction announced for spring 2019, which Seagreen intends to participate in. This auction will be extremely competitive and it is therefore essential

that the Seagreen consents maximise the chances of success in the auction by taking advantage of the developments in turbine technology, which have occurred since the section 36 applications were made, to increase the maximum generating capacity of the wind farms.

1.19 SWEL are requesting that the section 36 consents and Marine Licences are varied to delete the capacity limit.

1.20 Technology has advanced sufficiently since the issue of these consents that WTGs of similar physical size and dimensions but with greater generating capacity are now available.

1.21 This change requested would allow larger capacity WTGs to be constructed under the existing consent parameters, thus increasing the overall capacity of the site without affecting its appearance or impact on the environment.

1.22 Consequently, the only change sought in this Variation is to remove the 525MW generating limit on each of the Alpha and Bravo Projects.

1.23 The existing consents were assessed in compliance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 and the Marine Works (Environmental Impact Assessment) Regulations 2007 as set out within the 2012 Offshore ES, 2013 SEIS and HRA. The variation request does not change any of the physical works or parameters authorised by the current consents or create any new or different effects to those set out in the environmental information previously considered. The conclusions of the ES and SEIS therefore remain valid. As set out in the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017, in the case of variation applications, these will only constitute EIA development requiring assessment where the variation is a schedule 1 development or is likely to have significant effects on the environment.

1.24 In this case the variation sought does not extend or increase the size of the projects or create any new likely significant effect. An EIA for the variation is accordingly not required. The submission of no environmental implications arising from this variation is explained in further detail in the Impact Review (Appendix 3) submitted as part of this application.

1.25 In summary, as there would be no change to the physical parameters of WTGs and associated infrastructure, those parameters will remain unchanged from the original design envelope used as the basis for previous assessments in the 2012 Offshore ES and the 2013 SEIS and HRA as set out in Table 2 below. Table 2 summarises the consented parameters only. Associated infrastructure, including foundation types are outlined in Table 1 and remain unchanged.

Table 2. Overview of Consented Parameters and Proposed Variation

Parameter	Existing consents for Alpha and Bravo	Consents as Varied
Number of WTGs	Up to 75 per development (Maximum of 150 in total)	No change Up to 75 per development using original parameters (Maximum of 150 in total)

Parameter	Existing consents for Alpha and Bravo	Consents as Varied
Maximum capacity	525MW each	No limit
Maximum blade tip height (from LAT)	209.7 metres	No change
Rotor diameter	122 to 167 metres	No change
Hub height (from LAT)	87.1 to 126.2 metres	No change
Minimum blade tip clearance (from LAT)	29.8 metres	No change
Blade width	Up to 5.4 metres	No change
Minimum spacing	1,000 metres	No change

Section 36 Consent Variations Sought

1.26 As both the section 36 consents are largely identical in terms (other than the references to Alpha and Bravo) they are considered together here. The proposed variations to each of the section 36 consents are set out with tracked changes in Appendix 2 of this report.

1.27 The following sections of the consents are of relevance to the proposed amendments referred in Table 2 above.

1.28 The existing consents read:

Annex 1 description of development

Annex 1 of each consent provides:

"The Development, located as shown on Figure 1 below, shall have a permitted generating capacity not exceeding 525MW and shall comprise a wind-powered electricity generating station in the FFZ including:

1. not more than 75 three-bladed horizontal axis wind turbine generators each with:

(a) a maximum blade tip height of 209.7 metres (measured from LAT);

(b) a rotor diameter of between 122 and 167 metres;

(c) a hub height of between 87.1 and 126.2 metres (measured from LAT);

(d) a minimum blade tip clearance of between 29.8 and 42.7 metres (measured from LAT);

(e) blade width of up to 5.4 metres; and

(f) a minimum spacing of 1,000 metres;

2. all foundations, substructures, fixtures, fittings, fixings, and protections;

3. inter array cabling and cables up to and onto the offshore substation platforms; and

4. transition pieces including access ladders / fences and landing platforms,

and, except to the extent modified by the foregoing, all as specified in the Application and by the conditions imposed by the Scottish Ministers. References to "the Development" in this consent shall be construed accordingly."

1.29 The variation sought is to remove the capacity limit so that annex one in each consent reads:

"The Development, located as shown on Figure 1 below, shall comprise a wind-powered electricity generating station in the FFZ including:

1. not more than 75 three-bladed horizontal axis wind turbine generators each with:

(a) a maximum blade tip height of 209.7 metres (measured from LAT);

(b) a rotor diameter of between 122 and 167 metres;

(c) a hub height of between 87.1 and 126.2 metres (measured from LAT);

(d) a minimum blade tip clearance of between 29.8 and 42.7 metres (measured from LAT);

(e) blade width of up to 5.4 metres; and

(f) a minimum spacing of 1,000 metres;

2. all foundations, substructures, fixtures, fittings, fixings, and protections;

3. inter array cabling and cables up to and onto the offshore substation platforms; and

4. transition pieces including access ladders / fences and landing platforms,

and, except to the extent modified by the foregoing, all as specified in the Application and by the conditions imposed by the Scottish Ministers. References to "the Development" in this consent shall be construed accordingly."

Annex 2 conditions

Should the variation to the Annex 1 description be granted it is not considered to be necessary to amend any of the existing conditions of the section 36 consents. The terms of condition 7 can remain unchanged as the section 36 Annex 1 description as varied will authorise deviation from the generating capacity limits set out in the ES and SEIS.

Implications of Variation to the Section 36 Consents

1.30 As set out in Table 2 no changes are proposed to the consented design parameters with the exception of removing the 525MW generating limit on each of the Alpha and Bravo Projects to allow installation of higher rated WTGs, which require no change of physical parameters of the WTGs or the substructures. Consequently the terms of condition 7 can remain unchanged as the section 36 annex one description as varied will authorise deviation from the generating capacity limits set out in the ES and SEIS.

Potential Implications for Marine Licences

1.31 If consent is granted for the application to vary the section 36 consent then Seagreen will request Scottish Ministers to exercise their discretion to vary the Marine Licences granted in respect of the wind farms under of section 72(3)(d) of the Marine and Coastal Access Act 2009 and section 30(3) of the Marine (Scotland) Act 2010 to ensure that the Marine Licence and consent granted under section 36 of the Electricity Act 1989 (as amended) are consistent.

1.32 The Alpha Marine Licence (licence number 04676/14/0) and Bravo Marine licence (licence number 04677/14/0) both contain the same description of the works (under exception of the name of the development). That description is;

"2.2 Description of the Works

An offshore wind electricity generating station, known as the Seagreen [Alpha/Bravo] Offshore Wind Farm, with a maximum generating capacity of up to 525 MW, consisting of up to 75 wind turbine generators ("WTGs") including foundations, substructures, fixtures, fittings, fixings and protections and associated infrastructure including, but not limited to, inter-array cabling to the connection point on the Offshore Sub-station Platforms ("OSPs"), up to 3 meteorological masts and up to 3 wave buoys (should they be located in the Site) and transition pieces including access ladders, fences and landing platforms. The substructure and foundation design for the WTGs and meteorological masts will consist of either one of, or a combination of, the following design options:

- *a four leg steel jacket with driven piles;*
- *a four leg steel jacket with suction piles; or*
- *Gravity Base Structure ("GBS")."*

1.33 SWEL seeks the deletion of the words "with a maximum generating capacity of up to 525 MW," from Part 2.2 in each of the Marine Licences.

ENVIRONMENTAL IMPACT ASSESSMENT AND APPROPRIATE ASSESSMENT IMPLICATIONS

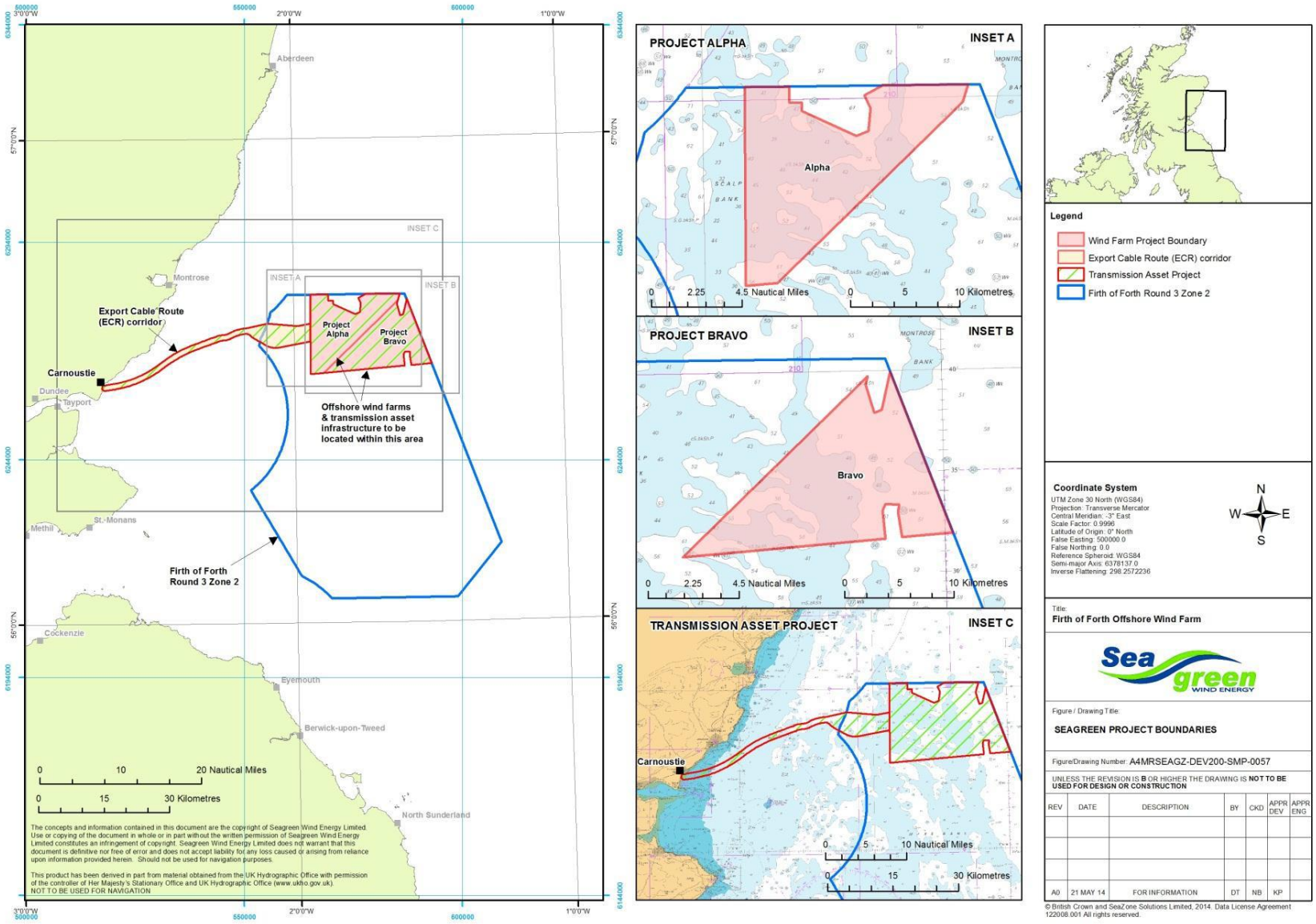
1.34 As set out in para 1.22 an EIA is not required to support the applications to vary section 36 consents for the Project Alpha and Project Bravo OWFs. However, a Variation - Impact Review Technical Note has been produced by NIRAS to support the applications. This Technical Note is provided in Appendix 3. NIRAS has undertaken a review of the proposed changes outlined in the section 36 consent variation sought in relation to the project descriptions and project design envelope outlined in the:

- Section 36 consents under section 36C of Electricity Act 1989 received on 10th October 2014 and Marine Licences under the Marine and Coastal Access Act 2009 and the Marine (Scotland) Act 2010 received on 10th October 2014.
- 2012 Offshore ES; and
- the 2013 SEIS.

1.35 The Technical Note includes a table of receptors considered in the 2012 Offshore ES and implications of the proposed variation on each and has been prepared by EIA professionals at NIRAS.

1.36 As the design envelope in relation to WTG numbers, sizes and associated physical parameters, layout, foundation parameters, and construction methods and periods, remains as assessed within the 2012 Offshore ES and 2013 SEIS (including the HRA), the conclusions of the impact assessments presented within these documents remain valid and unchanged.

APPENDIX 1. PROJECT ALPHA AND PROJECT BRAVO OWF DEVELOPMENT AREA



APPENDIX 2. SECTION 36 TRACKED CHANGES PROJECT ALPHA AND BRAVO

Annex 1

DESCRIPTION OF THE DEVELOPMENT

The Development, located as shown on Figure 1 below, ~~shall have a permitted generating capacity not exceeding 525 MW and~~ shall comprise a wind-powered electricity generating station in the FFZ, including:

1. not more than 75 three-bladed horizontal axis wind turbine generators each with:

a) a maximum blade tip height of 209.7 metres (measured from LAT);
b) a rotor diameter of between 122 and 167 metres;
c) a hub height of between 87.1 and 126.2 metres (measured from LAT);
d) a minimum blade tip clearance of between 29.8 and 42.7 metres (measured from LAT);
e) blade width of up to 5.4 metres; and
f) a minimum spacing of 1,000 metres;

2. all foundations, substructures, fixtures, fittings, fixings, and protections;

3. inter array cabling and cables up to and onto the offshore substation platforms; and

4. transition pieces including access ladders / fences and landing platforms,

and, except to the extent modified by the foregoing, all as specified in the Application and by the conditions imposed by the Scottish Ministers. References to “the Development” in this consent shall be construed accordingly.

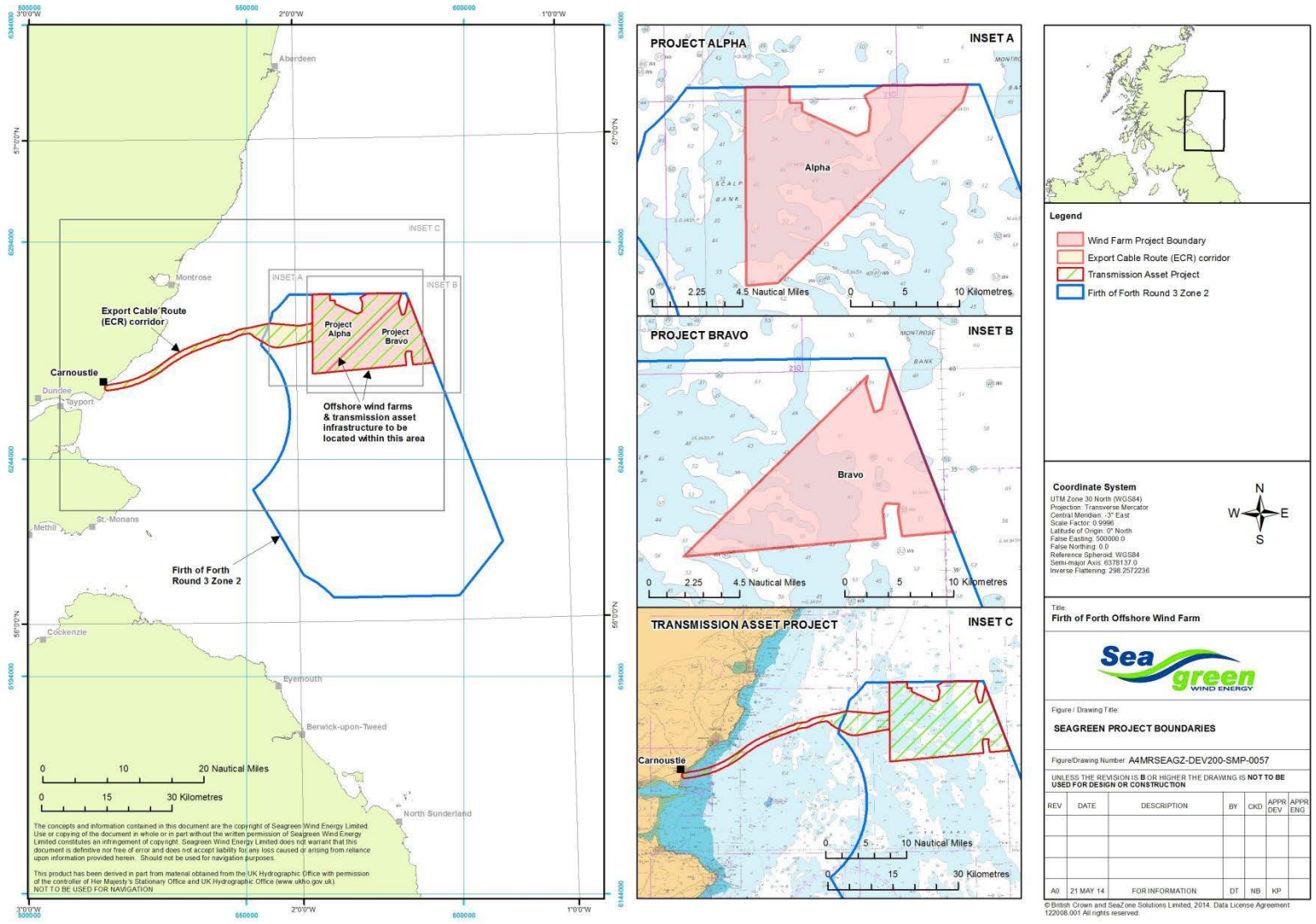


Figure 1: Development Location – see KEY

Annex 2

CONDITIONS OF THE SECTION 36 CONSENT

The consent granted in accordance with section 36 of the Electricity Act 1989 is subject to the following conditions:

1. The consent is for a period from the date this consent is granted until the date occurring 25 years after the Final Commissioning of the Development. Written confirmation of the date of the Final Commissioning of the Development must be provided by the Company to the Scottish Ministers, the Planning Authority, the JNCC and SNH no later than one calendar month after the Final Commissioning of the Development. Where the Scottish Ministers deem the Development to be complete on a date prior to the date when all wind turbine generators forming the Development have supplied electricity on a commercial basis to the National Grid then, the Scottish Ministers will provide written confirmation of the date of the Final Commissioning of the Development to the Company, the Planning Authority, the JNCC and SNH no later than one calendar month after the date on which the Scottish Ministers deem the Development to be complete.

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

2. The Commencement of the Development must be a date no later than 5 years from the date the consent is granted, or such later date from the date of the granting of this consent as the Scottish Ministers may hereafter direct inwriting.

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

3. Where the Secretary of State has, following consultation with the Scottish Ministers, given notice requiring the Company to submit to the Secretary of State a Decommissioning Programme, pursuant to section 105(2) and (5) of the Energy Act 2004, then construction may not begin on the site of the Development until after the Company has submitted to the Secretary of State a Decommissioning Programme in compliance with that notice.

Reason: *To ensure that a decommissioning programme is submitted to the Secretary of State where the Secretary of State has, following consultation with the Scottish Ministers, so required before any construction commences.*

4. The Company is not permitted to assign this consent without the prior written authorisation of the Scottish Ministers. The Scottish Ministers may grant (with or without conditions) or refuse such authorisation as they, at their own discretion, see fit. The consent is not capable of being assigned, alienated or transferred otherwise than in accordance with the foregoing procedure.

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

5. In the event that for a continuous period of 12 months or more any WTG installed and commissioned and forming part of the Development fails to produce electricity on a commercial basis to the National Grid then, unless otherwise agreed in writing by the Scottish Ministers and after consultation with the Company and any advisors as required at the discretion of the Scottish Ministers, any such WTG may be deemed by the Scottish Ministers to cease to be required. If so deemed, the WTG must be decommissioned and the area of the Site containing that WTG must be reinstated by the Company in accordance with the procedures laid out within the Company's Decommissioning Programme, within the period of 24 months from the date of the

deeming decision by the Scottish Ministers.

Reason: *To ensure that any redundant WTGs and associated ancillary equipment is removed from the Site in the interests of safety, amenity and environmental protection.*

6. If any serious health and safety incident occurs on the Site requiring the Company to report it to the Health and Safety Executive, then the Company must also notify the Scottish Ministers of the incident within 24 hours of the Company becoming aware of an incident occurring.

Reason: *To inform the Scottish Ministers of any serious health and safety incident occurring on the Site.*

7. The Development must be constructed and operated in accordance with the terms of the Application and related documents, including the accompanying ES, the SEIS and Annex 1 of this letter, except in so far as amended by the terms of this section 36 consent.

Reason: *To ensure that the Development is carried out in accordance with the Application documentation.*

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

Reason: *To ensure access to the Site for the purpose of inspection.*

9. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Construction Programme ("CoP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, SEPA, MCA, NLB, RSPB Scotland, the Planning Authority and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The Development must, at all times, be constructed in accordance with the approved CoP (as updated and amended from time to time by the Company). Any updates or amendments made to the CoP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.
The CoP must set out:

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

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

10. The Company must, no later than 6 months prior to the Commencement of the Development submit a Construction Method Statement ("CMS"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, SEPA, MCA, NLB, RSPB Scotland, the Planning Authority and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The CMS must set out the construction procedures and good working practices for installing the Development. The CMS must also include details of the roles and responsibilities,

chain of command and contact details of company personnel, any contractors or sub-contractors involved during the construction of the Development. The CMS must be in accordance with the construction methods assessed in the Application and must include details of how the construction related mitigation steps proposed in the ES and in the SEIS are to be delivered. The Development must, at all times, be constructed in accordance with the approved CMS (as updated and amended from time to time by the Company). Any updates or amendments made to the CMS by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

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

11. In the event that pile foundations are to be used, the Company must, no later than 6 months prior to the Commencement of the Development, submit a Piling Strategy ("PS"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH and any such other advisors as may be required at the discretion of the Scottish Ministers. The Development must, at all times, be constructed in accordance with the approved PS (as updated and amended from time to time by the Company). Any updates or amendments made to the PS by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.
The PS must include:

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

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

The PS must, so far as is reasonably practicable, be consistent with the EMP, the Project Environmental Monitoring Programme ("PEMP") and the CMS.

Reason*: To mitigate the underwater noise impacts arising from piling activity.*

12. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Development Specification and Layout Plan ("DSLP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the MCA, NLB, CoS, the JNCC, SNH, SFF, CAA and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The Development must, at all times, be constructed in accordance with the approved DSLP (as updated and amended from time to time by the Company). Any updates or amendments made to the DSLP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

a. A plan showing the proposed location of each individual WTG (subject to any required micro-siting), including information on WTG spacing, WTG identification / numbering, location of the substation platforms, seabed conditions, bathymetry, confirmed foundation type for each WTG and any key constraints recorded on the Site;
b. A list of latitude and longitude co-ordinates accurate to three decimal places of minutes of arc for each WTG. This should also be provided as a Geographic Information System ("GIS") shape file using WGS84 format;
c. A table or diagram of each WTG dimensions including - height to blade tip (measured above Lowest Astronomical Tide ("LAT")) to the highest point, height to hub (measured above LAT to the centreline of the generator shaft), rotor diameter and maximum rotation speed;
d. The generating capacity of each WTG used on the Site (Annex 1, Inset A of Figure 1) and a confirmed generating capacity for the Site overall;
e. The finishes for each WTG (see condition 19 on WTG lighting and marking); and
f. The length and proposed arrangements on the seabed of all inter-array cables.

Reason: *To confirm the final Development specification and layout.*

13. The Company must, prior to the Commencement of the Development, submit a Design Statement ("DS"), in writing, to the Scottish Ministers that includes representative wind farm visualisations from key viewpoints as agreed with the Scottish Ministers, based upon the final DSLP as approved by the Scottish Ministers (as updated and amended from time to time by the Company). The DS must be provided, for information only, to the Planning Authorities, and the JNCC, SNH and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The DS must be prepared and signed off by at least one qualified landscape architect, instructed by the Company prior to submission to the Scottish Ministers. The Development must, at all times, be constructed in accordance with the approved DS (as updated and amended from time to time by the Company).

Reason: *To inform interested parties of the final wind farm scheme proposed to be built.*

14. The Company must, no later than 6 months prior to the Commencement of the Development, submit an Environmental Management Plan ("EMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, SEPA, RSPB Scotland, WDC, ASFB and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The Development must, at all times, be constructed and operated in accordance with the approved EMP (as updated and amended from time to time by the Company). Any updates or amendments made to the EMP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

a. all construction as required to be undertaken before the Final Commissioning of the Development; and
b. the operational lifespan of the Development from the Final Commissioning of the Development until the cessation of electricity generation (Environmental management during decommissioning is addressed by the Decommissioning Programme provided for by condition 3).

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

a. Mitigation measures to prevent significant adverse impacts to environmental interests, as identified in the ES and pre-consent and pre-construction surveys, and include the relevant parts of the CMS (refer to condition 10);
b. Pollution prevention measures and contingency plans;
c. Management measures to prevent the introduction of invasive non- native marine species;
d. Measures to minimise, recycle, reuse and dispose of waste streams; and
e. The reporting mechanisms that will be used to provide the Scottish Ministers and relevant stakeholders (including, but not limited to, the JNCC, SNH, SEPA, RSPB Scotland, MCA and NLB) with regular updates on construction activity, including any environmental issues that have been encountered and how these have been addressed.

The Company must, no later than 3 months prior to the Final Commissioning of the Development, submit an updated EMP, in writing, to cover the operation and maintenance activities for the Development to the Scottish Ministers for their written approval. Such approval may be given only following consultation with the JNCC, SNH, SEPA, RSPB Scotland and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The EMP must be regularly reviewed by the Company and the Forth and Tay Regional Advisory Group ("FTRAG") (referred to in condition 27) over the lifespan of the Development, and be kept up to date (in relation to the likes of construction methods and operations of the Development in terms of up to date working practices) by the Company in consultation with the FTRAG.

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

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

15. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Vessel Management Plan ("VMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, WDC and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The Development must, at all times, be constructed and operated in accordance with the approved VMP (as updated and amended from time to time by the Company). Any updates or amendments made to the VMP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.
The VMP must include, but not be limited to, the following details:

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

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

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

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

16. The Company must, no later than 3 months prior to the Commissioning of the first WTG, submit an Operation and Maintenance Programme ("OMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, SEPA, MCA, NLB, RSPB Scotland, the Planning Authority and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The OMP must set out the procedures and good working practices for operations and the maintenance of the WTG's, substructures, and inter-array cable network of the Development. Environmental sensitivities which may affect the timing of the operation and maintenance activities must be considered in the OMP.
Operation and maintenance of the Development must, at all times, proceed in accordance with the approved OMP (as updated and amended from time to time by the Company). Any updates or amendments made to the OMP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

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

17. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Navigational Safety Plan ("NSP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with MCA, NLB and any other navigational advisors or organisations as may be required at the discretion of the Scottish Ministers. The NSP must include, but not be limited to, the following issues:

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

The Company must confirm within the NSP that they have taken into account and adequately addressed all of the recommendations of the MCA in the current Marine Guidance Note 371, and its annexes that may be appropriate to the Development, or any other relevant document which may supersede said guidance prior to approval of the NSP. The Development must, at all times, be constructed and operated in accordance with the approved NSP (as updated and amended from time to time by the Company). Any updates or amendments made to the NSP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written

approval.

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

18. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Cable Plan ("CaP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, MCA, SFF and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The CaP must be in accordance with the ES. The Development must, at all times, be constructed and operated in accordance with the approved CaP (as updated and amended from time to time by the Company). Any updates or amendments made to the CaP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.
The CaP must include the following:

a. Details of the location and cable laying techniques for the inter array cables;
b. The results of survey work (including geophysical, geotechnical and benthic surveys) which will help inform cable routing;
c. Technical specification of inter array cables, including a desk based assessment of attenuation of electro-magnetic field strengths and shielding;
d. A burial risk assessment to ascertain burial depths and where necessary alternative protection measures;
e. Methodologies for surveys (e.g. over trawl) of the inter array cables through the operational life of the wind farm where mechanical protection of cables laid on the sea bed is deployed; and
f. Methodologies for inter array cable inspection with measures to address and report to the Scottish Ministers any exposure of inter array cables.

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

19. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Lighting and Marking Plan ("LMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with MCA, NLB, CAA, MOD and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The LMP must provide that the Development be lit and marked in accordance with the current CAA and MOD aviation lighting policy and guidance that is in place as at the date of the Scottish Ministers approval of the LMP, or any such other documents that may supersede said guidance prior to the approval of the LMP. The LMP must also detail the navigational lighting requirements detailed in IALA Recommendation O-139 or any other documents that may supersede said guidance prior to approval of the LMP.
The Company must provide the LMP, for information only, to the Planning Authorities, the JNCC, SNH and any other bodies as may be required at the discretion of the Scottish Ministers. The Development must, at all times, be constructed and operated in accordance with the approved LMP (as updated and amended from time to time by the Company). Any updates or amendments made to the LMP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

20. The Company must, prior to the erection of any WTGs on the Site, submit an Air Traffic Control Radar Mitigation Scheme ("ATC Scheme"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the MOD.

The ATC Scheme is a scheme designed to mitigate the impact of the Development upon the operation of the Primary Surveillance Radar at RAF Leuchars ("the Radar") and the air traffic control operations of the MOD which is reliant upon the Radar. The ATC Scheme shall set out the appropriate measures to be implemented to mitigate the impact of the Development on the Radar and shall be in place for the operational life of the Development provided the Radar remains in operation.

No turbines shall become operational unless and until all those measures required by the approved ATC Scheme to be implemented prior to the operation of the turbines have been implemented and the Scottish Ministers have confirmed this in writing. The Development shall thereafter be operated fully in accordance with the approved ATC Scheme.

Reason: *To mitigate the adverse impacts of the Development on the air traffic control radar at RAF Leuchars and the operations of the MOD.*

21. The Company must ensure that no part of any turbine shall be erected above sea level within radar line of sight of the air defence radar at Remote Radar Head (RRH) Buchan unless and until an Air Defence Radar Mitigation Scheme ("the ADRM scheme") has been submitted to and approved in writing by the Scottish Ministers in consultation with the MOD.

For the purposes of this condition, the ADRM Scheme means a detailed scheme to mitigate the adverse impacts of the Development on the air defence radar at RRH Buchan and the air surveillance and control operations of the MOD. The scheme will set out the appropriate measures to be implemented to that end.

No turbines shall become operational until:

a. the mitigation measures which the approved ADRM Scheme requires to be implemented prior to the operation of the turbines have been implemented; and
b. any performance criteria specified in the approved ADRM Scheme and which the approved ADRM Scheme requires to have been satisfied prior to the operation of the turbines have been satisfied.

The Company shall thereafter comply with all other obligations contained within the approved ADRM Scheme for the duration of the operation of the Development.

Reason: *To mitigate the adverse impact of the Development on air defence radar at Remote Radar Head (RRH) Buchan.*

22. The Company must ensure that no part of any turbine shall be erected above sea level within radar line of sight of the air defence radar at Remote Radar Head ("RRH") Brizlee Wood unless and until an Air Defence Radar Mitigation Scheme ("the ADRM scheme") has been submitted to and approved in writing by the Scottish Ministers in consultation with the MOD.

For the purposes of this condition, the ADRM Scheme means a detailed scheme to mitigate the adverse impacts of the Development on the air defence radar at RRH Brizlee Wood and the air surveillance and control operations of the MOD. The scheme will set out the appropriate measures to be implemented to that end.

No turbines shall become operational until:

a. the mitigation measures which the approved ADRM Scheme requires to be implemented prior to the operation of the turbines have been implemented; and
b. any performance criteria specified in the approved ADRM Scheme and which the approved ADRM Scheme requires to have been satisfied prior to the operation of the turbines have been satisfied.

The Company shall thereafter comply with all other obligations contained within the approved ADRM Scheme for the duration of the operation of the Development.

Reason: *To mitigate the adverse impact of the development on air defence radar at Remote Radar Head (RRH) Brizlee Wood.*

23. The Company must ensure that no turbine shall be erected until a Primary Radar Mitigation Scheme ("PRMS") agreed with the Operator has been submitted to and approved in writing by the Scottish Ministers in order to mitigate the impact of the Development on the Primary Radar Installation at Perwinnes and associated air traffic management operations.
No blades shall be fitted to any turbine unless and until the approved Primary Radar Mitigation Scheme has been implemented and the development shall thereafter be operated fully in accordance with such approved Scheme.

Reason: *To mitigate the adverse impact of the development on air traffic operations.*

24. The Company must, prior to the Commencement of the Development, and following confirmation of the approved DSLP by the Scottish Ministers (refer to condition 12), provide the positions and maximum heights of the WTGs and construction equipment over 150 m (measured above LAT) and any Offshore Sub-Station Platforms to the United Kingdom Hydrographic Office ("UKHO") for aviation and nautical charting purposes. The Company must, within 1 month of the Final Commissioning of the Development, provide co-ordinates accurate to three decimal places of minutes of arc for each WTG position and maximum heights of the WTGs to the UKHO for aviation and nautical charting purposes.

Reason: *For aviation and navigational safety.*

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

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

26. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Project Environmental Monitoring Programme ("PEMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, RSPB Scotland, WDC, ASFB and any other ecological advisors or organisations as required at the discretion of the Scottish Ministers. The PEMP must be in accordance with the Application as it relates to environmental monitoring.
The PEMP must set out measures by which the Company must monitor the environmental impacts of the Development. Monitoring is required throughout the lifespan of the Development where this is deemed necessary by the Scottish Ministers. Lifespan in this context includes pre-construction, construction, operational and decommissioning phases.

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

Ministers may require the Company to undertake additional monitoring.

The Scottish Ministers may agree that monitoring may be reduced or ceased before the end of the lifespan of the Development.

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

a. Pre-construction, construction (if considered appropriate by the Scottish Ministers) and post-construction monitoring surveys for:

    1. Birds;
    2. Sandeels;
    3. Marine fish;
    4. Diadromous fish;
    5. Benthic communities; and
    6. Seabed scour and local sediment deposition.

b. The participation by the Company in surveys to be carried out in relation to marine mammals as set out in the Marine Mammal Monitoring Programme ("MMMP"); and

c. The participation by the Company in a National Strategic Bird Monitoring Framework ("NSBMF") and surveys to be carried out in relation to regional and / or strategic bird monitoring including but not necessarily limited to:

    1. the avoidance behaviour of breeding seabirds around turbines;
    2. flight height distributions of seabirds at wind farm sites;
    3. displacement of kittiwake, puffin and other auks from wind farm sites; and
    4. effects on survival and productivity at relevant breeding colonies

All initial methodologies for the above monitoring must be approved, in writing, by the Scottish Ministers and, where appropriate, in consultation with the Forth and Tay Regional Advisory Group ("FTRAG") referred to in condition 27 of this consent. Any pre-consent surveys carried out by the Company to address any of the above species may be used in part to discharge this condition subject to the written approval by the Scottish Ministers.

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

The Company must submit written reports and associated raw data of such monitoring surveys to the Scottish Ministers at timescales to be determined by the Scottish Ministers in consultation with the FTRAG. Subject to any legal restrictions regarding the treatment of the information, the results are to be made publicly available by the Scottish Ministers, or by such other party appointed at their discretion.

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

27. The Company must participate in any Forth and Tay Regional Advisory Group

("FTRAG") established by the Scottish Ministers for the purpose of advising the Scottish Ministers on research, monitoring and mitigation programmes for, but not limited to, ornithology, diadromous fish, marine mammals and commercial fish. Should a Scottish Strategic Marine Environment Group ("SSMEG") be established (refer to condition 28), the responsibilities and obligations being delivered by the FTRAG will be subsumed by the SSMEG at a timescale to be determined by the Scottish Ministers.

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

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

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

29. Prior to the Commencement of the Development, the Company must at its own expense, and with the approval of the Scottish Ministers in consultation with the JNCC and SNH, appoint an Ecological Clerk of Works ("ECoW"). The ECoW must be appointed in time to review and approve the final draft version of the first plan or programme submitted under this consent to the Scottish Ministers for approval, until the Final Commissioning of the Development. The responsibilities of the ECoW must include, but not be limited to:

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

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

30. The Company must, to the satisfaction of the Scottish Ministers, participate in the monitoring requirements as laid out in the 'National Research and Monitoring Strategy for Diadromous Fish' so far as they apply at a local level. The extent and nature of the Company's participation is to be agreed by the Scottish Ministers in consultation with the FTRAG.

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

31. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Commercial Fisheries Mitigation Strategy ("CFMS"), in writing, to the Scottish Ministers for their written approval. The Company must remain a member of the Forth and Tay Offshore Wind Developers Group-Commercial Fisheries Working Group or any successor group formed to facilitate commercial fisheries dialogue in the Forth and Tay regions.

The Company must include in the CFMS a mitigation strategy for each commercial fishery that Ministers are reasonably satisfied would be adversely affected by the Development. The CFMS must, in particular, include mitigation measures for lobster

stock enhancement if the Scottish Ministers are satisfied that such mitigation measures are reasonably necessary. The Company must implement all mitigation measures committed to be carried out by the Company within the terms of the CFMS. The Company must require all of its contractors, and sub-contractors, to co-operate with the fishing industry to ensure the effective implementation of the CFMS.

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

32. Prior to the Commencement of the Development, a Fisheries Liaison Officer ("FLO"), approved in writing by Scottish Ministers, in consultation with the FTOWDG-CFWG, must be appointed by the Company for the period from Commencement of the Development until the Final Commissioning of the Development. The Company must notify the Scottish Ministers of the identity and credentials of the FLO before Commencement of the Development by including such details in the EMP (referred to in condition 14). The FLO must establish and maintain effective communications between the Company, any contractors or sub-contractors, fishermen and other users of the sea during the construction of the Development, and ensure compliance with best practice guidelines whilst doing so.

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

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

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

33. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Marine Archaeology Reporting Protocol which sets out what the Company must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the Development, in writing, to the Scottish Ministers for their written approval. Such approval may be given only following consultation by the Scottish Ministers with any such advisors as may be required at the discretion of the Scottish Ministers. The Reporting Protocol must be implemented in full, at all times, by the Company.

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

Annex 1

DESCRIPTION OF THE DEVELOPMENT

The Development, located as shown on Figure 1 below, ~~shall have a permitted generating capacity not exceeding 525 MW and~~ shall comprise a wind-powered electricity generating station in the FFZ, including:

1. not more than 75 three-bladed horizontal axis wind turbine generators each with:

a) a maximum blade tip height of 209.7 metres (measured from LAT);
b) a rotor diameter of between 122 and 167 metres;
c) a hub height of between 87.1 and 126.2 metres (measured from LAT);
d) a minimum blade tip clearance of between 29.8 and 42.7 metres (measured from LAT);
e) blade width of up to 5.4 metres; and
f) a minimum spacing of 1,000 metres;

2. all foundations, substructures, fixtures, fittings, fixings, and protections;

3. inter array cabling and cables up to and onto the offshore substation platforms; and

4. transition pieces including access ladders / fences and landing platforms,

and, except to the extent modified by the foregoing, all as specified in the Application and by the conditions imposed by the Scottish Ministers. References to “the Development” in this consent shall be construed accordingly.

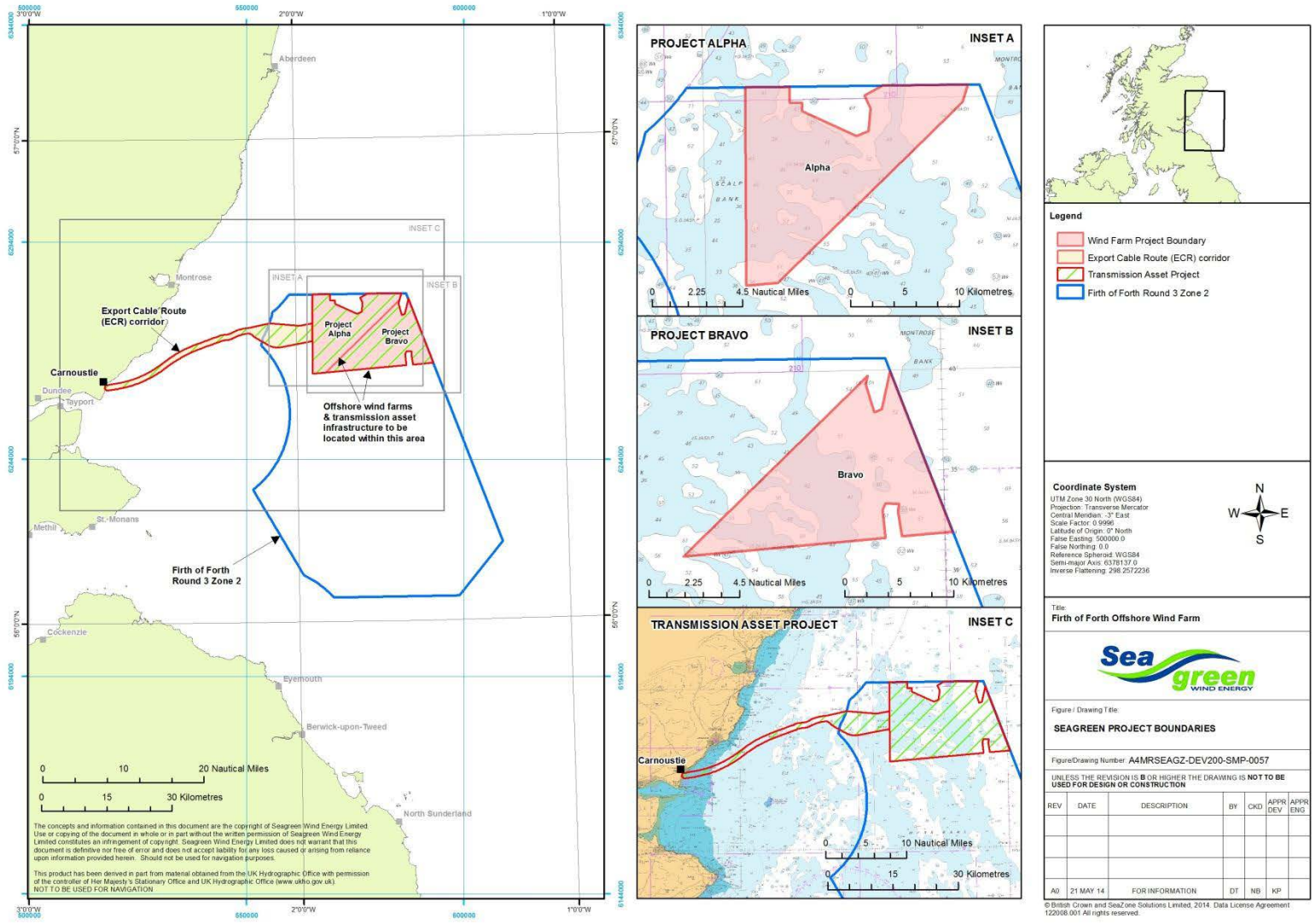


Figure 1: Development Location – see KEY

Annex 2

CONDITIONS OF THE SECTION 36 CONSENT

The consent granted in accordance with section 36 of the Electricity Act 1989 is subject to the following conditions:

1. The consent is for a period from the date this consent is granted until the date occurring 25 years after the Final Commissioning of the Development. Written confirmation of the date of the Final Commissioning of the Development must be provided by the Company to the Scottish Ministers, the Planning Authority, the JNCC and SNH no later than one calendar month after the Final Commissioning of the Development. Where the Scottish Ministers deem the Development to be complete on a date prior to the date when all wind turbine generators forming the Development have supplied electricity on a commercial basis to the National Grid then, the Scottish Ministers will provide written confirmation of the date of the Final Commissioning of the Development to the Company, the Planning Authority, the JNCC and SNH no later than one calendar month after the date on which the Scottish Ministers deem the Development to be complete.

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

2. The Commencement of the Development must be a date no later than 5 years from the date the consent is granted, or such later date from the date of the granting of this consent as the Scottish Ministers may hereafter direct inwriting.

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

3. Where the Secretary of State has, following consultation with the Scottish Ministers, given notice requiring the Company to submit to the Secretary of State a Decommissioning Programme, pursuant to section 105(2) and (5) of the Energy Act 2004, then construction may not begin on the site of the Development until after the Company has submitted to the Secretary of State a Decommissioning Programme in compliance with that notice.

Reason: *To ensure that a decommissioning programme is submitted to the Secretary of State where the Secretary of State has, following consultation with the Scottish Ministers, so required before any construction commences.*

4. The Company is not permitted to assign this consent without the prior written authorisation of the Scottish Ministers. The Scottish Ministers may grant (with or without conditions) or refuse such authorisation as they, at their own discretion, see fit. The consent is not capable of being assigned, alienated or transferred otherwise than in accordance with the foregoing procedure.

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

5. In the event that for a continuous period of 12 months or more any WTG installed and commissioned and forming part of the Development fails to produce electricity on a commercial basis to the National Grid then, unless otherwise agreed in writing by the Scottish Ministers and after consultation with the Company and any advisors as required at the discretion of the Scottish Ministers, any such WTG may be deemed by

the Scottish Ministers to cease to be required. If so deemed, the WTG must be decommissioned and the area of the Site containing that WTG must be reinstated by the Company in accordance with the procedures laid out within the Company's Decommissioning Programme, within the period of 24 months from the date of the deeming decision by the Scottish Ministers.

Reason: *To ensure that any redundant WTGs and associated ancillary equipment is removed from the Site in the interests of safety, amenity and environmental protection.*

6. If any serious health and safety incident occurs on the Site requiring the Company to report it to the Health and Safety Executive, then the Company must also notify the Scottish Ministers of the incident within 24 hours of the Company becoming aware of an incident occurring.

Reason: *To inform the Scottish Ministers of any serious health and safety incident occurring on the Site.*

7. The Development must be constructed and operated in accordance with the terms of the Application and related documents, including the accompanying ES, the SEIS and Annex 1 of this letter, except in so far as amended by the terms of this section 36 consent.

Reason: *To ensure that the Development is carried out in accordance with the Application documentation.*

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

Reason: *To ensure access to the Site for the purpose of inspection.*

9. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Construction Programme ("CoP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, SEPA, MCA, NLB, RSPB Scotland, the Planning Authority and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The Development must, at all times, be constructed in accordance with the approved CoP (as updated and amended from time to time by the Company). Any updates or amendments made to the CoP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.
The CoP must set out:

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

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

10. The Company must, no later than 6 months prior to the Commencement of the Development submit a Construction Method Statement ("CMS"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, SEPA, MCA, NLB, RSPB Scotland, the Planning Authority and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The CMS must set out the construction procedures and good working practices for installing the Development. The CMS must also include details of the roles and responsibilities, chain of command and contact details of company personnel, any contractors or sub-contractors involved during the construction of the Development. The CMS must be in accordance with the construction methods assessed in the Application and must include details of how the construction related mitigation steps proposed in the ES and in the SEIS are to be delivered. The Development must, at all times, be constructed in accordance with the approved CMS (as updated and amended from time to time by the Company). Any updates or amendments made to the CMS by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

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

11. In the event that pile foundations are to be used, the Company must, no later than 6 months prior to the Commencement of the Development, submit a Piling Strategy ("PS"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH and any such other advisors as may be required at the discretion of the Scottish Ministers. The Development must, at all times, be constructed in accordance with the approved PS (as updated and amended from time to time by the Company). Any updates or amendments made to the PS by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.
The PS must include:

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

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

The PS must, so far as is reasonably practicable, be consistent with the EMP, the Project Environmental Monitoring Programme ("PEMP") and the CMS.

Reason*: To mitigate the underwater noise impacts arising from piling activity.*

12. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Development Specification and Layout Plan ("DSLP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the MCA, NLB, CoS, the JNCC, SNH, SFF, CAA and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The Development must, at all times, be constructed in accordance with the approved DSLP (as updated and amended from time to time by the Company). Any updates or amendments made to the DSLP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

a. A plan showing the proposed location of each individual WTG (subject to any required micro-siting), including information on WTG spacing, WTG identification / numbering, location of the substation platforms, seabed conditions, bathymetry, confirmed foundation type for each WTG and any key constraints recorded on the Site;
b. A list of latitude and longitude co-ordinates accurate to three decimal places of minutes of arc for each WTG. This should also be provided as a Geographic Information System ("GIS") shape file using WGS84 format;
c. A table or diagram of each WTG dimensions including - height to blade tip (measured above Lowest Astronomical Tide ("LAT")) to the highest point, height to hub (measured above LAT to the centreline of the generator shaft), rotor diameter and maximum rotation speed;
d. The generating capacity of each WTG used on the Site (Annex 1, Inset A of Figure 1) and a confirmed generating capacity for the Site overall;
e. The finishes for each WTG (see condition 19 on WTG lighting and marking); and
f. The length and proposed arrangements on the seabed of all inter-array cables.

Reason: *To confirm the final Development specification and layout.*

13. The Company must, prior to the Commencement of the Development, submit a Design Statement ("DS"), in writing, to the Scottish Ministers that includes representative wind farm visualisations from key viewpoints as agreed with the Scottish Ministers, based upon the final DSLP as approved by the Scottish Ministers (as updated and amended from time to time by the Company). The DS must be provided, for information only, to the Planning Authorities, and the JNCC, SNH and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The DS must be prepared and signed off by at least one qualified landscape architect, instructed by the Company prior to submission to the Scottish Ministers. The Development must, at all times, be constructed in accordance with the approved DS (as updated and amended from time to time by the Company).

Reason: *To inform interested parties of the final wind farm scheme proposed to be built.*

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

times, be constructed and operated in accordance with the approved EMP (as updated and amended from time to time by the Company). Any updates or amendments made to the EMP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

a. all construction as required to be undertaken before the Final Commissioning of the Development; and
b. the operational lifespan of the Development from the Final Commissioning of the Development until the cessation of electricity generation (Environmental management during decommissioning is addressed by the Decommissioning Programme provided for by condition 3).

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

a. Mitigation measures to prevent significant adverse impacts to environmental interests, as identified in the ES and pre-consent and pre-construction surveys, and include the relevant parts of the CMS (refer to condition 10);
b. Pollution prevention measures and contingency plans;
c. Management measures to prevent the introduction of invasive non- native marine species;
d. Measures to minimise, recycle, reuse and dispose of waste streams; and
e. The reporting mechanisms that will be used to provide the Scottish Ministers and relevant stakeholders (including, but not limited to, the JNCC, SNH, SEPA, RSPB Scotland, MCA and NLB) with regular updates on construction activity, including any environmental issues that have been encountered and how these have been addressed.

The Company must, no later than 3 months prior to the Final Commissioning of the Development, submit an updated EMP, in writing, to cover the operation and maintenance activities for the Development to the Scottish Ministers for their written approval. Such approval may be given only following consultation with the JNCC, SNH, SEPA, RSPB Scotland and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The EMP must be regularly reviewed by the Company and the Forth and Tay Regional Advisory Group ("FTRAG") (referred to in condition 27) over the lifespan of the Development, and be kept up to date (in relation to the likes of construction methods and operations of the Development in terms of up to date working practices) by the Company in consultation with the FTRAG.

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

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

15. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Vessel Management Plan ("VMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, WDC and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The Development must, at all times, be constructed and operated in accordance with the approved VMP (as updated and amended from time to time by the Company). Any updates or amendments made to the VMP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

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

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

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

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

16. The Company must, no later than 3 months prior to the Commissioning of the first WTG, submit an Operation and Maintenance Programme ("OMP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, SEPA, MCA, NLB, RSPB Scotland, the Planning Authority and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The OMP must set out the procedures and good working practices for operations and the maintenance of the WTG's, substructures, and inter-array cable network of the Development. Environmental sensitivities which may affect the timing of the operation and maintenance activities must be considered in the OMP.

Operation and maintenance of the Development must, at all times, proceed in accordance with the approved OMP (as updated and amended from time to time by the Company). Any updates or amendments made to the OMP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

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

17. The Company must, no later than 6 months prior to the Commencement of the

Development, submit a Navigational Safety Plan ("NSP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with MCA, NLB and any other navigational advisors or organisations as may be required at the discretion of the Scottish Ministers. The NSP must include, but not be limited to, the following issues:

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

The Company must confirm within the NSP that they have taken into account and adequately addressed all of the recommendations of the MCA in the current Marine Guidance Note 371, and its annexes that may be appropriate to the Development, or any other relevant document which may supersede said guidance prior to approval of the NSP. The Development must, at all times, be constructed and operated in accordance with the approved NSP (as updated and amended from time to time by the Company). Any updates or amendments made to the NSP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

18. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Cable Plan ("CaP"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the JNCC, SNH, MCA, SFF and any such other advisors or organisations as may be required at the discretion of the Scottish Ministers. The CaP must be in accordance with the ES. The Development must, at all times, be constructed and operated in accordance with the approved CaP (as updated and amended from time to time by the Company). Any updates or amendments made to the CaP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.
The CaP must include the following:

a. Details of the location and cable laying techniques for the inter array cables;
b. The results of survey work (including geophysical, geotechnical and benthic surveys) which will help inform cable routing;
c. Technical specification of inter array cables, including a desk based assessment of attenuation of electro-magnetic field strengths and shielding;
d. A burial risk assessment to ascertain burial depths and where necessary alternative protection measures;
e. Methodologies for surveys (e.g. over trawl) of the inter array cables through the operational life of the wind farm where mechanical protection of cables laid on the sea bed is deployed; and
f. Methodologies for inter array cable inspection with measures to address and report to the Scottish Ministers any exposure of inter array cables.

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

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

The Company must provide the LMP, for information only, to the Planning Authorities, the JNCC, SNH and any other bodies as may be required at the discretion of the Scottish Ministers. The Development must, at all times, be constructed and operated in accordance with the approved LMP (as updated and amended from time to time by the Company). Any updates or amendments made to the LMP by the Company must be submitted, in writing, by the Company to the Scottish Ministers for their written approval.

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

20. The Company must, prior to the erection of any WTGs on the Site, submit an Air Traffic Control Radar Mitigation Scheme ("ATC Scheme"), in writing, to the Scottish Ministers for their written approval. Such approval may only be granted following consultation by the Scottish Ministers with the MOD.

The ATC Scheme is a scheme designed to mitigate the impact of the Development upon the operation of the Primary Surveillance Radar at RAF Leuchars ("the Radar") and the air traffic control operations of the MOD which is reliant upon the Radar. The ATC Scheme shall set out the appropriate measures to be implemented to mitigate the impact of the Development on the Radar and shall be in place for the operational life of the Development provided the Radar remains in operation.

No turbines shall become operational unless and until all those measures required by the approved ATC Scheme to be implemented prior to the operation of the turbines have been implemented and the Scottish Ministers have confirmed this in writing. The Development shall thereafter be operated fully in accordance with the approved ATC Scheme.

Reason: *To mitigate the adverse impacts of the Development on the air traffic control radar at RAF Leuchars and the operations of the MOD.*

21. The Company must ensure that no part of any turbine shall be erected above sea level within radar line of sight of the air defence radar at Remote Radar Head (RRH) Buchan unless and until an Air Defence Radar Mitigation Scheme ("the ADRM scheme") has been submitted to and approved in writing by the Scottish Ministers in consultation with the MOD.

For the purposes of this condition, the ADRM Scheme means a detailed scheme to mitigate the adverse impacts of the Development on the air defence radar at RRH Buchan and the air surveillance and control operations of the MOD. The scheme will set out the appropriate measures to be implemented to that end.

No turbines shall become operational until:

a. the mitigation measures which the approved ADRM Scheme requires to be implemented prior to the operation of the turbines have been implemented; and
b. any performance criteria specified in the approved ADRM Scheme and which the approved ADRM Scheme requires to have been satisfied prior to the operation of the turbines have been satisfied.

The Company shall thereafter comply with all other obligations contained within the approved ADRM Scheme for the duration of the operation of the Development.

Reason: *To mitigate the adverse impact of the Development on air defence radar at Remote Radar Head (RRH) Buchan.*

22. The Company must ensure that no part of any turbine shall be erected above sea level within radar line of sight of the air defence radar at Remote Radar Head ("RRH") Brizlee Wood unless and until an Air Defence Radar Mitigation Scheme ("the ADRM scheme") has been submitted to and approved in writing by the Scottish Ministers in consultation with the MOD.
For the purposes of this condition, the ADRM Scheme means a detailed scheme to mitigate the adverse impacts of the Development on the air defence radar at RRH Brizlee Wood and the air surveillance and control operations of the MOD. The scheme will set out the appropriate measures to be implemented to that end.
No turbines shall become operational until:

a. the mitigation measures which the approved ADRM Scheme requires to be implemented prior to the operation of the turbines have been implemented; and
b. any performance criteria specified in the approved ADRM Scheme and which the approved ADRM Scheme requires to have been satisfied prior to the operation of the turbines have been satisfied.

The Company shall thereafter comply with all other obligations contained within the approved ADRM Scheme for the duration of the operation of the Development.

Reason: *To mitigate the adverse impact of the development on air defence radar at Remote Radar Head (RRH) Brizlee Wood.*

23. The Company must ensure that no turbine shall be erected until a Primary Radar Mitigation Scheme ("PRMS") agreed with the Operator has been submitted to and approved in writing by the Scottish Ministers in order to mitigate the impact of the Development on the Primary Radar Installation at Perwinnes and associated air traffic management operations.
No blades shall be fitted to any turbine unless and until the approved Primary Radar Mitigation Scheme has been implemented and the development shall thereafter be operated fully in accordance with such approved Scheme.

Reason: *To mitigate the adverse impact of the development on air traffic operations.*

24. The Company must, prior to the Commencement of the Development, and following confirmation of the approved DSLP by the Scottish Ministers (refer to condition 12), provide the positions and maximum heights of the WTGs and construction equipment over 150 m (measured above LAT) and any Offshore Sub-Station Platforms to the United Kingdom Hydrographic Office ("UKHO") for aviation and nautical charting purposes. The Company must, within 1 month of the Final Commissioning of the

Development, provide co-ordinates accurate to three decimal places of minutes of arc for each WTG position and maximum heights of the WTGs to the UKHO for aviation and nautical charting purposes.

Reason: *For aviation and navigational safety.*

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

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

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

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

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

The Scottish Ministers may agree that monitoring may be reduced or ceased before the end of the lifespan of the Development.

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

a. Pre-construction, construction (if considered appropriate by the Scottish Ministers) and post-construction monitoring surveys for:

    1. Birds;
    2. Sandeels;
    3. Marine fish;
    4. Diadromous fish;
    5. Benthic communities; and
    6. Seabed scour and local sediment deposition.

b. The participation by the Company in surveys to be carried out in relation to marine mammals as set out in the Marine Mammal Monitoring Programme ("MMMP"); and

c. The participation by the Company in a National Strategic Bird Monitoring Framework ("NSBMF") and surveys to be carried out in relation to regional and / or strategic bird monitoring including but not necessarily limited to:

1. the avoidance behaviour of breeding seabirds around turbines;
2. flight height distributions of seabirds at wind farm sites;
3. displacement of kittiwake, puffin and other auks from wind farm sites; and
4. effects on survival and productivity at relevant breeding colonies

All initial methodologies for the above monitoring must be approved, in writing, by the Scottish Ministers and, where appropriate, in consultation with the Forth and Tay Regional Advisory Group ("FTRAG") referred to in condition 27 of this consent. Any pre-consent surveys carried out by the Company to address any of the above species may be used in part to discharge this condition subject to the written approval by the Scottish Ministers.

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

The Company must submit written reports and associated raw data of such monitoring surveys to the Scottish Ministers at timescales to be determined by the Scottish Ministers in consultation with the FTRAG. Subject to any legal restrictions regarding the treatment of the information, the results are to be made publicly available by the Scottish Ministers, or by such other party appointed at their discretion.

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

27. The Company must participate in any Forth and Tay Regional Advisory Group ("FTRAG") established by the Scottish Ministers for the purpose of advising the Scottish Ministers on research, monitoring and mitigation programmes for, but not limited to, ornithology, diadromous fish, marine mammals and commercial fish. Should a Scottish Strategic Marine Environment Group ("SSMEG") be established (refer to condition 28), the responsibilities and obligations being delivered by the FTRAG will be subsumed by the SSMEG at a timescale to be determined by the Scottish Ministers.

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

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

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

National scale.

29. Prior to the Commencement of the Development, the Company must at its own expense, and with the approval of the Scottish Ministers in consultation with the JNCC and SNH, appoint an Ecological Clerk of Works ("ECoW"). The ECoW must be appointed in time to review and approve the final draft version of the first plan or programme submitted under this consent to the Scottish Ministers for approval, until the Final Commissioning of the Development. The responsibilities of the ECoW must include, but not be limited to:

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

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

30. The Company must, to the satisfaction of the Scottish Ministers, participate in the monitoring requirements as laid out in the 'National Research and Monitoring Strategy for Diadromous Fish' so far as they apply at a local level. The extent and nature of the Company's participation is to be agreed by the Scottish Ministers in consultation with the FTRAG.

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

31. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Commercial Fisheries Mitigation Strategy ("CFMS"), in writing, to the Scottish Ministers for their written approval. The Company must remain a member of the Forth and Tay Offshore Wind Developers Group-Commercial Fisheries Working Group or any successor group formed to facilitate commercial fisheries dialogue in the Forth and Tay regions.
The Company must include in the CFMS a mitigation strategy for each commercial fishery that Ministers are reasonably satisfied would be adversely affected by the Development. The CFMS must, in particular, include mitigation measures for lobster stock enhancement if the Scottish Ministers are satisfied that such mitigation measures are reasonably necessary. The Company must implement all mitigation measures committed to be carried out by the Company within the terms of the CFMS. The Company must require all of its contractors, and sub-contractors, to co-operate with the fishing industry to ensure the effective implementation of the CFMS.

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

32. Prior to the Commencement of the Development, a Fisheries Liaison Officer ("FLO"), approved in writing by Scottish Ministers, in consultation with the FTOWDG-CFWG, must be appointed by the Company for the period from Commencement of the Development until the Final Commissioning of the Development. The Company must

notify the Scottish Ministers of the identity and credentials of the FLO before Commencement of the Development by including such details in the EMP (referred to in condition 14). The FLO must establish and maintain effective communications between the Company, any contractors or sub-contractors, fishermen and other users of the sea during the construction of the Development, and ensure compliance with best practice guidelines whilst doing so.

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

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

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

33. The Company must, no later than 6 months prior to the Commencement of the Development, submit a Marine Archaeology Reporting Protocol which sets out what the Company must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the Development, in writing, to the Scottish Ministers for their written approval. Such approval may be given only following consultation by the Scottish Ministers with any such advisors as may be required at the discretion of the Scottish Ministers. The Reporting Protocol must be implemented in full, at all times, by the Company.

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

APPENDIX 3. VARIATION - IMPACT REVIEW TECHNICAL NOTE

Note

Seagreen Wind Energy Ltd

Seagreen Phase 1 Capacity Variation

Variation - Impact Review Technical Note

Project No.: N0355
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Version 1
Revision 0.3

Prepared by INP
Verified by DCK
Approved by TNO

1 Introduction

This Technical Note has been produced to support the applications to vary Section 36 consents for the Seagreen Alpha and Seagreen Bravo Offshore Windfarms (OWFs), which together form the Seagreen Phase 1 project. This note is based on the information provided in the Variation Supporting Report (A4MR-SEAG-Z-DEV210-SRP-345).

NIRAS has undertaken a review of the proposed changes outlined in the Section 36 consent variation applications in relation to the project descriptions and project design envelope outlined in the:

- section 36 consents under section 36C of Electricity Act 1989 received on 10th October 2014);
- 2012 Offshore Environmental Statement (ES)[1]; and
- the 2013 Supplementary Environmental Information Statement (SEIS)[2]. This SEIS document contains the Habitat Regulations Assessment (HRA)[3] used to inform the Appropriate Assessment (AA) prepared by Marine Scotland in 2014.

2 Implications of Variation

The following points are noted in relation to the variations sought and the updated design envelope;

1) The variation sought is to remove the 525MW generating limit on each of the Alpha and Bravo OWFs to allow installation of higher rated Wind Turbine Generators (WTGs). This would allow larger MW capacity WTGs to be constructed under the existing consent parameters. No maximum

[1] Seagreen Phase 1 Offshore Project Environmental Statement, September 2012, Volume 1 part 1, Chapter 5, table 5.1

[2] SEIS NTS table 1, October 2013

[3] http://www.gov.scot/Topics/marine/Licensing/marine/scoping/Seagreen3

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capacity for individual WTGs was assessed in the 2012 Offshore ES, and no S36 consent or Marine Licence conditions state a maximum MW capacity for WTGs.

2) The only change would be to the technology within the WTGs which has advanced considerably since the applications for the 2014 consents were prepared. None of the physical parameters of the WTGs or overall OWFs would change.
3) As there would be no change to the physical parameters of WTGs and associated infrastructure, these parameters remain unchanged from the original design envelope used as the basis for previous assessments in the 2012 Offshore ES, the 2013 SEIS and HRA, and as consented in 2014. Therefore, there is no change in terms of the worst case scenario for;

    - WTG numbers;
    - WTG physical parameters;
    - layout principles including WTG spacing;
    - WTG lighting;
    - foundation options and physical parameters; or
    - construction methods or periods.

For completeness the implications of the proposed variation on the Environmental Impact Assessment (EIA) and HRA/AA receptor topics (as defined in the 2012 Offshore ES and 2013 SEIS/HRA) have been reviewed and are summarised in Table 1.1 below.

Table 2.1 Implications of Variation on EIA and HRA/AA Receptor Topics for Project Alpha and Project Bravo OWFs

Receptor Topic	Implication
Physical Environment	The maximum number of WTGs, foundation parameters, WTG spacing and construction methods remain as defined in the 2012 Offshore ES/2014 consented design envelope. As no physical changes are proposed, there would be no change to potential effects on the physical environment to those assessed within the 2012 Offshore ES. Conclusions related to physical processes, including in relation to assessment of potential resulting impacts on Natura 2000 interest features, within the EIA and HRA remain valid.
Water and Sediment Quality	The maximum number of WTGs, foundation parameters, WTG spacing and construction methods remain as defined in the 2012 Offshore ES/2014 consented design envelope. Due to the absence of physical changes, there would be no change to potential effects on water and sediment quality to those assessed within the 2012 Offshore ES. Conclusions related to water and sediment quality, including in relation to assessment of potential resulting impacts on Natura 2000 interest features, within the EIA and HRA remain valid.

Receptor Topic	Implication
Nature Conservation Designations	The maximum number of WTGs, foundation parameters, layout principles, physical WTG parameters, WTG spacing and construction methods remain as defined in the 2012 Offshore ES/2014 consented design envelope. As all physical parameters remain the same it is concluded that there would be no changes regarding impacts on the qualifying features of designated sites and therefore the conclusions of the EIA and HRA remain valid.
Ornithology	The maximum number of WTGs, layout principles and physical WTG parameters remain as defined in the 2012 Offshore ES/2014 consented design envelope. As all physical parameters remain the same it is concluded there would be no changes regarding impacts on ornithology receptors and therefore the conclusions of the EIA and HRA remain valid.
Benthic Ecology and Intertidal Ecology	The maximum number of WTGs and maximum footprint of foundations remain the same as defined in the 2012 Offshore ES/2014 consented design envelope. As all physical parameters remain the same it is concluded there would be no changes regarding impacts on benthic/intertidal ecology receptors and therefore the conclusions of the EIA and HRA remain valid.
Natural Fish and Shellfish Resource	The maximum number of WTGs, maximum parameters of foundations and construction methods and period remain the same as defined in the 2012 Offshore ES/2014 consented design envelope. As all physical parameters remain the same it is concluded there would be no changes regarding impacts on natural fish and shellfish receptors and therefore the conclusions of the EIA and HRA remain valid.
Marine Mammals	The maximum number of WTGs, maximum parameters of foundations, construction methods and period remain the same as defined in the 2012 Offshore ES/2014 consented design envelope. As all design parameters remain as previously assessed there would be no change to impacts on marine mammal receptors.
Commercial Fisheries	The maximum number of WTGs, foundation parameters, layout, WTG marking, and construction period remain as defined in the 2012 Offshore ES/2014 consented design envelope. As all design parameters remain as previously assessed conclusions in the 2012 Offshore ES in relation to fishing vessels, effort or navigation risk remain valid. Maximum foundation parameters are unchanged to those assessed within the 2012 Offshore ES and therefore the 2012 assessment in relation to benthic and fish communities and availability of fishing resource also remain valid.
Shipping and Navigation	The maximum number of WTGs, foundation parameters, layout, and WTG marking are as defined in the 2012 Offshore ES/2014 consented design envelope. As all design parameters remain as previously assessed there would be no change to impacts or navigation risk and the conclusions of the 2012 Offshore ES remain valid.

Receptor Topic	Implication
Seascape, Landscape and Visual Amenity (SLVIA)	The maximum number of WTGs, physical parameters of the WTG and layout principles remain as defined in the 2012 Offshore ES/2014 consented design envelope. As all design parameters remain as previously assessed, the conclusions of the SLVIA, within the 2012 Offshore ES, remain valid.
Archaeology and Cultural Heritage	The maximum number of WTGs, maximum footprint of foundations and wind farm layout principles remain as defined in the 2012 Offshore ES/2014 consented design envelope. As all design parameters remain as previously assessed, there would be no change to potential impacts to marine cultural heritage or archaeology and the conclusions of the 2012 Offshore ES remain valid.
Military and Civil Aviation	The maximum number of WTGs, physical parameters of the WTGs and layout principles remain as defined in the 2012 Offshore ES/2014 consented design envelope. As all design parameters remain as previously assessed, there would be no change to potential impacts to military and civil aviation activities and the conclusions of the 2012 Offshore ES remain valid.
Socio-economics, Tourism and Recreation	The maximum number of WTGs, their physical parameters and layout principles remain as defined in the 2012 Offshore ES/2014 consented design envelope. As all design parameters remain as previously assessed, there would be no change to potential impacts to socio-economic, tourism or recreation receptors and the conclusions of the 2012 Offshore ES remain valid.
Other Marine Users and Activities	The maximum number of WTGs, their physical parameters, construction period and layout principles remain the same as defined in the 2012 Offshore ES/2014 consented design envelope. As all design parameters remain as previously assessed, there would be no change to potential impacts on other marine users and activities and the conclusions of the 2012 Offshore ES remain valid.

3 Conclusion

The implications of the proposed variation on the EIA and HRA/AA receptor topics have been reviewed and are summarised in this Technical Note. The design envelope (in relation to WTG numbers, sizes and associated physical parameters, layout principles, foundation parameters, and construction methods and periods) remains as assessed within the 2012 Offshore ES, 2013 SEIS and HRA, and as consented in 2014. As the variation will not, therefore, result in a change to any impact on the environment, including biological, physical or human components of that environment, the conclusions of the impact assessments presented within these documents remain as predicted and hence remain valid.

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