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**MARINE SCOTLAND - LICENSING OPERATIONS TEAM'S
ASSESSMENT OF THE PROJECT'S IMPLICATIONS FOR
DESIGNATED SPECIAL AREAS OF CONSERVATION AND SPECIAL
PROTECTION AREAS IN VIEW OF THE SITES' CONSERVATION
OBJECTIVES.**

**APPLICATIONS FOR CONSENT UNDER SECTION 36 OF THE ELECTRICITY
ACT 1989 AND FOR A MARINE LICENCE UNDER THE MARINE (SCOTLAND)
ACT 2010 FOR THE CONSTRUCTION AND OPERATION OF THE FORTHWIND
DEMONSTRATION PROJECT COMPRISING A SINGLE WIND TURBINE
GENERATOR AND ASSOCIATED ANCILLARY WORKS**

**SITE DETAILS: FORTHWIND DEMONSTRATION PROJECT, FIRTH OF FORTH,
APPROXIMATELY 1.5 KILOMETRES FROM THE COAST OF METHIL**

Name	Assessor or Approver	Date
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SECTION 1: BACKGROUND

1 Appropriate assessment conclusion

- 1.1 This appropriate assessment (“AA”) concludes that there will be no adverse effect on the site integrity of the Berwickshire and North Northumberland Coast Special Area of Conservation (“SAC”), Firth of Tay and Eden Estuary SAC, Isle of May SAC, Moray Firth SAC, River Teith SAC, Firth of Forth Special Protection Area (“SPA”), Forth Islands SPA and Outer Firth of Forth and St Andrews Bay Complex SPA from the Forthwind Limited (“Forthwind”) proposal either in isolation or in combination with other plans or projects.
- 1.2 Marine Scotland – Licensing Operations Team (“MS-LOT”) considers that the most up to date and best scientific advice available has been used in reaching the conclusion that the Forthwind proposal will not adversely affect the integrity of these sites and is satisfied that no reasonable scientific doubt remains.

2 Introduction

- 2.1 This is a record of the AA undertaken by MS-LOT in regards to the Forthwind proposal to develop a test and demonstration site comprised of a wind turbine generator, a meteorological mast (“metmast”) and associated cables, as required under regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 and regulation 63 of the Conservation of Habitats and Species Regulations 2017 (together, “the Habitats Regulations”). The Scottish Ministers, as the ‘competent authority’ under the Habitats Regulations, must be satisfied that the project will not adversely affect the integrity of any European site (SAC and SPA), either alone or in combination with other plans or projects, before it can grant consent for the project.
- 2.2 NatureScot, operating name of Scottish Natural Heritage, has been consulted. Specialist advice was also sought and received from Marine Scotland Science (“MSS”).

3 Details of proposed project

- 3.1 Forthwind proposes to construct a single test and demonstration wind turbine with an installed capacity of up to 20 megawatts (“MW”) located approximately 1.5 kilometres (“km”) sea ward of mean high water springs (“MHWS”) level of the northern shore of the Firth of Forth at Methil, Scotland.
- 3.2 In 2016, a section 36 consent was granted by the Scottish Ministers to Forthwind for the installation and operation of two test and demonstration

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offshore wind turbines, each with 9MW generating capacity. This consent was varied in 2019 to increase the total capacity to 29.9MW. Forthwind is now seeking a new consent to replace this existing consent. The Forthwind proposal is in the same location however comprises of one turbine and a metmast. The turbine is also different in design as it is larger, has a higher individual generating capacity and a different internal technical design to the turbines permitted under the existing consent.

- 3.3 The Forthwind proposal comprises of a turbine with 3 blades and a maximum turbine height of 156 metres (“m”) above highest astronomical tide (“HAT”), maximum rotor diameter of 255m, a minimum blade clearance of 25m above HAT and a maximum blade tip height of 280m above HAT. The proposal also includes a single metmast located 625m south-west of the turbine with a height of 160m above HAT. The metmast is proposed to be powered by a cable from the turbine which is to run alongside a 20 millimetres² (“mm”) fibre optic communications cable. The communications cable will extend from the turbine to landfall at the Fife Energy Park (“FEP”) and run alongside a 66 kilovolt (“kV”) electricity export cable.

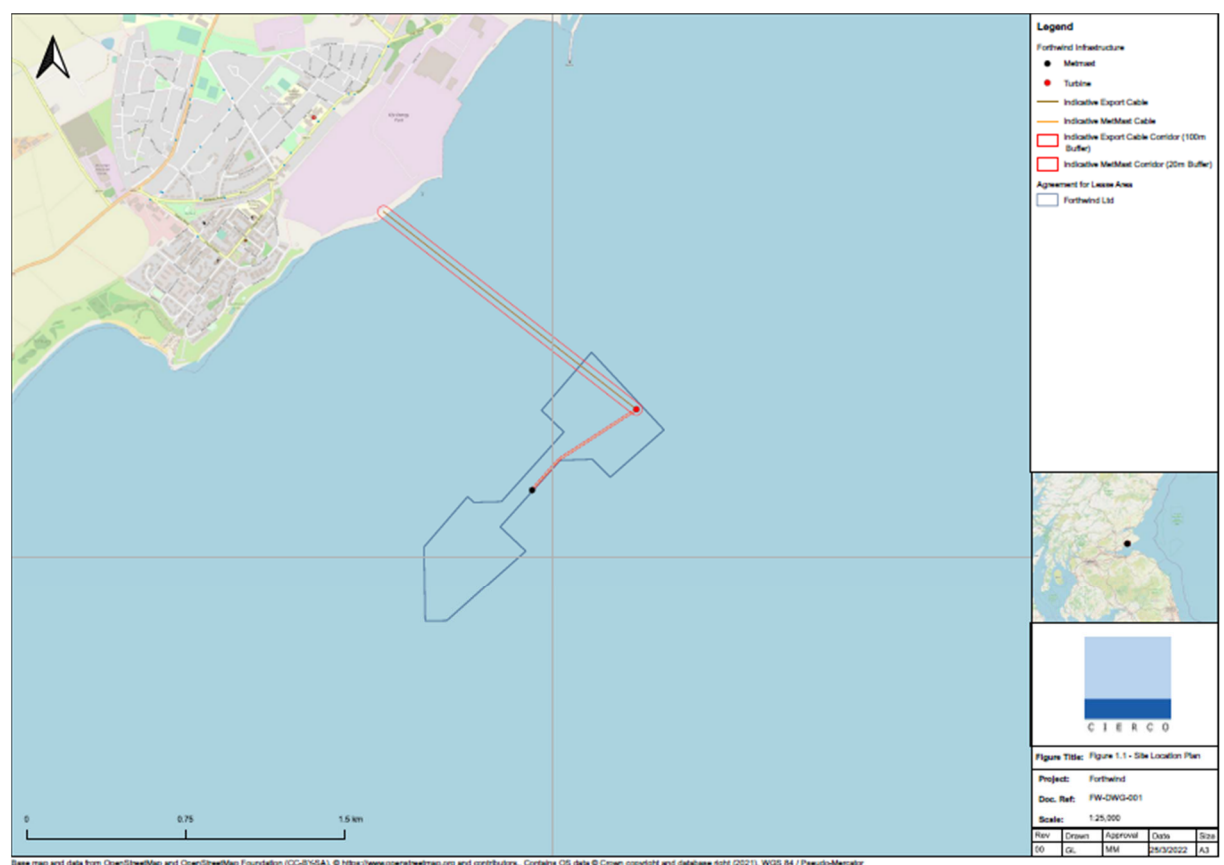


Figure 1: Chart of Forthwind Proposal – taken from the EIA Report.

- 3.4 The proposed metmast foundation is an 8m monopile. The turbine foundations are yet to be decided but are proposed to be either a 10m diameter monopile

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or four pin piles between 2.5-3.5m in diameter per pin pile inserted to a depth of up to 50m. The installation technique to be undertaken for installation of the piles is drilling rather than impact piling. When drilling is utilised, a pile sleeve is drilled into the seabed and the pile is then lowered in to the sleeve and grouted in place.

- 3.5 The preferred method of installation of the export cable is burial at a depth of 1.5m using ploughing, jetting or trenching. Alternatively, if burial is not possible or effective, the cables may be laid on the seabed and protected by concrete mattresses or rock bags.
- 3.6 As part of the Forthwind proposal, pre and post-installation geophysical surveys will be carried out along the cable route. These will include the use of multi-beam echo sounder, side-scan sonar, sub-bottom profiler and camera surveys.
- 3.7 The Forthwind proposal will take approximately three months to construct across a period of approximately six months and be operational for 25 years. It is anticipated that the intertidal trench (for the cable) will take around four weeks to construct. Installation of the foundations is anticipated to take up to 40 days and installation of the turbine and metmast up to seven days.

4 Consultation

- 4.1 NatureScot was consulted on 7 June 2022 and responded on 15 July 2022. Further clarification was sought from NatureScot on 5 August 2022 and MS-LOT received a response on 10 August 2022. On 15 September 2022 MS-LOT sought further guidance as to NatureScot's reasoning behind its conclusion that there is no adverse effect on site integrity without mitigation to which NatureScot responded on 10 October 2022.
- 4.2 Specialist advice was sought from MSS on 7 June 2022 and received on 28 July 2022.

5 Main points raised during consultation

- 5.1 NatureScot advised that the Forthwind proposal could have a likely significant effect on the qualifying interests listed in paragraph 7.2 of the Outer Firth of Forth and St Andrews Bay Complex SPA, Forth Islands SPA and Firth of Forth SPA. Additionally, NatureScot was of the view that the Forthwind proposal would have a likely significant effect on the harbour seal qualifying interest of the Firth of Tay and Eden Estuary SAC, the grey seal qualifying interest of the Isle of May SAC and Berwickshire and North Northumberland Coast SAC, the

bottlenose dolphin qualifying interest of the Moray Firth SAC and also the Atlantic salmon and sea lamprey qualifying interests of the River Teith SAC.

5.2 As such NatureScot advised that an AA is required.

SECTION 2: INFORMATION ON EUROPEAN SITES

6 Background information and qualifying interests for the relevant European sites

6.1 This section provides links to the NatureScot SiteLink website (“SiteLink”) where the background information on the sites being considered in this assessment is available. The qualifying interests for the sites are listed, as are the conservation objectives.

Table 1 Name of European sites affected and relevant link(s) to SiteLink

<p><u>Berwickshire and North Northumberland Coast SAC</u></p> <p><u>Firth of Tay and Eden Estuary SAC</u></p> <p><u>Isle of May SAC</u></p> <p><u>Moray Firth SAC</u></p> <p><u>River Teith SAC</u></p> <p><u>Firth of Forth SPA</u></p> <p><u>Forth Islands SPA</u></p> <p><u>Outer Firth of Forth and St Andrews Bay Complex SPA</u></p>
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Table 2 Qualifying interests

<p><u>Berwickshire and North Northumberland Coast SAC</u></p> <ul style="list-style-type: none">• Grey seal (<i>Halichoerus grypus</i>)• Reefs <p><u>Firth of Tay and Eden Estuary SAC</u></p> <ul style="list-style-type: none">• Estuaries

- Harbour seal (*Phoca vitulina*)
- Intertidal mudflats and sandflats
- Subtidal sandbanks

Isle of May SAC

- Grey seal (*Halichoerus grypus*)
- Reefs

Moray Firth SAC

- Bottlenose dolphin (*Tursiops truncatus*)
- Subtidal sandbanks

River Teith SAC

- Atlantic salmon (*Salmo salar*)
- Brook lamprey (*Lampetra planeri*)
- River lamprey (*Lampetra fluviatilis*)
- Sea lamprey (*Petromyzon marinus*)

Firth of Forth SPA

- Bar-tailed godwit (*Limosa lapponica*), non breeding
- Common scoter (*Melanitta nigra*), non-breeding
- Cormorant (*Phalacrocorax carbo*), non-breeding
- Curlew (*Numenius arquata*), non-breeding
- Dunlin (*Calidris alpina alpina*), non-breeding
- Eider (*Somateria mollissima*), non-breeding
- Golden plover (*Pluvialis apricaria*), non-breeding
- Goldeneye (*Bucephala clangula*), non-breeding
- Great crested grebe (*Podiceps cristatus*), non-breeding
- Grey plover (*Pluvialis squatarola*), non-breeding
- Knot (*Calidris canutus*), non-breeding
- Lapwing (*Vanellus vanellus*), non-breeding
- Long-tailed duck (*Clangula hyemalis*), non-breeding
- Mallard (*Anas platyrhynchos*), non-breeding
- Oystercatcher (*Haematopus ostralegus*), non-breeding
- Pink-footed goose (*Anser brachyrhynchus*), non-breeding
- Red-breasted merganser (*Mergus serrator*), non-breeding
- Red-throated diver (*Gavia stellata*), non-breeding
- Redshank (*Tringa totanus*), non-breeding
- Ringed plover (*Charadrius hiaticula*), non-breeding
- Sandwich tern (*Sterna sandvicensis*), passage
- Scaup (*Aythya marila*), non-breeding
- Shelduck (*Tadorna tadorna*), non-breeding

- Slavonian grebe (*Podiceps auritus*), non-breeding
- Turnstone (*Arenaria interpres*), non-breeding
- Velvet scoter (*Melanitta fusca*), non-breeding
- Waterfowl assemblage, non-breeding
- Wigeon (*Anas penelope*), non-breeding

Forth Islands SPA

- Arctic tern (*Sterna paradisaea*), breeding
- Common tern (*Sterna hirundo*), breeding
- Cormorant (*Phalacrocorax carbo*), breeding
- Gannet (*Morus bassanus*), breeding
- Guillemot (*Uria aalge*), breeding
- Herring gull (*Larus argentatus*), breeding
- Kittiwake (*Rissa tridactyla*), breeding
- Lesser black-backed gull (*Larus fuscus*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), breeding
- Roseate tern (*Sterna dougallii*), breeding
- Sandwich tern (*Sterna sandvicensis*), breeding
- Seabird assemblage, breeding
- Shag (*Phalacrocorax aristotelis*), breeding

Outer Firth of Forth and St Andrews Bay Complex SPA

- Arctic tern (*Sterna paradisaea*), breeding
- Black-headed gull (*Chroicocephalus ridibundus*), non-breeding
- Common gull (*Larus canus*), non-breeding
- Common scoter (*Melanitta nigra*), non-breeding
- Common tern (*Sterna hirundo*), breeding
- Eider (*Somateria mollissima*), non-breeding
- Gannet (*Morus bassanus*), breeding
- Goldeneye (*Bucephala clangula*), non-breeding
- Guillemot (*Uria aalge*), breeding and non-breeding
- Herring gull (*Larus argentatus*), breeding and non-breeding
- Kittiwake (*Rissa tridactyla*), breeding and non-breeding
- Little gull (*Hydrocoloeus minutus*), non-breeding
- Long-tailed duck (*Clangula hyemalis*), non-breeding
- Manx shearwater (*Puffinus puffinus*), breeding
- Puffin (*Fratercula arctica*), breeding
- Razorbill (*Alca torda*), non-breeding
- Red-breasted merganser (*Mergus serrator*), non-breeding
- Red-throated diver (*Gavia stellata*), non-breeding

- Seabird assemblage, breeding
- Seabird assemblage, non-breeding
- Shag (*Phalacrocorax aristotelis*), breeding and non-breeding
- Slavonian grebe (*Podiceps auritus*), non-breeding
- Velvet scoter (*Melanitta fusca*), non-breeding
- Waterfowl assemblage, non-breeding

Table 3 Conservation objectives

Berwickshire and North Northumberland Coast SAC

The site's conservation objectives apply to the site and the individual species and/or assemblage of species for which the site has been classified (the "Qualifying features" listed above).

The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the Favourable Conservation Status of its qualifying features, by maintaining or restoring:

- the extent and distribution of qualifying natural habitats and habitats of the qualifying species
- the structure and function (including typical species) of qualifying natural habitats
- the structure and function of the habitats of the qualifying species
- the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- the populations of each of the qualifying species
- the distribution of qualifying species within the site

Firth of Tay and Eden Estuary SAC

For Estuaries, intertidal mudflats and sandflats; and subtidal sandbanks

To avoid deterioration of the qualifying habitats (listed below) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the qualifying habitats that the following are maintained in the long term:

- Extent of the habitat on site
- Distribution of the habitat within site
- Structure and function of the habitat
- Processes supporting the habitat

- Distribution of typical species of the habitat
- Viability of typical species as components of the habitat
- No significant disturbance of typical species of the habitat

For Common Seal

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Isle of May SAC

For Reefs

To avoid deterioration of the qualifying habitat (listed above) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the qualifying habitat that the following are maintained in the long term:

- Extent of the habitat on site
- Distribution of the habitat within site
- Structure and function of the habitat
- Processes supporting the habitat
- Distribution of typical species of the habitat
- Viability of typical species as components of the habitat
- No significant disturbance of typical species of the habitat

For Grey Seal

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Moray Firth SAC

1. To ensure that the qualifying features of Moray Firth SAC are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.
2. To ensure that the integrity of Moray Firth SAC is maintained or restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature.

For subtidal sandbanks

- 2a. Extent and distribution of the habitat within the site.
- 2b. Structure and function of the habitat and the supporting environment on which it relies.
- 2c. Distribution and viability of typical species of the habitat.

For bottlenose dolphin

- 2a. The population of bottlenose dolphin is a viable component of the site.
- 2b. The distribution of bottlenose dolphin throughout the site is maintained by avoiding significant disturbance.
- 2c. The supporting habitats and processes relevant to bottlenose dolphin and the availability of prey for bottlenose dolphin are maintained.

River Teith SAC

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species, including range of genetic types for salmon, as a viable component of the site
- Distribution of the species within site

- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Firth of Forth SPA and Forth Islands SPA

To avoid deterioration of the habitats of the qualifying species (listed above) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Outer Firth of Forth and St Andrews Bay Complex SPA

1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.

2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:

2a. The populations of qualifying features are viable components of the site.

2b. The distributions of the qualifying features throughout the site are maintained by avoiding significant disturbance of the species.

2c. The supporting habitats and processes relevant to the qualifying features and their prey/food resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.

SECTION 3: ASSESSMENT IN RELATION TO REGULATION 48 OF THE CONSERVATION (NATURAL HABITATS, &C.) REGULATIONS 1994 AND REGULATION 63 OF THE CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017

7 Requirement for appropriate assessment

7.1 Is the project directly connected with or necessary to the conservation management of the site(s)?

The project is not directly connected with or necessary to the conservation management of the site.

7.2 Is the project likely to have a significant effect on the qualifying interest(s)?

In its response, dated 15 July 2022, NatureScot advised that the proposal is likely to have a significant effect on the following qualifying interests of the following SPAs and SACs;

Outer Firth of Forth and St Andrews Bay Complex SPA

- Gannet
- Kittiwake
- Herring gull
- Guillemot
- Razorbill
- Puffin
- European shag
- Black-headed gull
- Eider
- Red-throated diver
- Common scoter
- Velvet scoter
- Long-tailed duck
- Red-breasted merganser
- Goldeneye
- Slavonian grebe

Forth Islands SPA

- Gannet
- Kittiwake

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- Herring gull
- Lesser black-backed gull
- Guillemot
- Razorbill
- Puffin
- European shag

Firth of Forth SPA

- Eider
- Red-throated diver
- Common scoter
- Velvet scoter
- Long-tailed duck
- Red-breasted merganser
- Goldeneye
- Slavonian grebe

Berwickshire and North Northumberland Coast SAC and Isle of May SAC

- Grey seal

Firth of Tay and Eden Estuary SAC

- Harbour seal

Moray Firth SAC

- Bottlenose Dolphin

River Teith SAC

- Atlantic salmon
- Sea lamprey

7.3 NatureScot advised that there could be likely significant effect on the qualifying interests listed above of the Outer Firth of Forth and St Andrews Bay Complex SPA, Firth of Forth SPA and Forth Islands SPA due to risk of collision and displacement as a result of the Forthwind proposal. Further to this, barrier effects and the loss of supporting habitat could also cause likely significant effect.

7.4 NatureScot confirmed that the common tern, sandwich tern, whooper swan and pink footed goose do not require further assessment despite having connectivity to the Forthwind proposal and therefore these species do not form part of this AA.

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- 7.5 NatureScot advised that the marine mammal qualifying interests of the Berwickshire and North Northumberland Coast SAC and Isle of May SAC, Firth of Tay and Eden Estuary SAC and Moray Firth SAC are at risk of disturbance through underwater noise and vessel presence generated during construction and decommissioning of the Forthwind proposal.
- 7.6 In relation to the River Teith SAC, NatureScot advised that the Atlantic salmon and sea lamprey qualifying interests have potential to be at risk of disturbance as a result of underwater noise generated during construction, operation and decommissioning of the Forthwind proposal. Specifically, there may be a risk of disturbance in relation to noise generated by drilling of piles, operation of the turbine, vessel movement and decommissioning of the Forthwind proposal. In addition to this, NatureScot advised that these qualifying interests may be sensitive to electromagnetic field (“EMF”) from the proposed export cable.
- 7.7 MS-LOT agrees with NatureScot’s advice and has undertaken an AA for the above qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA, Firth of Forth SPA, Forth Islands SPA, Firth of Tay and Eden Estuary SAC, Isle of May SAC, Berwickshire and North Northumberland Coast SAC, Moray Firth SAC and the River Teith SAC.

8 Appropriate assessment of the implications for the site in view of the site’s conservation objectives

- 8.1 NatureScot highlighted that the absence of a separate Habitats Regulations Appraisal (“HRA”) Report has resulted in a lack of clarity for the HRA process and as such presented issues in compiling advice resulting in arguments and conclusions framed in EIA terminology having had to be applied to the HRA process. Despite this issue, NatureScot was able to provide sufficient advice to inform this AA.
- 8.2 Outer Firth of Forth and St Andrews Bay Complex SPA, Forth Islands SPA and Firth of Forth SPA
- 8.2.1 NatureScot advised that estimated impacts on the seabird qualifying interests of the Outer Firth of Forth and St Andrews Bay Complex SPA, the Forth Islands SPA and Firth of Forth SPA will not have an adverse effect on site integrity. This is due to:
- estimated impacts on these features being low and representing a very small proportion of the respective populations;
 - the location of the Forthwind proposal being close inshore within the Firth of Forth whilst most of the seabird species forage offshore and are not

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present within the site of the Forthwind proposal in significant numbers (relative to the SPA population as a whole); and

- seabird species tend to be wide-ranging and as such they are able to easily access alternative habitat if displaced from the relatively small site of the Forthwind proposal.

8.2.2 MSS agreed with this conclusion.

8.2.3 Further to this, in relation to wintering waterfowl and wader species of the Outer Firth of Forth and St Andrews Complex SPA, NatureScot concluded that a population viability assessment is not necessary to conclude no adverse effect on site integrity based on the following;

- the worst case scenario utilised during the impact assessment by Forthwind and the precautions built into this;
- the small scale of the development and thus small area of habitat to be lost;
- the small distances required for birds to move into non-impacted areas of the SPA; and
- the availability of other locations within the SPA into which to move.

8.2.4 MSS agreed with this conclusion.

8.3 Berwickshire and North Northumberland Coast SAC, Firth of Tay and Eden Estuary SAC, Isle of May SAC , Moray Firth SAC

8.3.1 NatureScot advised that harbour seal, grey seal and bottlenose dolphin could be disturbed as a result of underwater noise and vessel presence during construction. However, as construction will be short in duration over a localised area and as a marine mammal observer will be in place during noisy activities to observe a 500m mitigation zone, disturbance to marine mammals will not result in mortality or impacts on productivity. Vessel presence as a result of the Forthwind proposal will not be significant in the context of existing background levels of vessel activity in this area. As a result, NatureScot concluded that there will be no adverse effect on site integrity of the Berwickshire and North Northumberland Coast SAC, Firth of Tay and Eden Estuary SAC, Isle of May SAC, and Moray Firth SAC.

8.3.2 MSS agreed with this conclusion.

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8.4 River Teith SAC

- 8.4.1 NatureScot advised that although the qualifying interests of the River Teith SAC are sensitive to noise, construction noise generated by drilling of the piles poses no risk of injury to diadromous fish and as decommissioning noise will be lower in magnitude, this again poses no risk to diadromous fish. In relation to noise generated during the operation phase from the turbine and vessel movement, this is not significant in the context of background levels of noise in this area.
- 8.4.2 In addition to this, NatureScot advised that EMF does not pose a risk of acting as a barrier to migration due to the export cable being buried and additionally due to its relatively short length.
- 8.4.3 As a result of this NatureScot concluded that there will be no adverse effect on site integrity on the River Teith SAC. MSS agreed with this conclusion.
- 8.4.4 MS-LOT has considered the information contained with the Forthwind proposal and the advice provided by NatureScot and MSS and concludes that the Forthwind proposal, in isolation, will not adversely affect the site integrity of the Firth of Forth SPA, Forth Islands SPA, Outer Firth of Forth and St Andrews Bay Complex SPA, Berwickshire and North Northumberland Coast SAC and Isle of May SAC, Firth of Tay and Eden Estuary SAC, Moray Firth SAC and the River Teith SAC.

9 In combination assessment

- 9.1 MS-LOT has carried out an in combination assessment to ascertain whether the Forthwind proposal will have a cumulative effect with other plans or projects which, in combination, would have the potential to affect the qualifying interests of the Firth of Forth SPA, Forth Islands SPA, Outer Firth of Forth and St Andrews Bay Complex SPA, Berwickshire and North Northumberland Coast SAC and Isle of May SAC, Firth of Tay and Eden Estuary SAC, Moray Firth SAC and the River Teith SAC.
- 9.2 The following projects currently have an active marine licence, section 36 consent or European protected species licence and associated AA which identified a likely significant effect on the qualifying interests of the Firth of Forth SPA, Forth Islands SPA, Outer Firth of Forth and St Andrews Bay Complex SPA, Berwickshire and North Northumberland Coast SAC and Isle of May SAC, Firth of Tay and Eden Estuary SAC, Moray Firth SAC and the River Teith SAC.

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9.3 Aberdeen Offshore Wind Farm Limited – European Offshore Wind Deployment Centre – Aberdeen Bay

9.3.1 The European Offshore Wind Deployment Centre consists of 11 turbines, inter-array and export cables located 2 to 4.5km east of Blackdog, Aberdeenshire. Construction commenced in November 2017, beginning with foundations and cabling. All construction works have been completed for this project which is now in the operational stage which is scheduled to continue until 2032.

9.4 Amcogiffen – Sea Wall Repairs – Burntisland, Fife

9.4.1 The proposal is for the repair of masonry at ten locations along the coast at Burntisland, Fife. The proposal will ensure the structural integrity of the embankment and Fife coastal path by repairing the voids and undercutting caused by erosion from the sea. Amcogiffen plan to complete works within 10 days of starting. The proposal will be carried out with an excavator firstly clearing the fallen masonry to be transported to the individual worksite locations for reuse. The repairs of the ten locations will be infilled with a mix of the existing fallen masonry, Natem 35, Mastercrete rapid setting mortar and/or Soluform bags. In some locations the work will be squared up with a Stihl saw and the excavator will be used to compact materials where required. Once work is completed, all remaining masonry, mortar or related material will be removed from below Mean High Water Springs.

9.5 Ardersier Port Development – Ardersier

9.5.1 The Ardersier Port Development is located at the former McDermott Fabrication Yard, which lies approximately 7.5km to the west of Nairn, 3km northeast of the village of Ardersier and is bounded by the Moray Firth to the north. The site extends to 307 hectares in total (including marine and terrestrial aspects) and features an existing harbour which is protected by a naturally occurring sand and shingle spit known locally as Whiteness Head. The works involve port entrance and inner channel dredging, quay wall construction and realignment and quayside (berthing) dredging. A dredge of 2,300,000m³ of sand will be required to deepen the port entrance to -6.5m chart datum ("CD"). A cutter suction dredger will be used. An area of the inner channel will be dredged to -3m CD by either plough dredging, backhoe dredger or land-based equipment. Once dredging has been completed, the new 464m sheet pile wall will be constructed alongside the existing quayside. The works are due to be completed by August 2024.

9.6 BEAR Scotland Limited - Bridge Maintenance Works - Kessock Bridge, Inverness-shire

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9.6.1 The works include routine maintenance activities to be carried out on the bridge over a period of five years. All works will be highly localised and take place within the immediate vicinity of the bridge. With the exception of scour repairs and fender replacement, all maintenance activities will take place above MHWS. Activity duration is likely to be less than three months and for several activities, duration will be less than a few weeks. The exception being the painting of the superstructure which will take approximately four years to complete.

9.7 Beatrice Offshore Wind Farm Limited – Moray Firth, Caithness

9.7.1 The works involved the installation and operation of the Beatrice Offshore Wind Farm, which is located in the outer Moray Firth 13.5km from the Caithness coast. The total area of the development is 131.5km². The development comprises 84 turbines. The eastern edge of the development site is adjacent to the proposed Moray Firth Offshore Renewables Limited Eastern Development Area. The operational lifespan of the wind farm is expected to be 25 years. Construction started in April 2017 and the final turbine was installed in May 2019.

9.8 Beatrice Offshore Wind Farm Limited - Geophysical surveys, benthic surveys and visual inspections – Moray Firth, Caithness

9.8.1 The works involve geophysical surveys at the site of Beatrice Offshore Wind Farm transmission infrastructure and turbine sub structures, located in the Outer Moray Firth approximately 13.5 km from the Caithness coastline, off the Northeast of Scotland and comprised of 84 fixed wind turbines, two offshore transformer modules, inter-array cables and two subsea export cables. The survey operations are scheduled to be undertaken between June 2020 and December 2023. There will be numerous survey campaigns within this period, with a total duration of 365 days.

9.9 Caledonia Offshore Wind Limited – Geophysical Surveys – Caledonia Offshore Wind Farm Export Cable Corridor

9.9.1 Caledonia Offshore Wind Limited are to undertake geophysical surveys to assess the ground conditions along the proposed export cable corridor.

9.10 Copenhagen Offshore Partners – Geophysical Surveys – Outer Moray Firth

9.10.1 Geophysical surveys to take place in 2023 along the proposed export cable corridor for the E1 East offshore wind farm project. The surveys include the use of sub-bottom profilers, ultra-high resolution sparkers, multi-beam echo

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sounders, ultra-short baseline systems, side scan sonar, benthic sampling and geotechnical works.

9.11

9.12 Dalgety Bay Sailing Club Limited - Moorings - Dalgety Bay

9.12.1 Dalgety Bay Sailing Club are increasing the number of moorings in Dalgety Bay from 50 moorings to 80 moorings for private pleasure boating activities. The moorings will be in use from April to September each year.

9.13 Defence Infrastructure Organisation - Remediation and construction works - Dalgety Bay, Fife

9.13.1 The physical works are required to address the radium contamination in the area surrounding Dalgety Bay. The works primarily comprise of a robust "geotextile" membrane of approximately 13,000m² held in place and protected by a new revetment consisting of 9,500m³ of rock armour. The existing Dalgety Bay Sailing Club slipway and jetty structures will also be removed and replaced with a single slipway and jetty structure. The work will involve excavation of the foreshore and will include the removal of 7,500m³ of beach material to provide foundations for these structures and also to remove contamination at specific areas across the bay. The project will take place over two years with works only permitted between April and September.

9.14 Dounreay Tri Floating Wind Demonstration Project – Dounreay

9.14.1 The development was to consist of a demonstration floating offshore wind farm called Dounreay Tri at least 6km off the coast of Dounreay, Caithness. The main offshore components were to include two offshore wind turbines with an installed capacity of 8 to 12MW, a floating foundation, mooring clump weight, mooring chain and/or steel lines, drag embedment anchors, a 33kV export cable and scour protection for the anchors and the export cable where necessary. The company behind this development went into administration resulting in the project being discontinued. A new application for consent has been received for the Pentland Floating Offshore Wind Farm at the site which is currently under consideration.

9.15 Fife Council - Temporary bridge installation - River Leven, Fife

9.15.1 Fife Council propose the construction of a temporary bridge across the River Leven, Fife for the duration of separate works to repair the adjacent River Leven railway bridge so as to ease the flow of traffic. The construction works will consist in the installation of the temporary bridge over the River Leven. The bridge will be constructed on land and pushed over the watercourse. No construction will take place within the watercourse.

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9.16 Forth Ports Limited – Construction of Quay – Port of Leith

9.16.1 The works involve the redevelopment of an existing berth on the inner edge of the eastern breakwater to accommodate windfarm construction and service vessels in the Port of Leith. The works include the removal of the existing infrastructure and construction of a 125m long berth, provision of an area of hardstanding to be used for loading and unloading vessels, as well as capital dredging to enlarge the existing berth pocket. The marine licence was valid from January 2023, with the works expected to take approximately 15 months to complete. A separate marine licence has been granted for capital dredging and sea deposit.

9.17 Global Energy Nigg Limited - Removal of Two Dolphin Moorings - Nigg Energy Park, Cromarty Firth

9.17.1 Global Energy Nigg Limited propose to remove two mooring dolphins proximal to the south quayside at Nigg Energy Park, Cromarty Firth. The mooring dolphins will be dismantled and removed to allow unobstructed and safe passage to and from the south quayside. The dolphins comprise two separate steel mooring frames each supported on four no. steel tubular piles of 42 inches in diameter. The mooring frames are approx. 7.5m² and positioned some 65-70m apart. The piles penetrate the seabed to a depth of about 40 feet, which equates to -22m CD.

9.18 Grissan Portside Limited – Construction of Outfall Pipeline – Spey Bay

9.18.1 The works involve the construction of a long sea outfall of approximately 1.9 km in length to discharge effluent from a distillery into the Moray Firth. The pipe is made of High Density Polyethylene and will be fitted with 2 discharge diffusers, one at the midline and one at the end of the outfall. This will be protected with approximately 300 tonnes of cobbles and 1500 tonnes of boulders. Land based trenching will be carried out in the nearshore intertidal section and the subtidal section will be trenched using marine plant, likely a back-hoe dredger. Material removed during trenching will be stockpiled adjacent to the trench to be used as backfill once the pipe and diffusers are installed. Anti-scour rock mattresses will be used to protect the diffusers. A temporary mooring buoy will be used to attach to the pipes in a storage area until they are required during the construction process. This buoy will be removed at the end of the construction process.

9.19 Hywind (Scotland) Limited - Pilot Park – Peterhead

Five 6MW turbines have been installed approximately 25km off the coast of Peterhead, Northeast Scotland, just outside the 12 nautical mile territorial water limit. The project will be expected to produce up to 135 gigawatt hours per year of electricity. The turbines are positioned between 800 to 1,600m apart and attached to the seabed by a three-point mooring spread and anchoring system. Three anchors are required per turbine and the radius of the mooring system extends 600 to 1,200m out from each turbine. The turbines are connected by inter-array cables which may require stabilisation in some locations. The export cable, which transports electricity from the Pilot Park to shore at Peterhead, is buried where seabed conditions allow. Where this is not possible cable protection in the form of concrete mattresses and rock is required. Both the inter-array and export cables have 33kV transfer voltage. The export cable comes ashore at Peterhead and connects to the local distribution network at SSE Peterhead Grange substation. The project has finished construction and moved into the operational phase.

9.20 I. & H. Brown Limited – Sea Wall Repair – Valleyfield, Fife

9.20.1 The toe of the existing sea wall east of the Lagoon 5 Scottish Water sewage works in Valleyfield Fife has been identified as requiring repairs. An area of 178 metres of the existing wall has been identified as requiring repair works. Repair works will only take place during low tide, during which an excavator will be used to reduce the existing ground to reach the toe of the seawall. The excavator will then be used to place rock armour at the exposed toe of the sea wall. All materials will be delivered to the site by land and storage area above the sea wall. From storage area the excavator shall use its bucket to lift sufficient rock armour and then transport and carefully place into repair area. All plant and storage will be stored above MHWS. The marine licence has not yet been issued and the application is currently in determination processing.

9.21 Inch Cape Offshore Wind Farm Limited - Geophysical Surveys - Inch Cape Offshore Wind Farm

9.21.1 Geophysical surveys will be conducted along the Inch Cape export cable corridor and offshore wind farm site and geotechnical surveys will be conducted at 80 locations within the wind farm site. The geophysical survey activity will last up to ten days within the development area and 30 days along the offshore cable corridor. The geotechnical survey work is expected to last up to 24 weeks.

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9.22 Inch Cape Offshore Wind Farm Limited (revised design) – Angus

9.22.1 Construction and operation of a wind farm 15-22km east of the Angus coastline. The development will consist of a maximum of 72 wind turbines. Construction activities are anticipated to start in 2023 with works taking approximately 24 months over a three year period.

9.23 Inch Cape Offshore Wind Farm Limited - Transmission Infrastructure (revised design) – Angus

9.23.1 Construction of offshore transmission infrastructure associated with the Inch Cape Offshore Wind Farm, 15-22km east of the Angus coastline. The development will consist of up to two offshore substation platforms. In addition, up to two export cables will connect the development to the landfall at Cockenzie in East Lothian. Construction activities are anticipated to start in 2023 with works taking approximately 24 months over a three year period.

9.24 Kincardine Offshore Windfarm Limited – Aberdeen

9.24.1 Kincardine Offshore Wind Farm is a demonstrator floating offshore wind farm development that is located to the southeast of Aberdeen, approximately eight miles from the Scottish coastline in approximately 60 to 80m of water. The development is considered a commercial demonstrator site, which utilises floating semi-submersible technology to install five turbines including a temporary data gathering platform of 2MW. The maximum generating capacity of all five turbines will not exceed 50MW. The proposal also includes inter-array cabling to the connection point at the onshore Redmoss substation at Altens, Aberdeen. The turbines have now been installed and are fully operational.

9.25 MarramWind Limited – Geophysical Surveys – MarramWind Offshore Wind Farm

9.25.1 The works involve geophysical surveys of the offshore export cable corridor for MarramWind offshore windfarm. The surveys are scheduled to take place between 1 March 2023 and 30 September 2023, with noise-generating activity occurring for a maximum of 100 days during this period.

9.26 Meygen PLC - Tidal Turbines – Inner Sound, Pentland Firth

9.26.1 Construction and operation of a tidal array in the Inner Sound of the Pentland Firth. Phase 1a of the project is complete with four tidal turbines having been installed. A construction timeline for phases 1b and 1c has not yet been determined. Phase 1b of the project involved the deployment of the subsea

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hub. Four more turbines are to be installed and monitored in Phase 1b. The data collected from these will then be used to inform decisions on the future deployment of the remaining 53 tidal turbines.

9.27 Moray Offshore Windfarm (East) Limited – Moray Firth

9.27.1 The current design envelope is for a maximum generating capacity of up to 1,116MW and for a maximum of 186 wind turbines. The wind farm which is the subject of the proposals is located on the Smith Bank in the outer Moray Firth (approximately 22km from the Caithness coastline, in water depths of 38 to 57m). The operational lifespan of the wind farms is expected to be 25 years. The three proposed wind farm sites: the Telford, Stevenson and MacColl wind farms lie within the Eastern Development Area, which is part of Zone 1 of Round 3 leasing agreements in the UK Renewable Energy Zone. Substructure and foundation design for the wind turbines will consist of either a mixture of, or one design option of concrete gravity base foundation with ballast and a gravel/grout bed, or steel lattice jackets with pin piles. Construction works are now complete and the project is fully operational.

9.28 Moray Offshore Windfarm (East) Limited - Transmission Infrastructure – Moray Firth

9.28.1 Modified offshore transmission infrastructure for the consented Moray Offshore Windfarm (East) Limited, Telford, Stevenson and MacColl wind farms in the outer Moray Firth. The works will consist of up to two AC Offshore Substation Platforms ("OSP"), substructure and foundations for the OSPs, inter-platform cabling within the three consented wind farms and up to four triplecore submarine HVAC export cables between the OSPs and the shore. The works are now complete.

9.29 Moray Offshore Windfarm (West) Limited – Moray Firth

9.29.1 The wind farm is located 22.5km southeast off the Caithness coastline. The operational lifespan of the project is expected to be 25 years. The project covers a total area of approximately 225km² and will be comprised of no more than 85 wind turbines with a maximum generating capacity of around 850MW, along with associated offshore transmission infrastructure. The project has recently started construction.

9.30 Muir Mhòr Offshore Wind Farm Limited – Geophysical Surveys – Muir Mhòr Offshore Wind Farm Array

9.30.1 A geophysical survey campaign between March and July 2023 for the purpose of understanding the bathymetric, geological and sedimentary characteristics

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of the seabed and protected features within the Muir Mhòr Offshore Wind Farm array area and projected export cable corridor. The area to be surveyed extends to 229.1km squared which shall include the wind farm array area together with a 500m buffer zone. The projected export cable corridor at approximately 100km in length and 1000m in width, extending from the wind farm array area to a landfall in the vicinity of Peterhead, will also form part of the survey campaign.

9.31 Neart na Gaoithe Offshore Wind Farm Limited (revised design) – Outer Firth of Forth

9.31.1 Construction and operation of a wind farm located 15.5km east of Fife Ness in the Firth of Forth. Consent has been granted for up to 54 wind turbines with piled jacket foundations. The operational lifespan of the project is expected to be 50 years. Construction activities have now commenced for the project and are due to be completed in January 2024.

9.32 Offshore Renewable Energy Catapult - Levenmouth Demonstration Turbine – Methil, Fife

9.32.1 The project involves the construction, operation and decommissioning of a site for the testing of new designs of offshore wind turbines with a capacity of up to 7MW at the FEP, Methil. There is potential for more than one turbine model to be tested at the site. Once one turbine has been tested it will be removed from the site and replaced with a new turbine which falls within the same design parameters (maximum hub height of 110m, rotor diameter of 172m, and maximum height to turbine tip from mean sea level of 196m). Only one turbine will ever be installed at any one time. The base will remain in place throughout the development. The consent for this development expires in 2029. In addition to the wind turbine, the consent also includes a personnel bridge connection between the FEP and turbine tower, construction of an onshore crane pad on the FEP and construction of an onshore control compound. One turbine has been installed and is currently operational.

9.33 Peterhead Port Authority - Revetment Works - Alexandra Parade, Peterhead

9.33.1 The works are part of a larger project to strengthen the existing, circa 330m long, sea defence revetment at Alexandra Parade, Peterhead. The project will be completed in two phases between April 2020 and December 2022. The project includes re-profiling of the existing revetment, formation of a toe trench and placement of various sizes of rock armour and pre-cast concrete units within the toe trench to create a toe mound. Re-profiling of the existing rock armour revetment will be undertaken by removing existing concrete elements and rock armour. Remaining sections of the concrete pitched revetment will

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then be broken up to improve porosity using an excavator mounted rock breaker. A rock embankment will be constructed using 1-3 Tonne ("T") rockfill to overlay the existing revetment. Pre-cast concrete armour base units ("Xbloc units") will then be placed in the newly developed toe trench and overlaid with 10 T rock armour to create a toe mound. Xbloc units will be placed on the rock embankment slope, extending from the toe structure to the crest of the revetment.

9.34 Royal National Lifeboat Institution ("RNLI") - Low Impact Maintenance to Construction Projects - Kyle of Lochalsh/Kinghorn and North Berwick Lifeboat Station

9.34.1 This project covers routine, ongoing maintenance works for a six year period at a number of sites around Scotland that are owned and managed by the RNLI. The activities covered will be maintenance and repair such as replacement of elements of the structure including re-enforcing or repairing the slipway toe up to a maximum additional area of 6m². In addition, cleaning of the slipway structure for safety purposes may be carried out. These works do not include any piling. Although the licence covers a six year period, the proposed works will only be carried out infrequently and work programmes will generally last one to two weeks and some programmes may be completed in a single day.

9.35 Scottish Hydro Electric Power Distribution ("SHEPD") PLC - Geophysical Surveys - Forth and Tay and Moray Regions

9.35.1 SHEPD are undertaking geophysical surveys in the Moray Firth Marine Region and the Forth and Tay Marine Region along a number of cable routes. The surveys include the use of Ultra-Short Baseline and Sub-Bottom Profiler. Vessel presence and survey activities on all cables across the Moray Firth Marine Region and the Forth and Tay Marine Region are expected to take 7.22 days in total, with an additional 12 hours allowed for equipment calibrations for each survey mobilisation. The European Protected Species licence is due to expire on 31 March 2023, however an application has been submitted to MS-LOT to extend the validity of the licence to 31 March 2024.

9.36 Seagreen Alpha Wind Energy Limited - Offshore Wind Farm and Associated Transmission Infrastructure – Angus

9.36.1 The Seagreen Alpha Wind Energy Limited development is located approximately 27km off the Angus coastline. It was collectively assessed as part of the Forth and Tay Wind Farm Developments which also includes Neart na Gaoithe, Inch Cape and Seagreen Bravo.

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9.37 Seagreen Bravo Wind Energy Limited - Offshore Wind Farm and Associated Transmission Infrastructure – Angus

9.37.1 The Seagreen Bravo Wind Energy Limited development is located approximately 38km off the Angus coastline. It was collectively assessed as part of the Forth and Tay Wind Farm Developments which also includes Neart na Gaoithe, Inch Cape and Seagreen Alpha.

9.38 Seagreen Wind Energy Limited (“SWEL”) - Geophysical Surveys - Seagreen 1A Cable Route – Angus

SWEL propose to install a further export cable to enable the subsequent build out of the Seagreen Alpha and Bravo Offshore Wind Farms. This export cable is to be known as Seagreen 1A and will make landfall at Cockenzie in the Firth of Forth. Seagreen proposes to undertake geophysical surveys of the planned Seagreen 1A cable route. This will include the use of multi-beam echo sounder, side-scan sonar, sub-bottom profiler, magnetometer, sparker boomer and ultra-short base line. The total survey area covers approximately 548km².

9.39 Seagreen Wind Energy Limited – Unexploded Ordnance (“UXO”) Clearance – Firth of Forth

9.39.1 Seagreen proposes to undertake UXO clearance from 20 spare wind turbine generator locations across the Seagreen Alpha and Bravo Offshore Wind Farm area which is located in the Firth of Forth. Seagreen are currently undertaking geophysical survey work to confirm and identify UXO and debris within the area. As this survey has not yet been completed, Seagreen has applied for a marine licence and a European Protected Species licence based on a worst case assumption that the clearance of up to five UXO will require to be detonated. Seagreen have stated that the most powerful UXO which may be present and therefore require detonation would be 930 kilograms (“kg”) Net Explosive Quantity (“NEQ”); however, based on desk-based studies, it is unlikely or very unlikely that individual items of UXO will exceed 300kg NEQ. Detonation of the UXO generates a loud underwater sound which poses a risk to marine wildlife in the vicinity.

9.39.2 UXO clearance is expected to occur over an estimated maximum of 5 days (1 UXO per day) with debris removal also taking place throughout this period.

9.40 Scottish Power Transmission PLC - SEGL Eastern Link 1 High Voltage Direct Current (“HVDC”) Cable and Cable Protection - Torness to Hawthorn Pit

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9.40.1 National Grid Electricity Transmission and Scottish Power Transmission are jointly developing a subsea HVDC link between Torness in East Lothian and Hawthorn Pit in County Durham. The marine licence application is currently out for consultation.

9.41 Transport Scotland Limited - Bridge Maintenance - Forth Road Bridge, Edinburgh

9.41.1 The works require a five year marine licence to maintain the Forth Road Bridge. The individual work packages will vary in duration and be spread throughout the licence period. The maintenance works will predominantly be carried out at bridge deck level, but two of the work packages (installing a new suspended span underdeck access gantry and repairing the cathodic protection systems) will require barges and boats. In addition, a safety boat is required to be available whenever activities requiring work outside of the carriageway and walkways are programmed.

9.42 Wemyss 1952 Trust - Rebuilding Sea Wall - West Wemyss, Fife

9.42.1 The works involve rebuilding a seawall at West Wemyss, Fife.

9.43 Dredging Operations

9.43.1 There are a number of dredging operations which were identified as having a likely significant effect on the Firth of Forth SPA, Moray Firth SAC and Outer Firth of Forth and St Andrews Bay Complex SPA designated sites also affected by the Forthwind proposal. The table below summarises these projects.

Table 4: Dredging operations identified as having a likely significant effect on the Firth of Forth SPA, Moray Firth SAC and Outer Firth of Forth and St Andrews Bay Complex SPA designated sites also affected by the Forthwind proposal

Location of Dredge	Licensee	Amount of Dredge Material (tonnes)	Dredge Spoil Deposit Area	Dates of Licence	Designated Site
Aberdeen Harbour	Aberdeen Harbour Board	295,000	CR110	13 March 2022 to 12 March 2023	Moray Firth SAC
Arbroath Harbour	Angus Council	20,640 per year	FO020	13 July 2022 to 12 July 2024	Moray Firth SAC

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Dysart Harbour	Dysart Sailing Club	1200 per year	Beach west of Dysart Harbour	01 June 2022 to 31 May 2025	Firth of Forth SPA
Port of Kirkcaldy	Forth Ports Limited	63,000	FO045	22 December 2021 to 21 December 2024	Firth of Forth SPA, Moray Firth SAC and Outer Firth of Forth and St Andrews Bay Complex SPA
Leith Docks	Forth Ports Limited	130,000 per year	FO038	03 December 2021 to 02 December 2024	Firth of Forth SPA, Moray Firth SAC and Outer Firth of Forth and St Andrews Bay Complex SPA
Port of Rosyth	Forth Ports Limited	520,000 per year	FO041, FO042 and FO043	11 March 2021 to 10 March 2024	Firth of Forth SPA and Outer Firth of Forth and St Andrews Bay Complex SPA
Montrose Harbour	Montrose Port Authority	246,000	FO010	24 September 2022 to 23 September 2023	Moray Firth SAC
Buckie	Moray Council	16,665	CR040	16 March 2021 to 15 March 2024	Moray Firth SAC
Burghead	Moray Council	30,800	CR030	16 March 2021 to 15 March 2024	Moray Firth SAC
Cullen Harbour	Moray Council	10,000	CR040	02 July 2020 to 02 June 2023	Moray Firth SAC

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Findochty Harbour	Moray Council	10,000	CR040	07 February 2020 to 06 February 2023	Moray Firth SAC
Hopeman Harbour	Moray Council	10,000	CR030	07 February 2020 to 06 February 2023	Moray Firth SAC
Portknockie Harbour	Moray Council	10,000	CR030	03 February 2020 to 02 February 2023	Moray Firth SAC
Port Edgar Marina	Port Edgar Marina Limited	20,000 per year	Firth of Forth	10 September 2022 to 09 September 2025	Firth of Forth SPA
Boddam Harbour	Scottish and Southern Energy	8000	CR080	01 October 2021 to 30 September 2024	Moray Firth SAC
Aberdeen North Harbour and Aberdeen South Harbour	Port of Aberdeen	428,500 per year	CR110	01 February 2023 to 31 January 2026	Moray Firth SAC
Grangemouth Locks and Leith Locks	Forth Ports Limited	1060 per year	No sea deposit.	17 December 2020 to 16 December 2023	Firth of Forth SPA
Banff Harbour	EnviroCentre Limited	10,000	CR050	16 December 2022 to 15 December 2023	Moray Firth SAC
Port Babcock, Rosyth	Rosyth Royal Dockyard Limited	111,037	FO043	27 September 2022 to 26 September 2023	Firth of Forth SPA
Port of Inverness	Port of Inverness (per Affric Limited)	13,200	CR027	01 July 2022 to 30 June 2025	Moray Firth SAC
Port of Newhaven	Forth Ports Limited	19,500 per year	FO041, FO042 and FO043	02 December 2022 to 01	Firth of Forth SPA

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				December 2025	
Port of Leith	Forth Ports Limited	215,000	FO038	02 January 2023 to 31 December 2025	Isle of May SAC, Moray Firth SAC, Outer Firth of Forth, St Andrews Bay Complex SPA and River Teith SAC

9.44 Assessment of in combination effects on the Firth of Forth SPA, Moray Firth SAC, Berwickshire and North Northumberland Coast SAC, Isle of May SAC, Forth Islands SPA, Outer Firth of Forth and St Andrews Bay Complex SPA and the Firth of Tay and Eden Estuary SAC designated sites

- 9.44.1 The Beatrice Offshore Wind Farm, European Offshore Wind Deployment Centre, Hywind Scotland Pilot Park, Kincardine Offshore Wind Farm, Moray East Offshore Wind Farm and the Levenmouth Demonstration Turbine projects are currently in the operational phase and the pathway of effects for these on marine mammal qualifying interests were identified for the construction phase only. It is therefore unlikely there will be any in combination effects with the Forthwind proposal on the Moray Firth SAC, Berwickshire and North Northumberland Coast SAC, and the Isle of May SAC.
- 9.44.2 Phase 1A of the Meygen Tidal Project is now operational, with timeframes not confirmed for the remaining phases of the project. The Inch Cape Offshore Wind Farm and Moray West Offshore Wind Farm projects are currently in the pre-construction phase of development and so there is potential for in combination effect with the Forthwind proposal if the construction is due to take place in 2023 or 2024. However, provided all projects are carried out in accordance with their respective AAs, there will be no adverse effect on the Berwickshire and North Northumberland Coast SAC, Firth of Tay and Eden Estuary SAC, Isle of May SAC, Moray Firth SAC and River Teith SAC.
- 9.44.3 Many of the construction and dredging projects will be completed prior to the commencement of the Forthwind proposal, resulting in no in combination effects on the designated sites.

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9.44.4 There is the potential for in combination effects with all of the remaining projects. However, provided all of the projects are undertaken in line with the conditions in their respective AAs, MS-LOT concludes that, in combination effects will not have an adverse impact on the site integrity of the designated sites.

9.44.5 With respect to the Firth of Forth SPA, Forth Islands SPA, and the Outer Firth of Forth and St Andrews Bay Complex SPA there is the potential for in combination effects with the other offshore wind farms which are in the operational phase. MS-LOT concludes that the small additional effect from the Forthwind proposal will not result in an adverse impact on the site integrity of the designated sites.

10 MS-LOT Conclusion

10.1 MS-LOT concludes that there will be no adverse effect on the site integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA, Firth of Forth SPA, Forth Islands SPA, Berwickshire and North Northumberland Coast SAC, Isle of May SAC, Firth of Tay and Eden Estuary SAC, Moray Firth SAC and the River Teith SAC from the Forthwind proposal either in isolation or in combination with other projects.

SECTION 4: CONDITIONS

11 Requirement for conditions

11.1 No requirement for conditions.