



T: +44 (0)1224 295579  
F: +44 (0)1224 295524  
E: ms.marinerenewables@gov.scot

**MARINE SCOTLAND LICENSING OPERATIONS TEAM’S (“MS-LOT”)  
ASSESSMENT OF THE PROJECT’S IMPLICATIONS FOR  
DESIGNATED SPECIAL AREAS OF CONSERVATION (“SAC”) IN VIEW  
OF THE SITES’ CONSERVATION OBJECTIVES.**

APPLICATION FOR A MARINE LICENCE UNDER THE MARINE (SCOTLAND) ACT 2010 & MARINE AND COASTAL ACCESS ACT 2009 AND A EUROPEAN PROTECTED SPECIES LICENCE UNDER THE CONSERVATION (NATURAL HABITATS, &C.) REGULATIONS 1994 (AS AMENDED) AND THE CONSERVATION OF OFFSHORE MARINE HABITATS AND SPECIES REGULATIONS 2017 FOR UNEXPLODED ORDNANCE CLEARANCE WORKS

SITE DETAILS: MORAY EAST OFFSHORE WINDFARM, 22KM OFFSHORE ON THE SMITH BANK IN THE MORAY FIRTH AND OFFSHORE TRANSMISSION INFRASTRUCTURE CABLE CORRIDOR

<b>Name</b>	<b>Assessor or Approver</b>	<b>Date</b>
[REDACTED]	Assessor	19/03/2019
[REDACTED]	Approver	25/03/2019

## TABLE OF CONTENTS

<b>SECTION 1: BACKGROUND</b> .....	<b>2</b>
1 Appropriate assessment (“AA”) conclusion.....	2
2 Introduction.....	2
3 Details of proposed operation.....	3
Figure 1 - Moray East Offshore Windfarm and OfTI Corridor .....	3
4 Consultation.....	3
5 Main points raised during consultation .....	4
<b>SECTION 2: INFORMATION ON NATURA SITES</b> .....	<b>5</b>
6 Background information and qualifying interests for the relevant Natura sites .....	5
<b>SECTION 3: ASSESSMENT IN RELATION TO REGULATION 48 OF THE CONSERVATION (NATURAL HABITATS, &amp;C.) REGULATIONS 1994 AND REGULATION 25 OF THE OFFSHORE MARINE CONSERVATION (NATURAL HABITATS, &amp;C.) REGULATIONS 2007</b> .....	<b>7</b>
7 Requirement for appropriate assessment.....	7
8 Appropriate assessment of the implications for the site in view of the site’s conservation objectives. ....	7
9 In-combination assessment.....	9
Table 1 Dredging operations identified as having a likely significant effect on the bottlenose dolphin qualifying feature of the Moray Firth SAC .....	16
10 MS-LOT conclusion .....	17
<b>SECTION 4: CONDITIONS</b> .....	<b>18</b>
11 Requirement for conditions.....	18

## LIST OF FIGURES AND TABLES

Figure 1 Moray East Offshore Windfarm and OfTI Corridor.....	3
Table 1 Name of Natura site affected and current status .....	5
Table 2 European qualifying interests .....	5
Table 3 Conservation objectives .....	6

MARINE SCOTLAND LICENSING OPERATIONS TEAM'S ("MS-LOT")  
ASSESSMENT OF THE PROJECT'S IMPLICATIONS FOR DESIGNATED  
SPECIAL AREAS OF CONSERVATION IN VIEW OF THE SITES' CONSERVATION  
OBJECTIVES.

APPLICATION FOR A MARINE LICENCE UNDER THE MARINE (SCOTLAND) ACT 2010 & MARINE AND COASTAL ACCESS ACT 2009 AND A EUROPEAN PROTECTED SPECIES LICENCE UNDER THE CONSERVATION (NATURAL HABITATS, &C.) REGULATIONS 1994 (AS AMENDED) AND THE CONSERVATION OF OFFSHORE MARINE HABITATS AND SPECIES REGULATIONS 2017 FOR UNEXPLODED ORDNANCE CLEARANCE WORKS

## **SECTION 1: BACKGROUND**

### **1 Appropriate assessment ("AA") conclusion**

- 1.1 This AA concludes that there will be no adverse effect on the site integrity of the Moray Firth Special Area Conservation ("SAC") or the Dornoch Firth and Morrich More SAC from the Moray Offshore Windfarm (East) Limited ("Moray East") proposal to carry out Unexploded Ordnance ("UXO") clearance work, either in isolation or in-combination with other plans or projects providing the conditions set out in Section 4 are complied with.

### **2 Introduction**

- 2.1 This is a record of the AA of the Moray East proposal to carry out UXO clearance work. The assessment has been undertaken by MS-LOT. This assessment is required under Regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) and Regulation 28 of The Conservation of Offshore Marine Habitats and Species Regulations 2017 (collectively referred to as "the Regulations"). This AA is in accordance with Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive") and Council Directive 2009/147/EC on the conservation of wild birds. MS-LOT, as the 'competent authority' under the Regulations, has to be satisfied that the project will not adversely affect the integrity of any European site (SAC and special protection areas ("SPA")) before it can grant consent for the project.
- 2.2 A detailed AA has been undertaken and Scottish Natural Heritage ("SNH") has been consulted.

### 3 Details of proposed operation

3.1 Moray East propose to carry out UXO clearance work at the site of the Moray East Offshore Windfarm and Offshore Transmission Infrastructure (“OfTI”) corridor (see Figure 1). These works will require both a marine licence and European protected species licence.

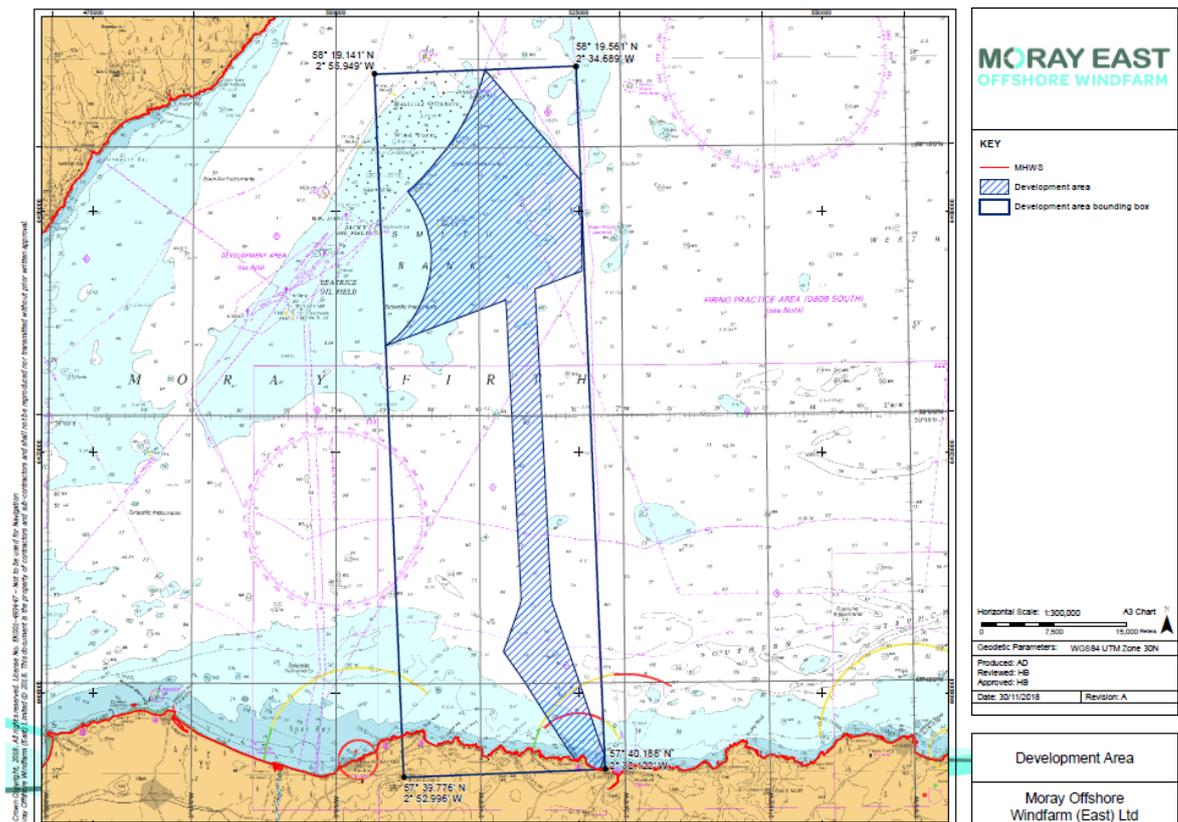


Figure 1 - Moray East Offshore Windfarm and OfTI Corridor

3.2 The proposed works are planned to commence on 26 March 2019 and completed by 31 May 2019. A total of 18 UXO across the wind farm site and OfTI corridor will be cleared using controlled detonation. Moray East note three options for UXO disposal: in-situ detonation; relocation of UXO prior to detonation; and recovery of UXO to the deck of the vessel. Acoustic Deterrent Devices (“ADDs”) and soft start charges will be used to encourage marine mammals to flee beyond the mitigation zone.

### 4 Consultation

4.1 SNH were consulted on the application on 18 December 2018 and replied on 16 January 2019.

## Appropriate Assessment for Moray East Offshore Windfarm – Unexploded Ordnance Clearance – 25 March 2019

- 4.2 Further clarification was sought from SNH on 20 February 2019 on receipt of the UXO marine mammal assessment update. SNH provided a response on 22 February 2019.
- 4.3 Moray East subsequently provided an UXO noise monitoring requirements memo on 7 March 2019, outlining their proposed approach to noise monitoring during the UXO detonations. Confirmation from SNH that this approach was acceptable was received on 12 March 2019.

### **5 Main points raised during consultation**

- 5.1 SNH noted that the proposal is likely to have a significant effect on the bottlenose dolphin (*Tursiops truncatus*) in relation to the Moray Firth SAC and the harbour seal (*Phoca vitulina*) in relation to the Dornoch Firth and Morrich More SAC.

## SECTION 2: INFORMATION ON NATURA SITES

### 6 Background information and qualifying interests for the relevant Natura sites

6.1 This section provides links to the Scottish Natural Heritage Interactive website where the background information on the site being considered in this assessment is available. The qualifying interests for the sites are listed as are the conservation objectives.

**Table 1 Name of Natura site affected and current status**

<p><b>Moray Firth SAC:</b> <a href="https://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8327">https://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8327</a></p> <p><b>Dornoch Firth and Morrich More SAC:</b> <a href="http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8242">http://gateway.snh.gov.uk/sitelink/siteinfo.jsp?pa_code=8242</a></p>
--

**Table 2 European qualifying interests**

<p><b>Moray Firth SAC:</b> Bottlenose dolphins (<i>Tursiops truncatus</i>) Subtidal sandbanks</p> <p><b>Dornoch Firth and Morrich More SAC:</b></p> <p>Atlantic salt meadows Coastal dune heathland Dune grassland Dunes with juniper thickets Estuaries Glasswort and other annuals colonising mud and sand Harbour seal (<i>Phoca vitulina</i>) Humid dune slacks Intertidal mudflats and sandflats Lime-deficient dune heathland with crowberry Otter (<i>Lutra lutra</i>) Reefs Shifting dunes Shifting dunes with marram Subtidal sandbanks</p>
--

**Table 3 Conservation objectives**

**Moray Firth SAC and Dornoch Firth and Morrich More SAC:**

i) To avoid deterioration of the qualifying habitats (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 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; and
- No significant disturbance of typical species of the habitat.

ii) 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 established then 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; and
- No significant disturbance of the species.

### **SECTION 3: ASSESSMENT IN RELATION TO REGULATION 48 OF THE CONSERVATION (NATURAL HABITATS, &C.) REGULATIONS 1994 AND REGULATION 25 OF THE OFFSHORE MARINE CONSERVATION (NATURAL HABITATS, &C.) REGULATIONS 2007**

#### **7 Requirement for appropriate assessment**

7.1 *Is the operation directly connected with or necessary to conservation management of the site?*

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

7.2 *Is the operation likely to have a significant effect on the qualifying interest?*

In their response dated 16 January 2019, SNH advised that the proposal would have a likely significant effect on the following qualifying interests:

#### **Moray Firth SAC**

- Bottlenose dolphins (*Tursiops truncatus*)

#### **Dornoch Firth and Morrich More SAC**

- Harbour seal (*Phoca vitulina*)

MS-LOT agree with this advice and have undertaken an AA for the UXO clearance works for the Moray Firth SAC in relation to bottlenose dolphin and the Dornoch Firth and Morrich More SAC in relation to the harbour seal.

#### **8 Appropriate assessment of the implications for the site in view of the site's conservation objectives.**

8.1 MS-LOT have considered the advice provided by SNH dated 16 January 2019, 22 February 2019 and 12 March 2019 and have used it to support this assessment

8.2 SNH have based their advice on the information contained within the EPS Cetacean Risk Assessment and associated Marine Mammal Mitigation Plan ("MMMP") together with the UXO marine mammal assessment update.

- 8.3 In their correspondence of 16 January 2019, SNH advised that there is a risk of physical injury, auditory injury and disturbance impacts from the clearance of UXOs.
- 8.3.1 SNH recommended that the MMMP be fully implemented and also updated to include site specific modelling for both the wind farm site and OfTI corridor scenarios, if any UXO are identified in these areas. SNH noted that the OfTI cable corridor area, particularly within 3km of the coast, is a key transit corridor for bottlenose dolphins travelling around the East Coast. SNH further advised that, if any UXOs were identified in the export cable corridor within 3km of the Moray or Aberdeenshire Coast then further discussion would be required in respect of further mitigation options, including the potential for the use of bubble curtains.
- 8.3.2 Within their UXO marine mammal assessment update, Moray East undertook underwater noise modelling, informed by the results of the Moray East UXO inspection campaign. This identified the UXO requiring detonation and the scope of work considered the generic site characteristics and size of the UXO devices to be detonated. Moray East, in their UXO marine mammal assessment update, confirmed that no UXO were identified within 3km of the coast.
- 8.4 In their correspondence of 22 February 2019, on receipt of the UXO marine mammal assessment update, SNH provided further recommendations. SNH advised that clearance should be conducted as early as it practicable and at the latest before the summer season (mid-April) and that the UXO with the largest charge size is cleared first. Moray East acknowledged that UXOs should be detonated as soon as reasonably possible but also stressed that UXO clearance prior to construction is necessary for health and safety reasons and UXO clearance would still occur later in the season if necessary. Moray East agreed that the largest UXO will be detonated first and, should this not be possible due to unforeseen circumstances, will contact MS-LOT in the first instance for further discussion. An assessment for the largest UXO's noise recording will follow within a few days after the detonation and this will be provided to MS-LOT and SNH. The noise monitoring of the first UXO detonations will be reviewed to determine if the noise source levels are similar to those used in the noise modelling. This will then be used to establish if any alterations to the mitigation, e.g. duration of ADD activation and scare charge sequence could be required or if there are any considerations to take into account for monitoring the remaining UXO detonations. Detonations will continue implementing the Marine Mammal Mitigation Protocol and undertaking noise monitoring during the analysis of

results for the largest UXO (representing the worst case scenario within the updated marine mammal assessment).

- 8.4.1 SNH also strongly advised that noise recordings are made at 5km and at 10km for the largest UXO charge size and, ideally, other UXO detonations should also be recorded at 5km and 10km to validate the predictions and assumptions made in the UXO marine mammal assessment update. SNH recommended that the assessment of the noise recording is submitted to MS-LOT and SNH as close to real-time as possible, so that any alterations to the mitigation and/or monitoring can be made quickly and used for the remaining UXOs. SNH further recommended that the use of drones for monitoring should also be considered.
- 8.4.2 Moray East subsequently provided SNH and MS-LOT with the UXO noise monitoring requirements memo on 7 March 2019, outlining their proposed approach to noise monitoring during the UXO detonations. Confirmation from SNH that this approach was acceptable was received on 12 March 2019. Given the location of the UXO from the coastline and detailed noise monitoring approach proposed for the UXO detonations, Moray East is not proposing any further monitoring for the UXO detonations.
- 8.5 SNH advised that provided the mitigation as outlined in the MMMP (as amended to account for SNH's advice) is fully implemented, the proposed UXO clearance will have no adverse effect on site integrity of the Moray Firth SAC or the Dornoch Firth and Morrich More SAC.
- 8.6 MS-LOT agree that the proposed Moray East works alone will have no adverse impact on the site integrity of either the Moray Firth SAC or the Dornoch Firth and Morrich More SAC and have carried out an in-combination assessment as outlined below.

## **9 In-combination assessment**

- 9.1 MS-LOT have carried out an in-combination assessment to ascertain whether the Moray East proposal will have a cumulative effect with other plans or projects which, in-combination, would have the potential to affect the bottlenose dolphin qualifying interest of the Moray Firth SAC or harbour seals qualifying interest of the Dornoch Firth and Morrich More SAC.
- 9.2 MS-LOT are aware of the following projects which currently have an active marine licence and/or EPS licence and/or consent under Section 36 of the Electricity Act 1989 (as amended) and where likely significant effect was

identified on the qualifying interests of the Moray Firth SAC or Dornoch Firth and Morrich More SAC. Each project has been considered as to whether the works will have an in-combination effect with the Moray East proposal.

### **Aberdeen Harbour Expansion Project (“AHEP”), construction, capital dredging and sea disposal**

- 9.3 Aberdeen Harbour Board (“AHB”) proposes to develop a new harbour facility at Nigg Bay, Aberdeen, approximately 0.8km south of the existing harbour in Aberdeen City centre. Their proposal includes construction of two breakwaters, quaysides and associated infrastructure as well as a large-scale capital dredge and sea disposal operation. Works commenced in late 2016 and are scheduled to take place over a 3-year period. Dredging operations are expected to last until September 2019, which is when their dredging licence expires. Test blasting was undertaken in August 2018 and discussions are currently underway regarding future blasting operations. Therefore, timelines relating to blasting are yet to be confirmed. AHB are no longer undertaking any impact piling as they will be using rotary piling, which it is thought to produce less noise. All marine elements of the works are scheduled to be complete by February 2020.
- 9.4 The AA for this project concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC provided that the conditions set out in the AA are complied with. Provided that the conditions set out in the AHEP AA and this AA are implemented and complied with, MS-LOT conclude there will be no cumulative adverse impact on the site integrity of the Moray Firth SAC.

### **Beatrice Offshore Wind Farm (“BOWL”)**

- 9.5 Installation and operation of the Beatrice Offshore Windfarm which is located in the outer Moray Firth 13.5km from the Caithness coast. The total area of the development is 131.5km<sup>2</sup>. The eastern edge of the development site is adjacent to the Moray East Offshore Windfarm comprising the proposed Telford Offshore Windfarm, Stevenson Offshore Windfarm and MacColl Offshore Windfarm. The operational lifespan of the wind farm is expected to be 25 years. The construction programme is expected to cover a period of three to five years. BOWL construction started in April 2017 and will continue until approximately the end of 2019.
- 9.6 A full project description can be found [here](#).

- 9.7 The AA for this project concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC or the Dornoch Firth and Morrich More SAC provided that the conditions set out in the AA are complied with. Provided that the conditions set out in the Moray East AA are also complied with and implemented, MS-LOT conclude that there will be no significant adverse effects on the site integrity of the Moray Firth SAC or the Dornoch Firth and Morrich More SAC in-combination with the Moray East proposal.

### **Caithness Moray Rock Placement**

- 9.8 The works consist of the placement of rock protection along the route of the Caithness to Moray cable installed under previous consents. Deposits of 154,127 tonnes of crushed rock is proposed to be placed over the existing power cable bundle in areas of hard ground conditions. The rock placement activities will be executed by Dynamic Positioned Fall Pipe Vessels. Larger rocks (i.e. those that cannot be placed by fall pipe) will be placed on to the rock berm through use of a crane and large rock grab. The work will require the use of a Multi Beam Echo Sounder (“MBES”) system for pre- and post-work surveys, Ultra Short Baseline (“USBL”) positioning systems and beacons.
- 9.9 The AA for this project concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC or the Dornoch Firth and Morrich More SAC. MS-LOT conclude that provided the conditions set out in the AA is complied with there will be no adverse effect on the site integrity of the Moray Firth SAC or the Dornoch Firth and Morrich More SAC.

### **Forth and Tay Windfarm Developments**

- 9.10 When considered collectively, the following developments are referred to as the “Forth and Tay Windfarm Developments”
- Neart na Gaoithe Offshore Windfarm Limited development (“NNGOWL”), approximately 15.5km to the east of Fife Ness in the outer Firth of Forth.
  - Inch Cape Offshore Limited development (“ICOL”), approximately 15km to the east off the Angus coastline.
  - Seagreen Alpha Wind Energy Limited development (“SAWEL”), approximately 27km off the Angus coastline.
  - Seagreen Bravo Wind Energy Limited development (“SBWEL”), approximately 38km off the Angus coastline.

- 9.11 A full project description for each development can be found here: [NNGOWL](#), [ICOL](#), [SAWEL](#), [SBWEL](#).
- 9.12 The developers for these projects are currently in the process of applying for new consents or to vary their current licences. The work to construct these wind farms will not be starting within the timeframe of the Moray East proposed works. Given that the timescales for construction of these projects do not overlap with the proposed UXO clearance works, MS-LOT consider that there will not be an in-combination effect on the Moray Firth SAC.

### **Hywind Scotland Pilot Park**

- 9.13 The Hywind Pilot Park is located approximately 25km off the coast at Peterhead, North East Scotland just outside the 12nm territorial water limit. The project includes construction, installation, operation and maintenance activities. Five 6MW wind turbine generators (“WTGs”) have been installed and are expected to produce up to 135GWh 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 between 600 to 1,200m out from each turbine. All construction and installation works are complete and the project is now in the operational phase.
- 9.14 A full project description can be found [here](#).
- 9.15 The AA for this project concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC. Given the fact that the main risk identified from the Hywind Pilot Park was in relation to cable laying activities, which are now complete, MS-LOT conclude there will be no cumulative impact with the proposed UXO clearance works on the Moray Firth SAC.

### **Kincardine Offshore Windfarm Limited (“KOWL”)**

- 9.16 KOWL is a proposed demonstrator floating offshore windfarm development that is located to the south east of Aberdeen, approximately eight miles from the Scottish coastline. The development is considered a commercial demonstrator site, which will utilise floating semi-submersible technology to install six or eight wind turbine generators, with a combined maximum generating capacity of 50 MW, in approximately 60 to 80 m of water. The proposal also includes inter-array cabling to the connection point at the onshore Redmoss substation, Altens, Aberdeen.

9.17 The development is located approximately 150 km from the nearest point of the SSE proposed works.

9.18 A full project description can be found [here](#).

9.19 The AA for this project concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC. Given the fact that the main risk identified from KOWL was in relation to cable laying activities, which are not expected to coincide with the timings of the Moray East UXO clearance, MS-LOT conclude there will be no cumulative impact on the Moray Firth SAC.

### **MeyGen Phase 1**

9.20 Construction and operation of a tidal array in the Inner Sound of the Pentland Firth. Phase 1a of the project is complete with 4 tidal turbines having been installed. Phases 1b and 1c are likely to commence late 2019.

9.21 A full project description can be found [here](#).

9.22 The AA for this project concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC or the Dornoch Firth and Morrich More SAC. Due to the fact that no works will be undertaken during the same timescale as Moray East's proposed UXO clearance, MS-LOT conclude there will be no cumulative impact with the Moray East proposal on the Moray Firth SAC or the Dornoch Firth and Morrich More SAC.

### **Montrose Port Authority, construction of new quay**

9.23 The proposed works include the construction of a new quay wall and hard standing area.

9.24 MS-LOT concluded that providing the work is undertaken strictly in accordance with the mitigation outlined by SNH there would be no adverse effect on the site integrity of the Moray Firth SAC.

9.25 The AA for this project concludes that provided the conditions set out within both AAs are complied with there will be no adverse effect on the site integrity of the Moray Firth SAC in relation to bottlenose dolphin.

### **Port of Cromarty Firth, construction and dredging**

9.1 The proposed phase 4 project involves land reclamation to provide an additional 4.5Ha of laydown space to the west of the previously completed

phase 3 development, including the construction of 215m of quay wall to create a new berth adjacent to the existing berth 5 to create a combined 369m long quay face. Fendering will then be installed along berth 5 and the new berth 6.

- 9.2 A rock armour revetment will be constructed along the north and west sides of the new laydown area with a tubular and sheet piled wall forming the new quay. The existing rock armour will be removed from the western edge of the phase 3 development and re-used on phase 4. The area will then be lined with a geotextile membrane and infilled, before appropriate drainage, bollards and services are installed prior to surfacing.
- 9.3 Dredging will be required along the toe of the new revetment structure and a second campaign will be required to create a finished depth of 12 metres along the new berth. The total dredge volume is estimated to be 110,000m<sup>3</sup> of material. It is anticipated that up to 60,000m<sup>3</sup> of material will be suitable for re-use within the land reclamation and that the remainder will be deposited at the Sutors dredge spoil deposit area.
- 9.4 The works are scheduled to take place between 01 November 2018 and 31 March 2020. A full project description can be found [here](#).
- 9.5 The AA for this project concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC or the Dornoch Firth and Morrich More SAC provided that the resulting conditions are complied with. Provided that the conditions within the Port of Cromarty Firth AA and this AA are complied with, MS-LOT will conclude there will be no significant adverse effect on the Moray Firth SAC or the Dornoch Firth and Morrich More SAC in combination with the Montrose Port Authority proposal.

### **Scottish water, extension to outfall at Ardersier**

- 9.26 The Scottish Water proposal is to extend the outfall pipe to the lowest astronomical tide by installing a new 310 metre long pipe in order to meet SEPA's dilution requirements. The works will involve clearance of rock armour on the foreshore to enable the removal of existing manhole chambers. A short section of sheet pile cut will be installed using vibro-piling to just seaward of Mean High Water Springs. A pipeline trench will then be excavated using a jack up barge. The trench will be graded due to the gravelly substrate so may be up to 27 metres wide at the surface to allow a 1 metre width at the base. A pair of small diameter tubes will be installed using vibro-piling at 50 metre intervals along either side of the trench to keep the pipeline centralised within the trench during pipe pulling operations. The new

pipe will be filled with air to make it buoyant while it is pulled into position. It will then be gradually flooded to allow it to sink into the trench. It will be weighted down with pre-cast concrete collars. A diffuser will be installed at the end of the pipe before the trench is backfilled using excavated material.

- 9.27 The works are scheduled to commence in January 2019 and be completed by March 2019, however there is the potential for delay caused by weather conditions, making it unsafe to carry out crew transfer on and off the jack-up barge. This may mean that the works cannot be completed until the end of May 2019.
- 9.6 The AA for this project concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC. Due to the small scale of these works and providing that the conditions for both the Scottish Water AA and this AA are complied with, MS-LOT will conclude there will be no significant adverse effect on the Moray Firth SAC in combination with the Scottish Water proposal.

#### **Sea Mammal Research Unit Seal Licence**

- 9.28 The Sea Mammal Research Unit ("SMRU") have applied for a licence to take seals in Scotland for scientific, research or educational purposes. The proposed activities are to be carried out between 01 February 2019 until 31 January 2020. The means by which seals are taken is by capture using bag nets or canvas bags on land, or at sea in tangle nets, seine nets, popup nets or traps in areas used by seals. Seals may be sedated to assist capture on land using tranquillizer darts administered with a blow-pipe. Seals are normally released after capture, unless a seal is seriously injured or disabled and has no reasonable chance of recovering. If a seal is injured while being taken, appropriate veterinary care is administered.
- 9.29 The conditions for the SMRU AA state that where seals are to be taken within a SAC and/or where the activities are to be undertaken within 50 km of a site designated for harbour seal, the licensee must request written approval from the licensing authority at least 28 days prior to the commencement of the activity. The request must include details of the proposed activity and an assessment of the effects on the qualifying interest(s) of the designated site(s). No such activity can be undertaken until such time as written approval has been granted by the licensing authority.
- 9.30 The AA for this project concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC provided that the resulting conditions are complied with. Provided that the conditions within the SMRU AA and this

AA are complied with, MS-LOT will conclude there will be no significant adverse effect on the Dornoch Firth & Morrich More SAC in combination with the SMRU proposal.

### **SSE, Geophysical survey and cable laying activities**

- 9.31 SSE applied for a European Protected Species licence for geophysical survey works, use of positioning equipment, and cable laying activities along the route of the Caithness to Moray high-voltage, direct current cable. The survey works consist of use of geophysical equipment which emits sound and noise generate from cable laying activities. The cable laying works were initially licensed until 31 March 2018 but SSE have since applied for two variations to extend the validity of the licence. The current licence expires on 31 August 2019.
- 9.32 The AA for this project concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC provided that the work is undertaken strictly in accordance with the mitigation outlined by SNH. Providing the conditions in this AA are implemented, MS-LOT conclude there will be no cumulative adverse impact with the proposed UXO clearance on the Moray Firth SAC.

### **Dredging operations**

- 9.33 In addition to the projects listed above, there are a number of dredging operations with active licences which were identified as having a likely significant effect on qualifying features of the Moray Firth SAC. The table below summarises these projects.

**Table 1 Dredging operations identified as having a likely significant effect on the bottlenose dolphin qualifying feature of the Moray Firth SAC**

<b>Location of Dredge</b>	<b>Type of Dredge</b>	<b>Amount of Dredge Material</b>	<b>Disposal Site</b>	<b>Timeframes</b>
Aberdeen Harbour	Maintenance	295,500 wet tonnes	Aberdeen	April 2018 – April 2019
Portknockie	Capital	1,000m <sup>3</sup>	Buckie	June 2016 – May 2019
Findochty	Capital	2,900m <sup>3</sup>	Buckie	June 2016 – May 2019
Cullen	Capital	1,000m <sup>3</sup>	Buckie	June 2016 – May

Appropriate Assessment for Moray East Offshore Windfarm – Unexploded Ordnance Clearance – 25 March 2019

				2019
Hopeman	Capital	500m <sup>3</sup>	Burghead	September 2016 – August 2019
Nigg	Maintenance	6,000m <sup>3</sup>	Sutors	March 2017 – March 2020
Cromarty	Maintenance	3,840 wet tonnes	Sutors	October 2018 – 30 September 2019
Montrose	Maintenance	246,000 wet tonnes	Lunan Bay	December 2018 – December 2019

9.34 All of the projects listed in table 4 were identified as having a likely significant effect on the bottlenose dolphin qualifying feature of the Moray Firth SAC.

9.35 For each of these dredging operations the associated AA required mitigation measures to reduce the risk of harm to marine mammals and, if these were followed, the AAs concluded that there would be no adverse effect on the site integrity of the Moray Firth SAC in relation to bottlenose dolphin.

9.36 MS-LOT note that the dredging disposal operations are within specific locations that have been used for this purpose in the past and have mitigation measures in place to reduce the risk of injury or disturbance to bottlenose dolphin. Based on this information, MS-LOT conclude that the dredging and disposal operations in-combination with the Moray East UXO clearance works will not have an adverse effect on the site integrity of the Moray Firth SAC in relation to bottlenose dolphin.

## 10 MS-LOT conclusion

**MS-LOT conclude that the Moray East UXO clearance works will not adversely affect the site integrity of the Moray Firth SAC in relation to bottlenose dolphin or the Dornoch Firth and Morrich More SAC in relation to harbour seal either in isolation or in-combination with the developments described above.**

## **SECTION 4: CONDITIONS**

### **11 Requirement for conditions.**

- 11.1 The licensee must ensure that all licensed activities are carried out in strict accordance with the UXO Clearance Cetacean Risk Assessment and Marine Mammal Mitigation Plan for UXO Clearance (dated 3 December 2018), UXO Inspection Interim Summary (dated 6 February 2019), UXO marine mammal assessment update (dated 19 February 2019) and UXO noise monitoring requirements memo (dated 7 March 2019) but subject to any modifications or amendments made within this licence.