

# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited Pre-Construction Operations



Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01

## Notice of Operations at Beatrice Offshore Wind Farm

### Work Planned for the Period 06.03.2017 to 12.03.2017

*The preconstruction work for Beatrice Offshore Wind Farm is now ongoing. We will issue regular notices on the progress and resources involved in the offshore project. In the near future the notices will be issued approximately monthly. Once the offshore construction commences, the notices will be weekly.*

*The intension is to give an overview of activities and vessels involved. Should anyone have questions regarding the operations, we kindly ask you to put them forward well in advance. If you are not the appropriate recipient of these notices, or do not wish to receive the notices in the future, please let us know by reply or email (see details in Section 1).*

Beatrice Offshore Windfarm Limited (BOWL) is developing the Beatrice Offshore Wind Farm in the 'Outer' Moray Firth on the north-western point of the Smith Bank, approximately 7 nm off the Caithness coastline. The development site will cover an approximate area of up to 130km<sup>2</sup> and will consist of 84 7MW offshore wind turbines (with a total capacity of 588MW) and two HVAC Offshore Transformer Modules (OTM). Water depths in the area range from approximately 38m below LAT in the south of the field to 60m below LAT in the north. The generated power will be transmitted to the grid via two subsea export / transmission cables with a landfall near Portgordon to the south of the field and grid connection at Blackhillock. The transmission cables will cover a route of approximately 38 nm from the wind farm boundary back to the landfall. The Beatrice Offshore Wind Farm development area is highlighted in red below.

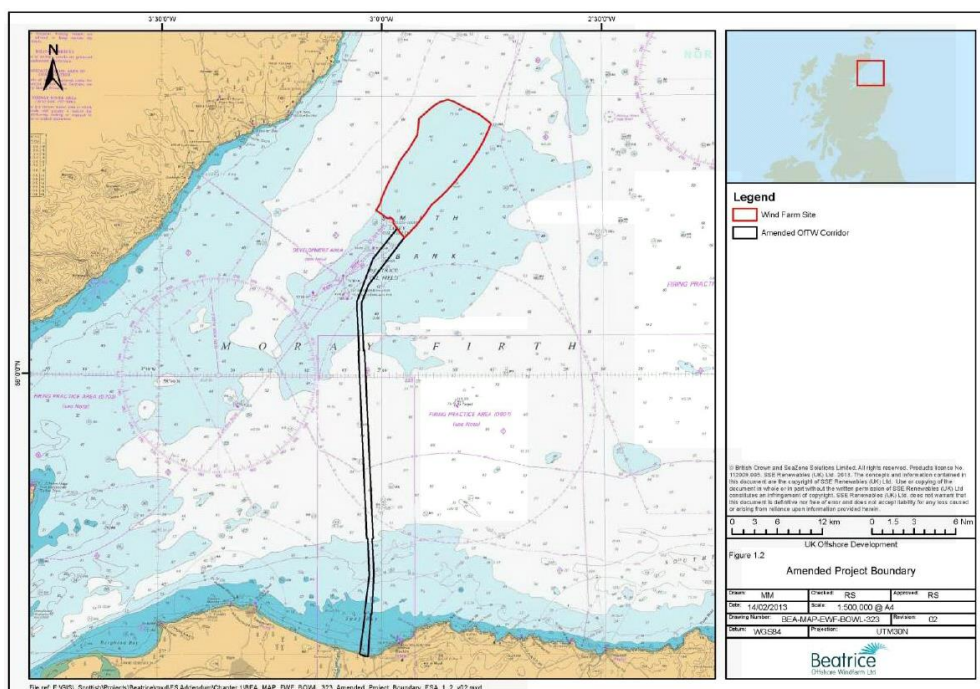


Fig 1 Beatrice Offshore Wind Farm location

# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited Pre-Construction Operations



Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01

From February 2017 the Marine Coordination and Construction site office in Wick will be in place and manned.

A number of pre- construction activities are planned offshore, before the installation works commence in April 2017.

- Boulder removal and scar plough operation (Detailed in this notices).
- Deployment of seabed mounted scientific equipment moorings in the Moray Firth by Aberdeen University (Detailed in this notice).
- Deployment of four wave rider buoys (Detailed in future notices).

### 1. Contact Details for Marine Coordination

The following contact can provide more information if required. Please note that specific queries can also be addressed to the relevant vessel or shore based representative.

Telephone Number (Day Operations)	+44 (0) 3302020329
Emergency Contact (24/7)	+44 (0) 7342 028207
Email for Marine Coordinator	<a href="mailto:mc.bowl@sse.com">mc.bowl@sse.com</a>
Address	Unit 1 Harbour Office Wick Caithness KW1 5HA

### 2. Completed operations

#### 2.1 Deployment of four special marks and four cardinal buoys to mark the construction site boundary

The following Aids to Navigation have been deployed to mark the construction site boundaries of the Beatrice Offshore Wind Farm, as shown in Fig 1:

Eight Sealite Trident 3000 GLA Class 2 navigation buoys on the wind farm site complete with AIS (Automatic Identification System) capability.

The positions of the Aids to Navigation have been issued as a Navigational warning by the UK Hydrographic Office as WZ 212

Name	Coordinates (WGS84)	Characteristics
Beatrice OWF, Special Mark No.1	58° 12.76'N 002° 51.58'W	Yellow Special Mark 'X', Yellow Pillar, Fl Y 5s Light
Beatrice OWF, Special Mark No.2	58° 15.36'N 002° 47.66'W	Yellow Special Mark 'X', Yellow Pillar, Fl Y 5s Light
Beatrice OWF, Special Mark No.3	58° 18.22'N 002° 54.24'W	Yellow Special Mark 'X', Yellow Pillar, Fl Y 5s Light

# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited Pre-Construction Operations

Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01

Name	Coordinates (WGS84)	Characteristics
Beatrice OWF, Special Mark No.4	58° 15.34'N 002° 57.80'W	Yellow Special Mark 'X', Yellow Pillar, Fl Y 5s Light
Beatrice OWF, East Cardinal Mark	58° 18.00'N 002° 45.11'W	East Cardinal shaped topmark, VQ(3) 5s light and AIS
Beatrice OWF, South Cardinal Mark	58° 10.43'N 002° 55.83'W	South Cardinal shaped topmark, VQ(6) +LFI 10s light and AIS
Beatrice OWF, West Cardinal Mark	58° 12.56'N 003° 01.32'W	West Cardinal shaped topmark, VQ(9) 10s light and AIS
Beatrice OWF, North Cardinal Mark	58° 20.21'N 002° 50.58'W	North Cardinal shaped topmark, QW light and AIS

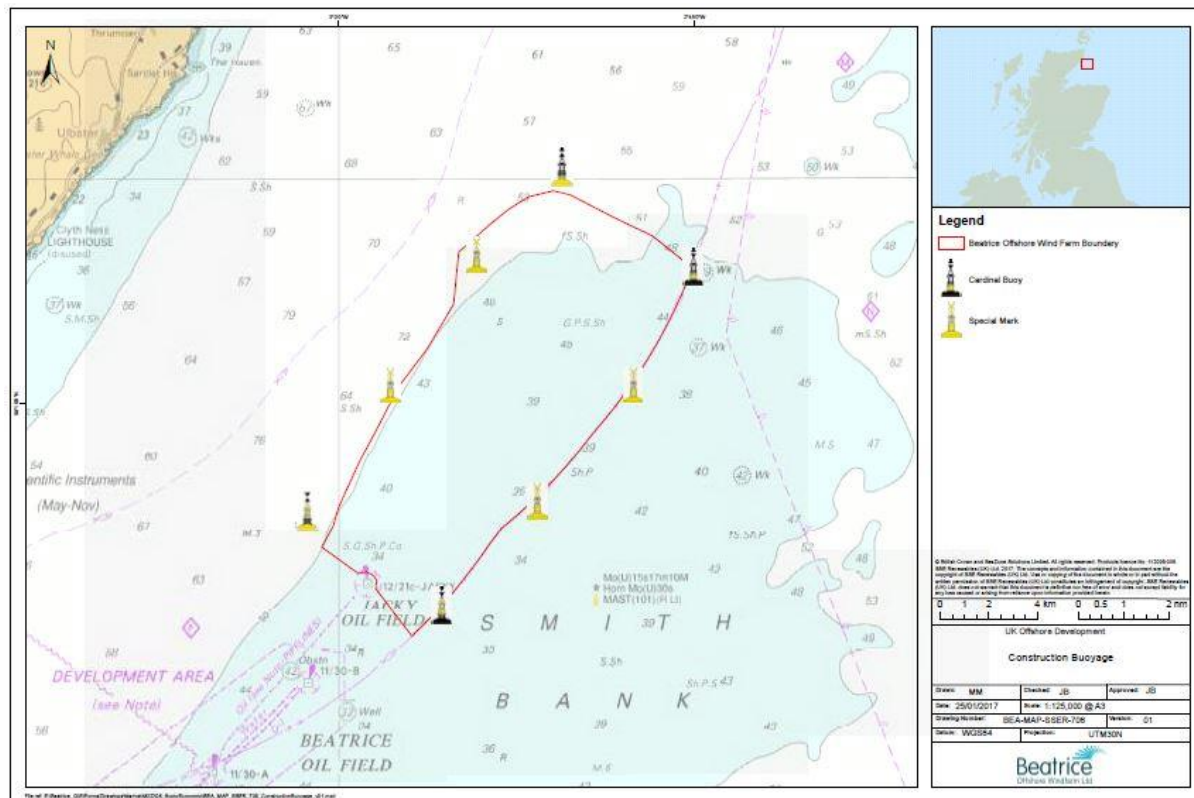


Fig 1 Construction site boundary Aids to Navigation locations

# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited Pre-Construction Operations



Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01

### 3. Upcoming Operations

#### 3.1 Beatrice Offshore Wind Farm Boulder removal and scar plough campaign

<b>Project:</b>	Boulder removal and SCAR plough campaign
<b>Contractor:</b>	Siem Offshore for SHL
<b>Contract Purpose:</b>	Remove boulders and other debris from the array cable routes and foundation locations
<b>Area:</b>	BOWL construction site: within the array cable routes and foundation locations. (See Fig* for details)
<b>Deployment Dates:</b>	8 <sup>th</sup> – 15 <sup>th</sup> March 2017
<b>Deployment Vessel (s):</b>	Siem Ruby, - for SCAR plough, Siem N-Sea for boulder grab
<b>Equipment:</b>	Ecosse 15m SCAR Plough, UTROV grabber system

On behalf of BOWL, Seaway Heavy Lifting will deploy two vessels, to carry out the aforementioned work during the period 08/03/2017 – 20/03/2017, within the boundary of the BOWL construction site, along approximately 15% of the array cable routes and at various foundation locations.

#### 3.2 Detailed locations

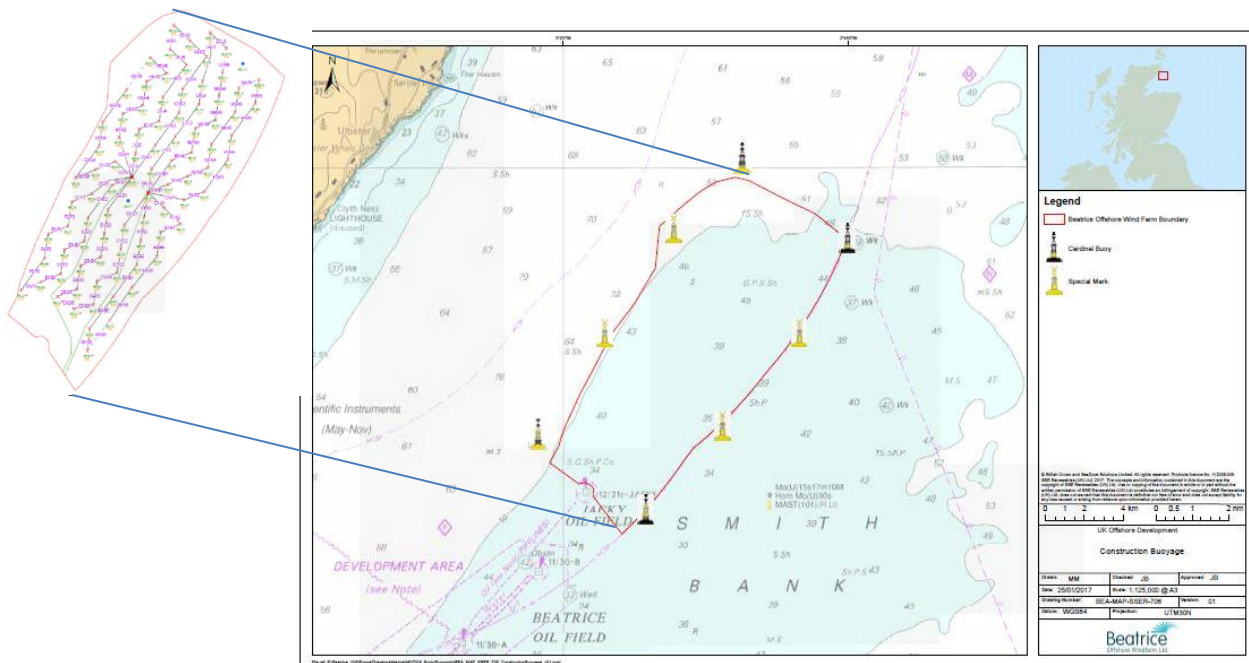


Fig 2 Locations of boulder removal and SCAR Plough routes



# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited

### Pre-Construction Operations

Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01

### 3.3 Vessels on Site Associated with the Activity

SIEM RUBY	
General Description and Dimensions:	Anchor Handling Tug for Boulder Clearance DP2 LOA 91m Beam 22m Draft 7.9m
Call Sign:	2EZQ4
MMSI:	235089425
On Board Contact:	TBC
Offshore Manager / Party Chief:	TBC
E-mail:	siemoffshore@siemoffshore.com
Onshore Representative:	Steve Bell – sbell@shl.nl



The Siem Ruby will deploy and tow an Ecosse Subsea Systems 15m SCAR Plough. The plough will be deployed over the stern roller and the tow will extend approximately 100m astern of the vessel. Around 15% of the overall array cable routes will be prepared using this system.



**Fig 2** Ecosse Subsea Systems 15m SCAR Plough

# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited

### Pre-Construction Operations

Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01

SIEM N-Sea	
<b>General Description and Dimensions:</b>	Boulder Removal Vessel - Cable Route DP2 LOA 94m Beam 20m Draft 7.9m
<b>Call Sign:</b>	C6YG5
<b>MMSI:</b>	3110311800
<b>On Board Contact:</b>	TBC
<b>Offshore Manager / Party Chief:</b>	TBC
<b>E-mail:</b>	siemoffshore@siemoffshore.com
<b>Onshore Representative:</b>	Steve Bell – sbell@shl.nl



The Siem N-Sea will deploy a UTROV (Utility ROV) grabber system to pinpoint and remove individual boulders from foundation locations. The UTROV is a remotely operated system with lights and a suite of survey equipment mounted over a grabber tool. The Siem N-Sea will operate in DP at various foundation locations.



**Fig 3** UTROV Grabber system for boulder removal

# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited Pre-Construction Operations



Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01

The Siem Ruby and Siem N-Sea will exhibit appropriate lights and shapes prescribed by the International Regulations for Preventing Collisions at Sea; relative to the operation. They will also transmit an AIS message.

MARINERS ARE ADVISED to navigate with caution and keep continuous watch on VHF Ch. 70/16 when navigating the area.

### 3.4 Deployment of seabed mounted scientific equipment moorings in the Moray Firth by Aberdeen University.

<b>Project:</b>	Deployment of seabed mounted scientific equipment
<b>Contractor:</b>	Moray First Marine for Aberdeen University
<b>Contract Purpose:</b>	To deploy seabed mounted scientific equipment in the Moray Firth to monitor marine mammals.
<b>Area:</b>	Moray Firth (for detailed locations see table below)
<b>Deployment Dates:</b>	February 15 <sup>th</sup> – March 15 <sup>th</sup> 2017 inclusive
<b>Deployment Vessel (s):</b>	Moray First Marine 'Coral Wind' (for details see Section 6)
<b>Equipment:</b>	Acoustic loggers with a 50 kg weight and a terminated rope riser (for details see fig 5 below)

### 3.5 Detailed Locations

All coordinates are referenced to the WGS 84 Datum

Name	Provisional coordinates		Characteristics
17	57° 57.754' N	003° 31.262' W	Subsurface with acoustic release.
40	57° 48.985' N	003° 36.379' W	Subsurface with acoustic release.
41	57° 51.153' N	003° 33.032' W	Subsurface with acoustic release.
42	57° 52.326' N	003° 29.071' W	Subsurface with acoustic release.
44	57° 56.418' N	003° 21.416' W	Subsurface with acoustic release.
45	57° 57.267' N	003° 16.087' W	Subsurface with acoustic release.
46	58° 00.856' N	003° 15.377' W	Subsurface with acoustic release.
47	58° 00.808' N	003° 08.539' W	Subsurface.
48	58° 04.010' N	003° 06.924' W	Subsurface.
49	58° 04.444' N	003° 00.989' W	Subsurface.
53	58° 11.749' N	002° 45.793' W	Subsurface.
54	58° 13.523' N	002° 41.973' W	Subsurface.
55	58° 16.157' N	002° 39.638' W	Subsurface.
56	58° 18.722' N	002° 37.062' W	Subsurface.
76	58° 17.335' N	002° 50.317' W	Subsurface with transponder.
78	58° 13.572' N	002° 56.755' W	Subsurface.

# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited Pre-Construction Operations



Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01

82	58° 00.617' N	003° 25.689' W	Subsurface with acoustic release.
89	57° 56.050' N	003° 38.244' W	Subsurface with acoustic release.
90	58° 01.057' N	003° 36.577' W	Subsurface with acoustic release.
98	57° 54.166' N	003° 17.853' W	Subsurface with acoustic release.
99	57° 50.853' N	003° 24.442' W	Subsurface with acoustic release.
108	58° 18.995' N	002° 59.233' W	Subsurface.
110	58° 07.659' N	002° 45.361' W	Subsurface.
143	58° 14.730' N	002° 53.069' W	Subsurface with transponder.
144	58° 14.820' N	002° 52.422' W	Subsurface with transponder.
145	58° 15.174' N	002° 52.554' W	Subsurface with transponder.
146	58° 15.234' N	002° 53.316' W	Subsurface with transponder.
147	58° 15.528' N	002° 54.240' W	Subsurface with transponder.
148	58° 15.684' N	002° 53.400' W	Subsurface with transponder.
149	58° 16.002' N	002° 52.047' W	Subsurface with transponder.
150	58° 16.656' N	002° 51.078' W	Subsurface with transponder.
151	58° 14.934' N	002° 54.900' W	Subsurface with transponder.
152	58° 14.805' N	002° 56.415' W	Subsurface with transponder.
153	58° 14.748' N	002° 57.912' W	Subsurface with transponder.
154	58° 10.770' N	002° 55.740' W	Subsurface with transponder.
155	58° 10.680' N	002° 56.550' W	Subsurface with transponder.
156	58° 10.992' N	002° 56.640' W	Subsurface with transponder.
157	58° 10.236' N	002° 54.642' W	Subsurface with transponder.
158	58° 09.739' N	002° 53.442' W	Subsurface with transponder.
159	58° 09.246' N	002° 52.224' W	Subsurface with transponder.
160	58° 17.631' N	002° 49.903' W	Subsurface.
161	58° 12.993' N	002° 55.953' W	Subsurface.
162	58° 18.200' N	002° 54.240' W	Subsurface with transponder.
163	58° 17.950' N	002° 45.000' W	Subsurface.
164	58° 12.770' N	002° 51.590' W	Subsurface with transponder.
165	58° 12.550' N	003° 01.300' W	Subsurface.
166	58° 07.800' N	002° 55.200' W	Subsurface.



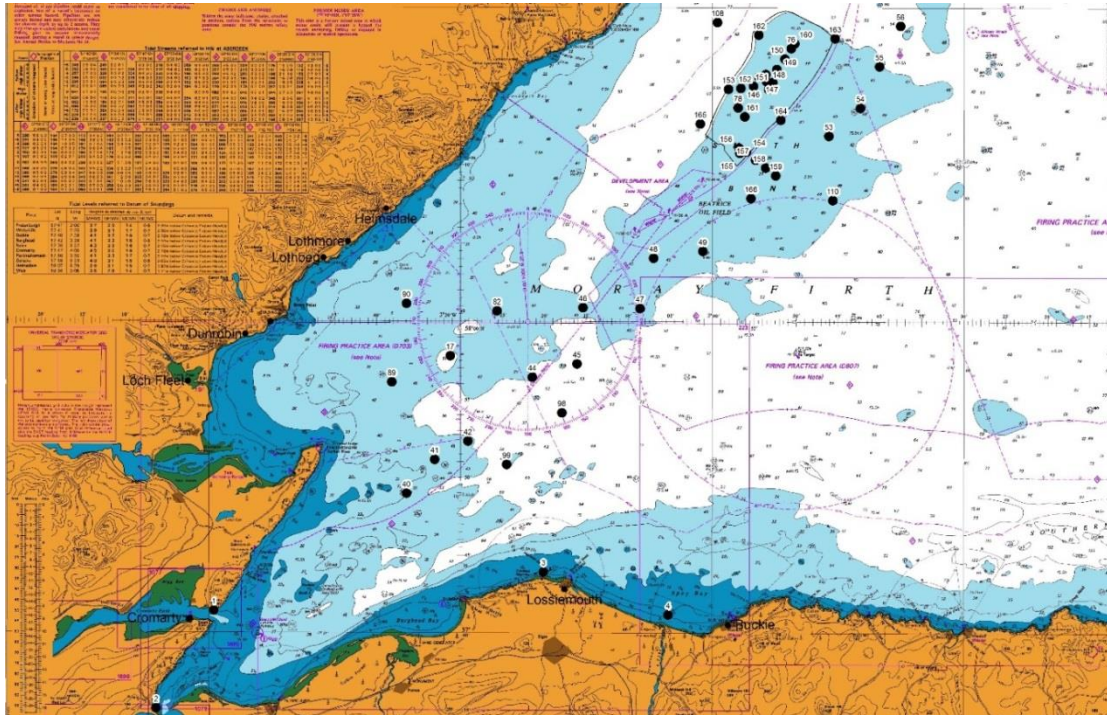
# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited

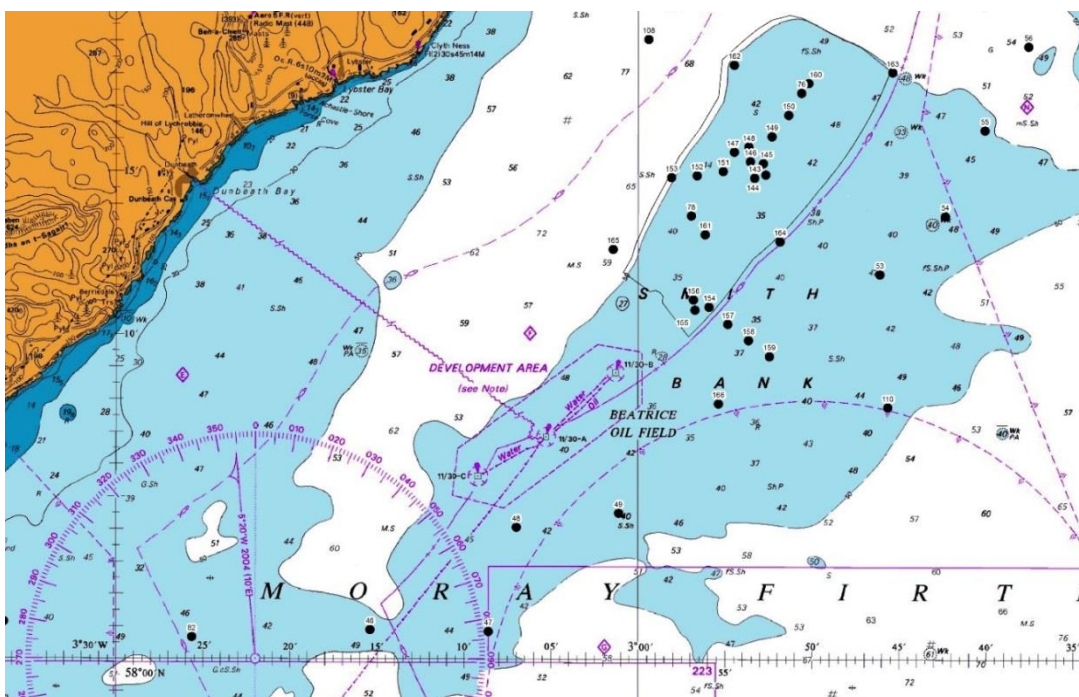
### Pre-Construction Operations

Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01



**Fig 3** Mooring locations – Moray Firth, all sites



**Fig 4** Mooring locations – detail of Smith Bank sites, Moray Firth

# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited Pre-Construction Operations




Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01

The moorings support sound recording equipment, and acoustic loggers that record echolocation clicks of dolphins and porpoises (see images of devices at the foot of this notice). All the above moorings will be subsurface, consisting of a 50kg weight and a terminated rope riser. The above moorings will not extend more than three metres vertically from the seabed. Thirty two of the above moorings will also be equipped with an acoustic release or transponder.

### 3.6 Vessels on Site Associated with the Activity

Coral Wind	
General Description and Dimensions:	Workboat, UK MCA Cat.2, 60nm from safe haven LOA 14m, Beam 5.1m, Draft 1.2m
Call Sign:	2EMX8
MMSI:	235 086 491
On Board Contact:	Bill Ruck – Master 07775 802963
Offshore Manager / Party Chief:	Bill Ruck
E-mail:	<a href="mailto:bill@moraymarine.com">bill@moraymarine.com</a>
Onshore Representative:	Tim Candido Barton +44 (0)1381 600548 <a href="http://www.abdn.ac.uk/lighthouse">www.abdn.ac.uk/lighthouse</a>
	

**Coral Wind**

Mariners are further advised that, the following existing moorings remain in place in the Moray and Cromarty Firths, as per Aberdeen University Notice to Mariners UoA/04/2016 (see also chart extracts at the foot of this notice):

All coordinates are referenced to the WGS 84 Datum

Name	As laid coordinates		Characteristics
1	57° 41.407' N	003° 58.922' W	Subsurface
2	57° 35.130' N	004° 05.870' W	Surface marked (NB50 buoy, red)

# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited Pre-Construction Operations



Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01

3	57° 44.083' N	003° 19.783' W	Surface marked (dhan, 12' aluminium & RADAR reflector)
4	57° 41.379' N	003° 05.623' W	Surface marked (dhan, 12' aluminium & RADAR reflector)

A further Notice to Mariners will be issued when the removed moorings are permanently discontinued.

For information and enquiries please contact:

Tim Candido Barton,




Lighthouse Field Station, University of Aberdeen, George St., Cromarty, Ross-shire, IV11 8YL.

+44 (0)1381 600548.

[t.r.barton@abdn.ac.uk](mailto:t.r.barton@abdn.ac.uk)

### 3.7 Equipment deployed

The following are examples of equipment which the above moorings will support

		
Acoustic logger (600 x 95mm)	Sound recorder (900 x 170mm)	Sound recorder (200 x 60mm)

**Fig 5** Acoustic loggers

# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited

### Pre-Construction Operations

---



Issue Date: 5<sup>th</sup> March 2017

LF000005-WNO-003 BOWL Weekly Notice of Operations Rev 01

#### **4. General Safety Advice**

ALL VESSELS will exhibit appropriate lights and shapes prescribed by the International Regulations for Preventing Collisions at Sea; relative to their operations. All BOWL vessels will also transmit an AIS message.

MARINERS ARE ADVISED to navigate with caution and keep continuous watch on VHF Ch. 70/16 when navigating the area.

#### **5. Dedicated Guard Vessel**

Not yet in place.

#### **6. Fisheries Liaison**

Fisheries liaison associated with the activity will be co-ordinated by Brown and May Marine. For any commercial fishery queries please contact: Alex Winrow-Giffin, telephone: +44 (0)1379 872145 and mobile: +44 (0)7702 710178.

#### **7. Distribution List**

The distribution of this notice is as per email recipient's header. A central list of recipients is maintained by the Marine Coordinator; if you are not the appropriate recipient of these notices, or do not wish to receive the notices in the future, please contact us at the address included in Section 1 of this notice.






Beatrice Offshore Windfarm  
Vessels, agents, contractors and sub-contractors

5-Mar-17

Reference to Marine Licence  
Conditions 2.5, 2.6 and 3.1.2

Vessel Data Matrix



No Ref	Vessel Picture	Vessel Name / Flag	Type / Function	Vessel Contact / Masters name	Company Name / Contact / contact details	Call sign / MMSI / IMO	LOA (m) Beam (m) Draft (m)	Date on Site
2		Siem Ruby / Norway	Anchor Handling Tug for Boulder Clearance	TBC	Siem Offshore / Steve Bell (SHL) / Bavinkstrasse 23, 26789 Leer, Germany	LEQY / 257733000 / 9413444	91 / 22 / 7.9	08.03.2017
		Siem N-Sea / Bahamas	Multipurpose field & ROV Support Vessel (MRSV) for boulder removal	TBC	Siem Offshore / Steve Bell (SHL) / Bavinkstrasse 23, 26789 Leer, Germany	C6YG5 / 311031800 / 9424508	94 / 20 / 6.3	12.03.2017
4		Coral Wind / UK	Workboat, UK MCA Cat.2 C-pod deployment	07775 802963 E-mail: bill@moraymarine.com / Bill Ruck	Aberdeen University / Tim Candido Barton / Lighthouse Field Station, University of Aberdeen, George St., Cromarty, Ross-shire, IV11 8YL. +44 (0)1381 600548. t.r.barton@abdn.ac.uk	2EMX8 / 235086491 / N/A	14 / 5.1 / 1.2	15.02.2017