

# Weekly Notice of Operations (WNoO)

## Beatrice Offshore Windfarm Limited Pre-Construction Operations



Issue Date: 26<sup>th</sup> March 2017

LF000005-WNO-006 BOWL Weekly Notice of Operations

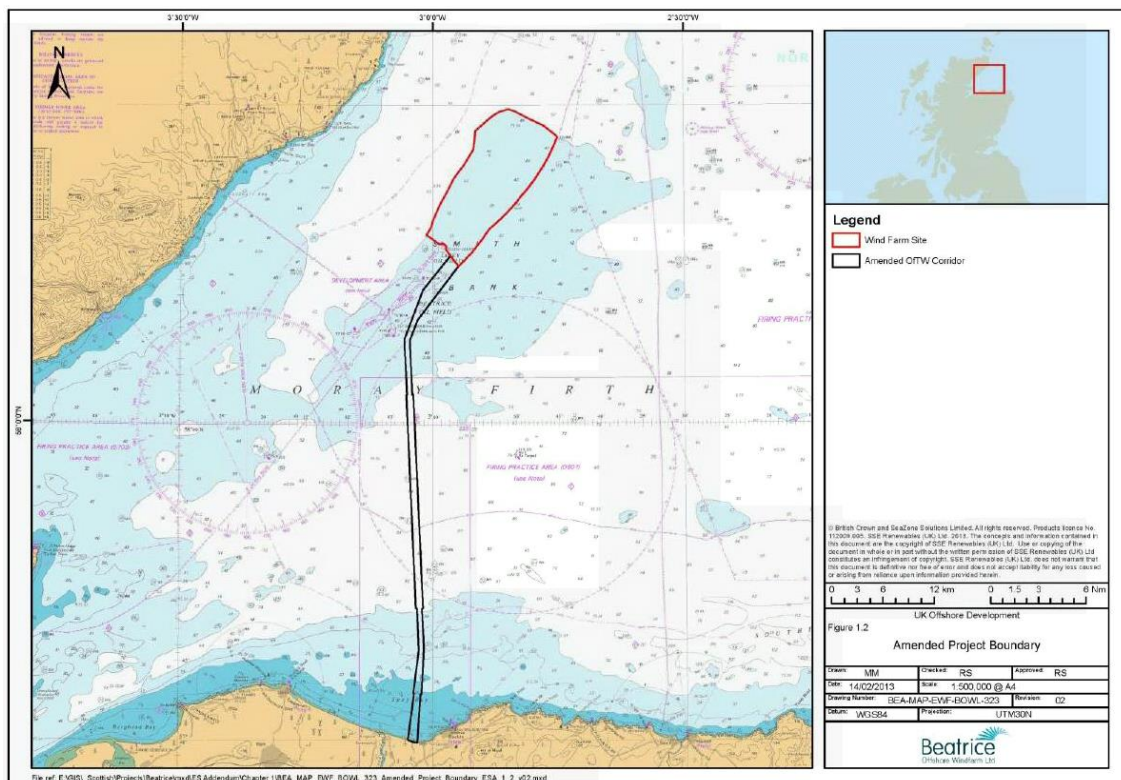
## Notice of Operations at Beatrice Offshore Wind Farm, Week 13

**Work Planned for the Period 27.03.2017 to 02.04.2017**

**Construction work for Beatrice Offshore Wind Farm will commence from the 1<sup>st</sup> April 2017. We will issue regular notices on the progress and resources involved in the offshore project.**

**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**

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From Saturday 1<sup>st</sup> April 2017 at 0700 the Marine Coordination Centre in Wick will be manned 24 hours, 7 days a week.

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

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

The Main construction activity will commence with the Foundation Piling operations (Detailed in this notice).

Also included in this, is the commencement of Guard vessel duties (Detailed in this notice).

### 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.

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

### 2. Completed operations

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

Mariners are advised that, in conjunction with Beatrice Offshore Windfarm Limited (BOWL), and further to notice UoA/03/2017, the University of Aberdeen has installed seabed mounted scientific equipment moorings in the Moray Firth at the locations listed below:

Name	As Laid coordinates (WGS84) datum		Characteristics
17	57° 57.759' N	003° 31.258' W	Subsurface with acoustic release.
40	57° 48.984' N	003° 36.382' W	Subsurface with acoustic release.
41	57° 51.154' N	3° 33.048' W	Subsurface with acoustic release.
42	57° 52.338' N	3° 29.066' W	Subsurface with acoustic release.
44	57° 56.416' N	003° 21.417' W	Subsurface with acoustic release.
45	57° 57.261' N	003° 16.063' W	Subsurface with acoustic release.

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46	58° 00.858' N	003° 15.396' W	Subsurface with acoustic release.
47	58° 00.816' N	003° 08.539' W	Subsurface.
48	58° 04.006' N	003° 06.921' W	Subsurface.
49	58° 04.449' N	003° 00.998' W	Subsurface.
53	58° 11.741' N	002° 45.762' W	Subsurface.
54	58° 13.517' N	002° 41.969' W	Subsurface.
55	58° 16.158' N	002° 39.644' W	Subsurface.
56	58° 18.725' N	002° 37.063' W	Subsurface.
76	58° 17.337' N	002° 50.312' W	Subsurface with transponder.
78	58° 13.565' N	002° 56.750' W	Subsurface.
82	58° 00.621' N	003° 25.692' W	Subsurface with acoustic release.
89	57° 56.051' N	003° 38.250' W	Subsurface with acoustic release.
90	58° 01.061' N	003° 36.584' W	Subsurface with acoustic release.
98	57° 54.165' N	003° 17.854' W	Subsurface with acoustic release.
99	57° 50.856' N	003° 24.445' W	Subsurface with acoustic release.
108	58° 18.998' N	002° 59.211' W	Subsurface.
110	58° 07.667' N	002° 45.368' W	Subsurface.
143	58° 14.730' N	002° 53.056' W	Subsurface with transponder.
144	58° 14.818' N	002° 52.414' W	Subsurface with transponder.
145	58° 15.174' N	002° 52.555' W	Subsurface with transponder.
146	58° 15.231' N	002° 53.321' W	Subsurface with transponder.
147	58° 15.523' N	002° 54.256' W	Subsurface with transponder.
148	58° 15.689' N	002° 53.414' W	Subsurface with transponder.
149	58° 16.002' N	002° 52.037' W	Subsurface with transponder.
150	58° 16.660' N	002° 51.076' W	Subsurface with transponder.
151	58° 14.933' N	002° 54.903' W	Subsurface with transponder.
152	58° 14.808' N	002° 56.411' W	Subsurface with transponder.
153	58° 14.746' N	002° 57.912' W	Subsurface with transponder.
154	58° 10.770' N	002° 55.745' W	Subsurface with transponder.
155	58° 10.670' N	002° 56.563' W	Subsurface with transponder.
156	58° 10.993' N	002° 56.624' W	Subsurface with transponder.
157	58° 10.241' N	002° 54.663' W	Subsurface with transponder.
158	58° 09.747' N	002° 53.444' W	Subsurface with transponder.
159	58° 09.262' N	002° 52.228' W	Subsurface with transponder.
160	58° 17.636' N	002° 49.911' W	Subsurface.
161	58° 12.993' N	002° 55.942' W	Subsurface.
163	58° 17.950' N	002° 44.998' W	Subsurface.
165	58° 12.471' N	003° 01.260' W	Subsurface.
166	58° 07.799' N	002° 55.205' W	Subsurface.

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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 are subsurface, consisting of a 50kg weight and a terminated rope riser. The above moorings do not extend more than three metres vertically from the seabed.

Thirty-two of the above moorings are also equipped with an acoustic release or transponder.

Mariners are also advised that the following two moorings have now been deployed.

Name	Proposed Coordinates (WGS84) datum		Characteristics
162	58° 18.200' N	002° 54.240' W	Subsurface with transponder.
164	58° 12.770' N	002° 51.590' W	Subsurface with acoustic release.

The following locations will be used as ADD playback sites for testing the deployed acoustic beacons. ADD playbacks will require the vessel to be anchored and shut-down for the duration of each 15 minute playback. ADD playbacks will be made from the vessel and the recording equipment will only be deployed from the vessel itself and not released. The work will take place over two days as detailed in Figures 2 and 3 below.

ADD playback locations within the BOWL site:

Name	Proposed Coordinates (WGS84) datum	
WTG-B6	58° 10.900' N,	002° 56.256' W
Off 160	58° 17.676' N	002° 49.818' W
159	58° 09.246' N	002° 52.224' W
OTM1	58° 15.004' N	002° 52.834' W
153	58° 14.748' N	002° 57.912' W
166	58° 07.799' N	002° 55.205' W
OTM2	58° 15.411' N	002° 53.750' W

ADD playback locations not within the BOWL site:

Name	Proposed Coordinates (WGS84) datum	
82	58° 00.621' N	003° 25.692' W
89	57° 56.051' N	003° 38.250' W
45	57° 57.261' N,	003° 16.063' W
41	57° 51.154' N	003° 33.048' W
46	58° 00.858' N	003° 15.396' W
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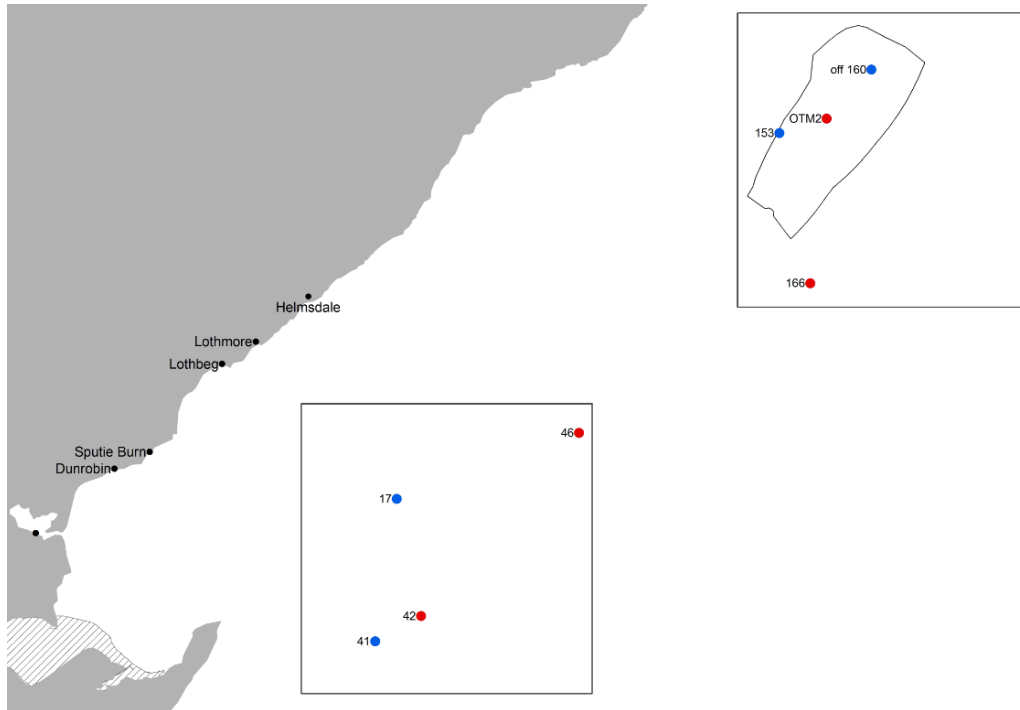
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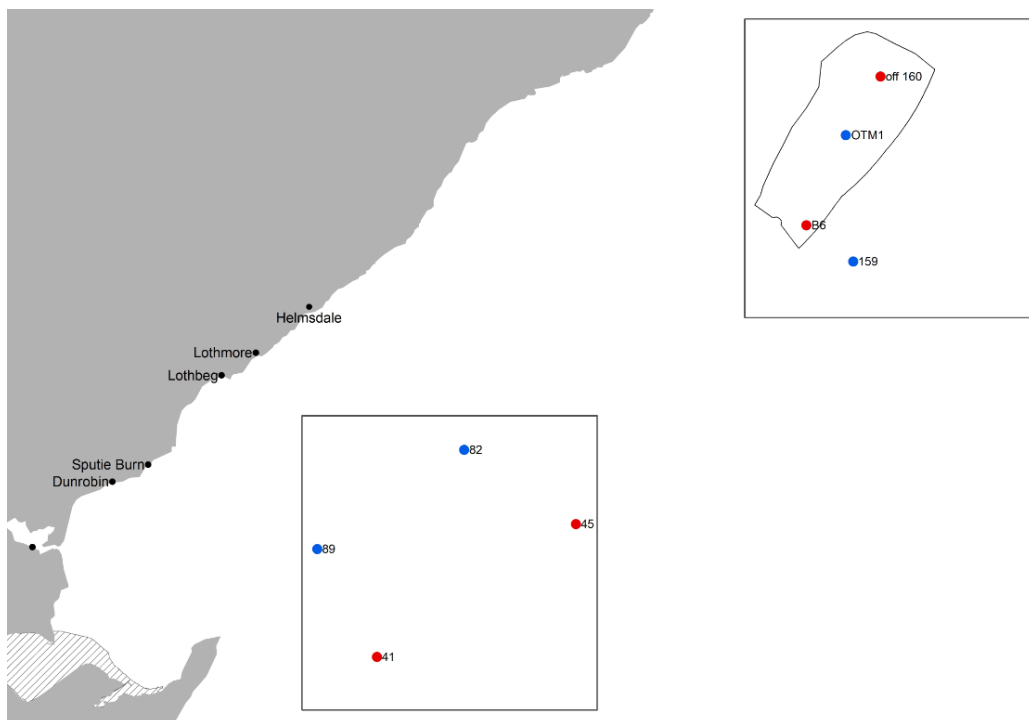
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See chartlets Fig 2 and Fig 3 below for ADD position locations:



**Fig 2** ADD testing locations.





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Fig 3 ADD testing locations.

### 2.2 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>



Mariners are further advised that, the following existing moorings remain in place in the Moray and Cromarty Firths, as per Notice to Mariners UoA/03/2017 (see also chart extracts below Figs 3 and 4):

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)
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)

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### 2.3 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 4** Acoustic loggers

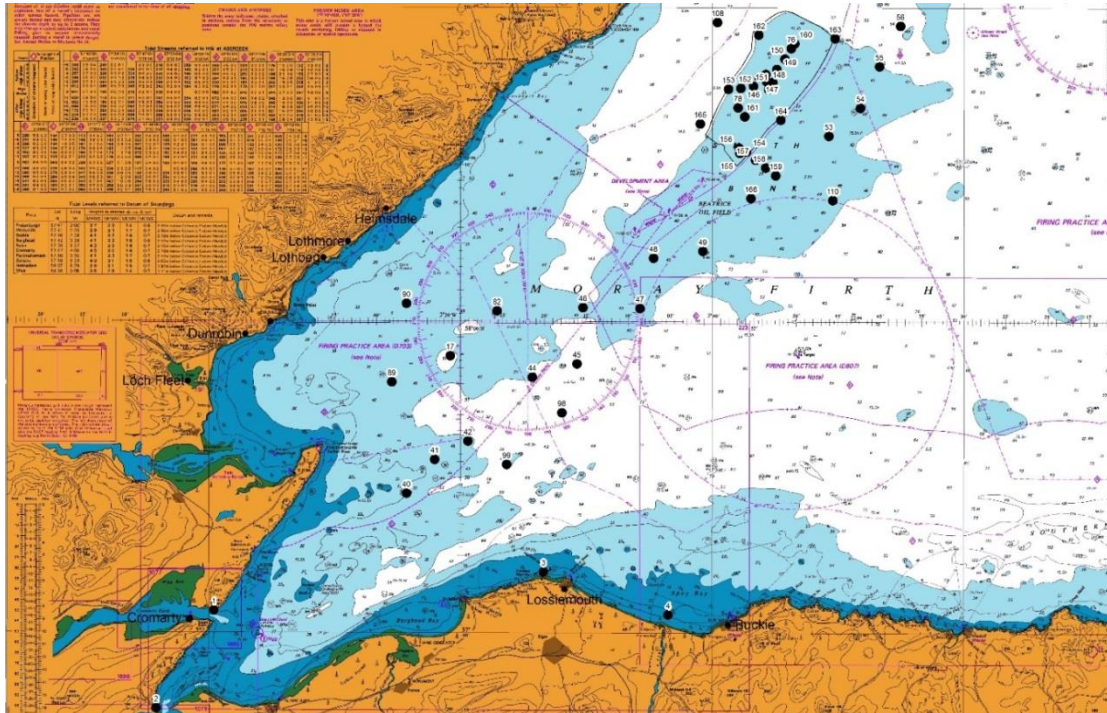
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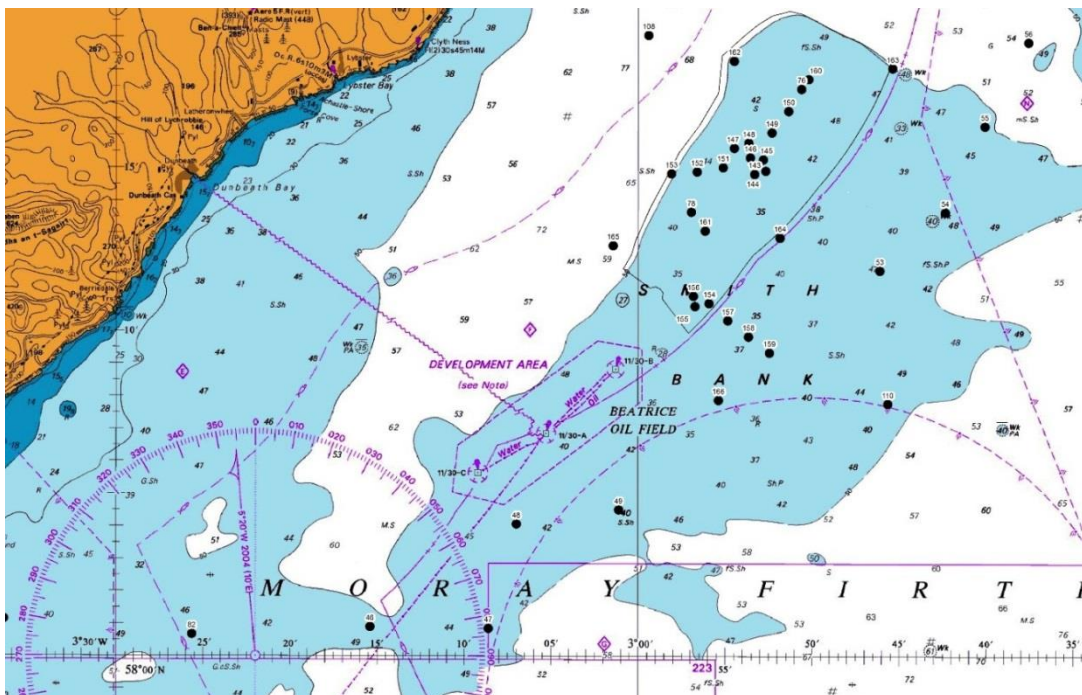
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**Fig 5** Mooring locations – Moray Firth, all sites



**Fig 6** Mooring locations – detail of Smith Bank sites, Moray Firth.



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#### 2.4 Completed SCAR Plough Operations

The Siem Ruby Completed Ploughing operations on the 23<sup>rd</sup> March 2017 and her details have now been removed from this Weekly notice of Operations.

### 3. Upcoming Operations

#### 3.1 Beatrice Offshore Wind Farm Boulder removal campaign

<b>Project:</b>	Boulder removal
<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> – 31 <sup>st</sup> March 2017
<b>Deployment Vessel (s):</b>	Siem N-Sea for boulder grab
<b>Equipment:</b>	UTROV grabber system

On behalf of BOWL, Seaway Heavy Lifting continues to have one vessel, to carry out the aforementioned work during the period 08/03/2017 – 04/04/2017, 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

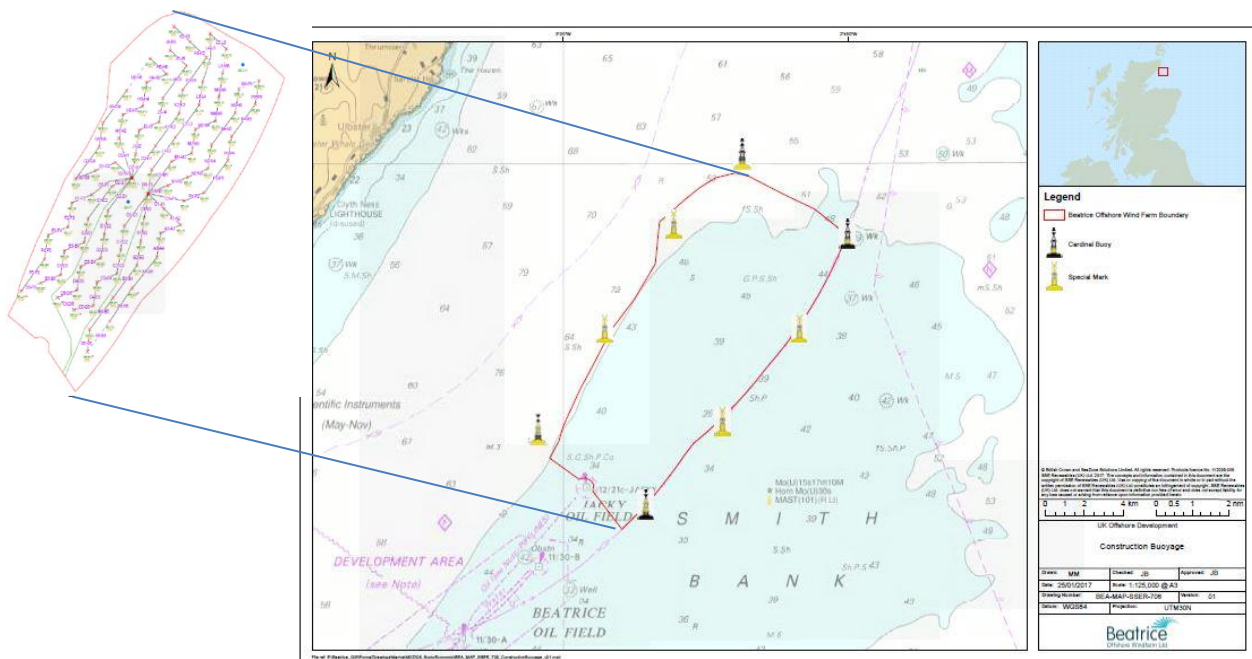


Fig 7 Locations of boulder removal operations

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### 3.3 Vessels on Site Associated with the Activity

SIEM N-Sea	
General Description and Dimensions:	Boulder Removal Vessel - Cable Route WTG locations, DP2 LOA 94m Beam 20m Draft 7.9m
Call Sign:	C6YG5
MMSI:	3110311800
On Board Contact:	Steven Rae
Offshore Manager / Party Chief:	Eric Wittemans / Robert Kyle
E-mail:	siemoffshore@siemoffshore.com
Onshore Representative:	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 8** UTROV Grabber system for boulder removal

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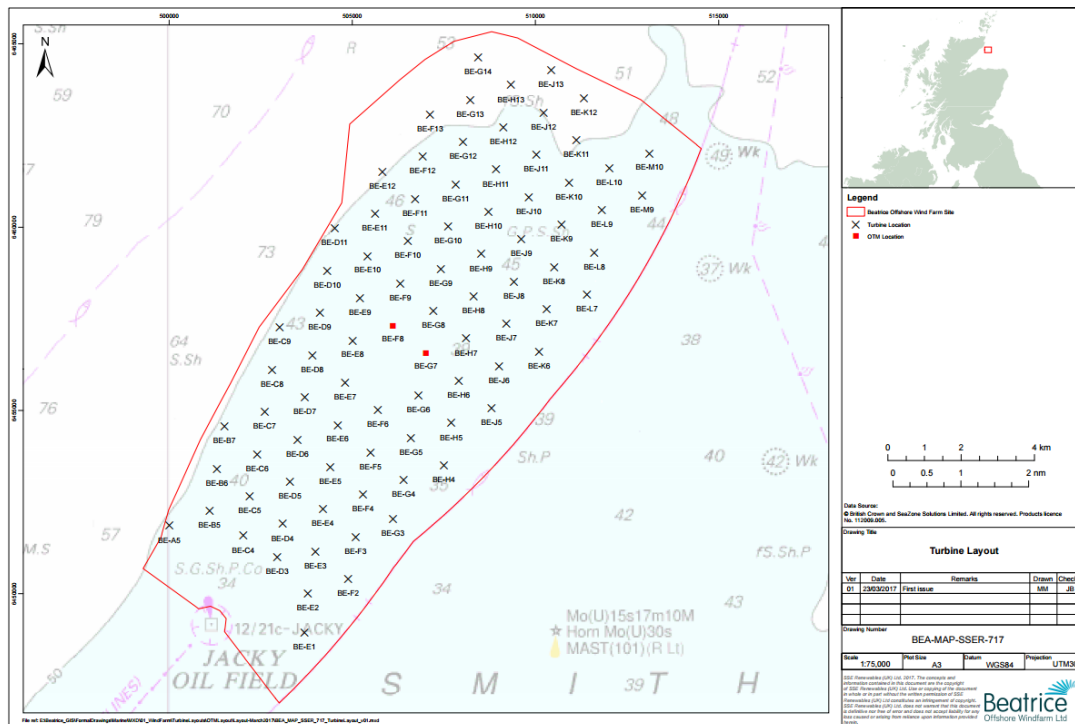
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### 3.4 Beatrice Offshore Wind Farm Foundation Piling Operations

<b>Project:</b>	Foundation Piling campaign
<b>Contractor:</b>	SHL
<b>Contract Purpose:</b>	To install x4 piles at each Turbine Location within the field.
<b>Area:</b>	BOWL construction site: foundation locations. (See Fig 1 for details)
<b>Deployment Dates:</b>	27 <sup>th</sup> March 2017 – 31 <sup>st</sup> October 2017.
<b>Deployment Vessel (s):</b>	Stanislav Yudin, Bremen Fighter, Smit Sentosa & Rix Lynx
<b>Equipment:</b>	Piling Installation Frame (PIF), Piling Hammer and Transport barges.

On behalf of BOWL, Seaway Heavy Lifting will deploy various vessels to carry out the foundation piling operations during the period 27/03/2017 – 31/10/2017, within the boundary of the BOWL construction site.



**Fig 9** Foundation locations

Foundation locations for piling operations are shown in the table below

Location ID	Latitude (ddm) WGS84	Longitude (ddm) WGS84
BE-A5	58 12.471' N	002 59.996' W
BE-B5	58 12.687' N	002 58.873' W
BE-B6	58 13.308' N	002 58.664' W
BE-B7	58 13.929' N	002 58.456' W
BE-C4	58 12.307' N	002 57.948' W
BE-C5	58 12.902' N	002 57.749' W
BE-C6	58 13.524' N	002 57.541' W
BE-C7	58 14.144' N	002 57.332' W

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Location ID	Latitude (ddm) WGS84	Longitude (ddm) WGS84
BE-C8	58 14.766' N	002 57.124' W
BE-C9	58 15.386' N	002 56.915' W
BE-D3	58 11.995' N	002 57.002' W
BE-D4	58 12.497' N	002 56.834' W
BE-D5	58 13.117' N	002 56.626' W
BE-D6	58 13.739' N	002 56.417' W
BE-D7	58 14.359' N	002 56.209' W
BE-D8	58 14.981' N	002 55.999' W
BE-D9	58 15.602' N	002 55.790' W
BE-D10	58 16.223' N	002 55.582' W
BE-D11	58 16.844' N	002 55.373' W
BE-E1	58 10.900' N	002 56.256' W
BE-E2	58 11.470' N	002 56.128' W
BE-E3	58 12.090' N	002 55.920' W
BE-E4	58 12.712' N	002 55.710' W
BE-E5	58 13.333' N	002 55.502' W
BE-E6	58 13.954' N	002 55.293' W
BE-E7	58 14.575' N	002 55.084' W
BE-E8	58 15.196' N	002 54.875' W
BE-E9	58 15.817' N	002 54.665' W
BE-E10	58 16.438' N	002 54.456' W
BE-E11	58 17.059' N	002 54.247' W
BE-E12	58 17.680' N	002 54.037' W
BE-F2	58 11.685' N	002 55.005' W
BE-F3	58 12.306' N	002 54.796' W
BE-F4	58 12.927' N	002 54.588' W
BE-F5	58 13.548' N	002 54.378' W
BE-F6	58 14.168' N	002 54.169' W
BE-F8 (OTM)	58 15.411' N	002 53.750' W
BE-F9	58 16.031' N	002 53.540' W
BE-F10	58 16.653' N	002 53.330' W
BE-F11	58 17.274' N	002 53.120' W
BE-F12	58 17.894' N	002 52.911' W
BE-F13	58 18.516' N	002 52.701' W
BE-G3	58 12.544' N	002 53.726' W
BE-G4	58 13.142' N	002 53.464' W
BE-G5	58 13.762' N	002 53.254' W
BE-G6	58 14.384' N	002 53.044' W
BE-G7 (OTM)	58 15.004' N	002 52.834' W



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Location ID	Latitude (ddm) WGS84	Longitude (ddm) WGS84
BE-G8	58 15.625' N	002 52.625' W
BE-G9	58 16.247' N	002 52.415' W
BE-G10	58 16.867' N	002 52.204' W
BE-G11	58 17.488' N	002 51.994' W
BE-G12	58 18.109' N	002 51.784' W
BE-G13	58 18.730' N	002 51.574' W
BE-G14	58 19.351' N	002 51.362' W
BE-H4	58 13.356' N	002 52.339' W
BE-H5	58 13.977' N	002 52.130' W
BE-H6	58 14.598' N	002 51.920' W
BE-H7	58 15.219' N	002 51.709' W
BE-H8	58 15.840' N	002 51.499' W
BE-H9	58 16.461' N	002 51.289' W
BE-H10	58 17.082' N	002 51.079' W
BE-H11	58 17.703' N	002 50.867' W
BE-H12	58 18.324' N	002 50.657' W
BE-H13	58 18.944' N	002 50.446' W
BE-J5	58 14.192' N	002 51.005' W
BE-J6	58 14.812' N	002 50.795' W
BE-J7	58 15.433' N	002 50.585' W
BE-J8	58 16.055' N	002 50.373' W
BE-J9	58 16.675' N	002 50.163' W
BE-J10	58 17.296' N	002 49.952' W
BE-J11	58 17.917' N	002 49.741' W
BE-J12	58 18.538' N	002 49.530' W
BE-J13	58 19.159' N	002 49.319' W
BE-K6	58 15.027' N	002 49.669' W
BE-K7	58 15.648' N	002 49.459' W
BE-K8	58 16.269' N	002 49.247' W
BE-K9	58 16.890' N	002 49.036' W
BE-K10	58 17.510' N	002 48.825' W
BE-K11	58 18.131' N	002 48.614' W
BE-K12	58 18.752' N	002 48.403' W
BE-L7	58 15.862' N	002 48.333' W
BE-L8	58 16.482' N	002 48.122' W
BE-L9	58 17.104' N	002 47.910' W
BE-L10	58 17.724' N	002 47.698' W
BE-M9	58 17.317' N	002 46.784' W
BE-M10	58 17.938' N	002 46.571' W

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### 3.5 Vessels on Site Associated with the Activity

Stanislav Yudin	
General Description and Dimensions:	Heavy Lift Vessel L:183.3m B: 40.0m D:8.9m
Call Sign & MMSI:	V20Y1 / 304742000
On Board Contact for BOWL:	Chris Hadlow
Offshore Manager / Party Chief:	Joanes van der vliet
E-mail:	stanislav-yudin@shl.com.cy
Onshore Representative:	Danny Sprangers email: dsprangers@shl.nl



### Piling Operations

Pile foundations will be installed by the Heavy Lift Vessel (HLV) Stanislav Yudin, which will arrive at the proposed foundation installation location and will be positioned in readiness for the foundation installation works. This will involve the placing of an eight point anchor spread using two dedicated anchor handling tugs, Bremen Fighter and Smit Sentosa.

Pile foundations will be installed by the use of a Pile Installation Frame (PIF), an example of which is shown in Figure 10 Pile

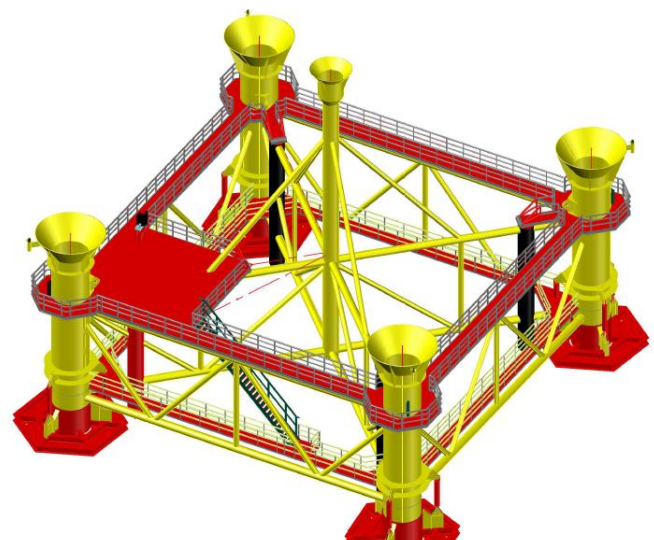


Fig 10 Pile Installation Frame (PIF)

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installation tolerances will be achieved through the use of a hydraulically operated PIF with sufficient travel to accommodate the worst case seabed slopes to ensure the piles are installed correctly.

The PIF will be lifted from the HLV and lowered to the seabed in position ready for the piling operations and levelled hydraulically to take into account seabed slope. Each of the four piles is then lifted and lowered into the PIF in readiness for the piling operation. The approximate duration of pile installation frame positioning will be up to 4 hours.



**Fig 11.** PIF lowering.

The pile foundations will be delivered to the HLV by cargo barge directly from the manufacturing site. The cargo barge will be moored alongside the HLV and the four piles will each be lifted and transferred to the deck of the HLV. The cargo barge will then be unmoored and will depart. Each of the four piles will then be lifted, upended, lowered into the PIF and vibrated (vibro-piled) in readiness for the piling operation.

Vibro-piling is a technique used to make the pile oscillate at a low frequency of about 20Hz. Having been lifted into the PIF, each pile will be vibro-piled to a nominal penetration or until refusal, whichever occurs first. This process continues until all four piles are settled in the PIF. The purpose of the vibro-piling will be to settle the piles into the PIF in advance of percussive piling. The approximate duration of pile installation at each location is 7 hours. The approximate duration of vibro-piling will be up to 2 hours at each location.

#### **Piling Mitigation protocol**

The piling hammer will be lifted on to the top of the first pile in the PIF. The approximate duration of setting up the piling hammer on the first pile will be 2 hours. Prior to commencing piling the Piling Mitigation Protocol will be implemented. This will include the deployment of the Acoustic Deterrence Device (ADD) and a soft start piling procedure. The approximate duration of mitigation depends on the duration of any breaks, the ADDs may also be deployed concurrently with setting up the piling hammer.

#### **Piling to Full Penetration**

Following completion of the mitigation described above, the piling operators will gradually increase the hammer energy applied until the pile is penetrating the seabed at the target rate of approximately 1 cm to 2.5 cm per hammer strike (see Figure 6.7 for pile hammer installing a pile). If this target rate is reached with a lower than anticipated hammer energy, the hammer energy is unlikely to be increased further. Final penetration depth is reached when the pile foundations stick up between 2m and 6m above the



**Figure 12** Hammer positioned on pile

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seabed. Once the first pile in the PIF has been fully installed, the hammer will be repositioned to commence piling at the next pile in the PIF. The mitigation implemented prior to commencing this second piling event will depend on the duration of the break between piling each pile in the PIF as set out in the Piling Mitigation Protocol. The anticipated duration for re-positioning the hammer to commence piling at the next pile in the PIF will be 10 minutes to 1 hour. For the four piles hammer re-positioning may therefore take up to 3 hours in total.

The anticipated duration of piling to full penetration depth (including the mitigation period) at each wind turbine or OTM location ranges between 5.4 to 12.7 hours. Once all four of the piles in the PIF have been pile-driven to the required depth pile metrology is performed (measurements to determine pile position and depth is satisfactory). The duration for performing

### Supporting Vessels for the Stanislav Yudin

The anchor handling vessels working with the Stanislav Yudin are Bremen Fighter and Smit Sentosa

The operation will involve placing an anchor spread using a dedicated AHT, using up to eight anchors, with each anchor up to 850 metres from the Stanislav Yudin. An anchor buoy will mark the anchor position

BREMEN FIGHTER	
General Description and Dimensions:	Anchor Handling Tug LOA 48,81m Breadth 14.06m
Call Sign:	V20Y1
MMSI:	404742000
Onshore Representative:	Steve Bell – sbell@shl.nl





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SMIT SENTOSA	
General Description and Dimensions:	Anchor Handling Tug LOA 51.8M Breadth 15.0m
Call Sign:	ORRX
MMSI:	205696000
Onshore Representative:	Steve Bell – sbell@shl.nl



The Bremen Fighter and Smit Sentosa 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.

### 3.6 Beatrice Offshore Wind Farm Waverider Buoy Deployment

On behalf of BOWL, Seaway Heavy Lifting will deploy four Waverider buoys will be deployed at the following locations within the Beatrice Offshore Wind Farm, during the period 28<sup>th</sup> – 31<sup>st</sup> March 2017

Project:	Waverider Buoy Deployment
Contractor:	SHL
Contract Purpose:	To install x4 Waverider buoys.
Area:	BOWL construction site: within the array cable routes and foundation locations. (See Fig 1 for details)
Deployment Dates:	27 <sup>th</sup> March 2017 – 31 <sup>st</sup> March 2017.
Deployment Vessel (s):	Bremen Fighter
Equipment:	Datawell Directional waverider DWR-MkIII

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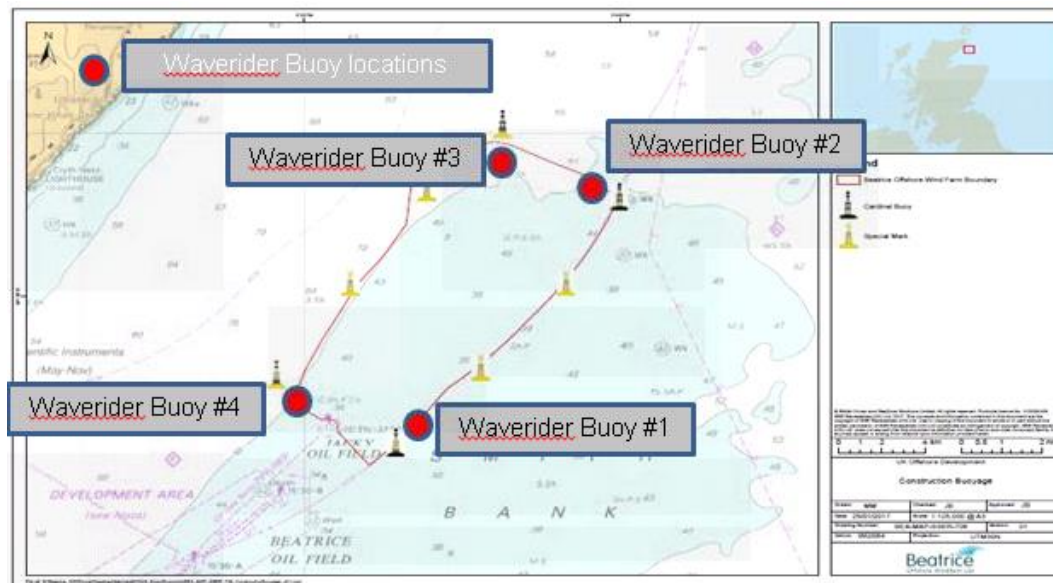


Fig 13 Waverider locations



Fig 14 Datowell Directional waverider DWR-MkIII

Name	Coordinates (WGS84)	Characteristics
Wave Rider Buoy #1	58° 10.662'N 002° 55.493'W	LED Flashlight Antenna with integrated LED flasher, colour yellow, pattern 5 flashes every 20 s,
Wave Rider Buoy #2	58° 18.033'N 002° 45.466'W	LED Flashlight Antenna with integrated LED flasher, colour yellow, pattern 5 flashes every 20 s,

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Name	Coordinates (WGS84)	Characteristics
Wave Rider Buoy #3	58°19.630'N 002° 50.573'W	LED Flashlight Antenna with integrated LED flasher, colour yellow, pattern 5 flashes every 20 s,
Wave Rider Buoy #4	58° 12.152'N 003° 00.330'W	LED Flashlight Antenna with integrated LED flasher, colour yellow, pattern 5 flashes every 20 s

The Waveriders will be deployed by the AHT Bremen Fighter (for details see above).

### 3.7 Beatrice Offshore Wind Farm Guard Vessel Deployment

<b>Project:</b>	Beatrice Offshore Windfarm Guard Vessel Deployment.
<b>Contractor:</b>	SHL – SFF Services Ltd
<b>Contract Purpose:</b>	Guard Vessel for the Windfarm site.
<b>Area:</b>	BOWL construction site: within the array cable routes and foundation locations. (See Fig 1 for details)
<b>Deployment Dates:</b>	From 1 <sup>st</sup> April 2017.
<b>Deployment Vessel (s):</b>	Genesis BCK19
<b>Equipment:</b>	N/A

Genesis BCK19	
<b>General Description and Dimensions:</b>	Guard Vessel: L:35.70m B:6m D:3.0m
<b>Call Sign:</b>	MGGT9
<b>MMSI:</b>	235008110
<b>On Board Contact:</b>	A Morrice Tel: 07712114874
<b>E-mail:</b>	ops@sff.co.uk
<b>Onshore Representative:</b>	SFF Services Limited Office. Tel: 01224 646966
	

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

##### **General Safety Advice**

All vessels engaged in the activity will exhibit appropriate lights and shapes prescribed by the International Regulations for Preventing Collisions at Sea; relative to their operations. All vessels engaged in the activity will also transmit an Automatic Identification System (AIS) message.

The Secretary of State has authorised the use of the following safety zones as per Notice to Mariners LF000005-NTM-004 Notification of Safety Zones.

- 500 metres radius around each wind turbine, offshore transformer module and/or their substructures and foundations comprising the Beatrice Offshore Wind Farm whilst work is being performed as indicated by the presence of construction vessels.
- 50 metres radius around each wind turbine, offshore transformer module and/or their substructure and foundations installed but waiting to be commissioned as part of the Beatrice Offshore Wind Farm.

ALL VESSELS ARE REQUESTED to give all construction and support vessels a wide berth.

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

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

The guard vessel Genesis BCK is due to take up station on 1<sup>st</sup> April 2017.

#### **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 872144 and mobile: +44 (0)7760 160039

#### **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.



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

Date: 24-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	Operator	Contact / contact details	Call sign / MMSI / IMO	LOA (m) Beam (m) Draft (m)	Date on Site
1		Siem N-Sea	Anchor Handling Tug for Boulder Clearance	Seaway Heavy Lifting (SHL)	Steve Bell (SHL) / s.bell@shl.nl	C6YG5 / 311031800 / 9424508	93.6 / 19.74 / 6.3	17.03.2017
2		Coral Wind / UK	Workboat, UK MCA Cat.2 C-pod deployment	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
3		Bremen Fighter	Anchor Handling Tug assisting the Stanislav Yudin	Seaway Heavy Lifting (SHL)	Danny Sprangers (SHL) C/o Subsea 7 East Campus Prospect Road Amhall Business Park Westhill, Aberdeenshire AB32 8FE +31 653997158 EMAIL:dsprangers@shl.nl	V20Y1 / 304742000	48.1 / 14.06 / 6.0	27.03.2017
4		Stanislav Yudin	Heavy Lift Vessel	Seaway Heavy Lifting (SHL)	Danny Sprangers (SHL) C/o Subsea 7 East Campus Prospect Road Amhall Business Park Westhill, Aberdeenshire AB32 8FE +31 653997158 EMAIL:dsprangers@shl.nl	5BYM2 / 210334000	183.3 / 40.0 / 8.9	27.03.2017
5		Smit Sentosa	Anchor Handling Tug assisting the Stanislav Yudin	Seaway Heavy Lifting (SHL)	Danny Sprangers (SHL) C/o Subsea 7 East Campus Prospect Road Amhall Business Park Westhill, Aberdeenshire AB32 8FE +31 653997158 EMAIL:dsprangers@shl.nl	ORRX / 205696000	51.8 / 15.0 / 6.2	27.03.2017
6		Rix Lynx	Crew Transfer Vessel / CTV	Seaway Heavy Lifting (SHL)	Danny Sprangers (SHL) C/o Subsea 7 East Campus Prospect Road Amhall Business Park Westhill, Aberdeenshire AB32 8FE +31 653997158 EMAIL:dsprangers@shl.nl	2JGQ8 / 235115745	26 / 7.0 / 2.0	27.03.2017
7		BOA Balder	Harbour Tug 65t Bolland Pull.		BOA Strandveien 43 7067 Trondheim Norway Phone: +47 73 99 11 99 (Switchboard) Fax: +47 73 99 11 98 E-mail: office@boa.no	LDAF / 259086000	32 / 11.6 / 7.1	

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

Date: 24-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	Operator	Contact / contact details	Call sign / MMSI / IMO	LOA (m) Beam (m) Draft (m)	Date on Site
8		Genesis BCK19	Guard Vessel	Alex Morrice, 07712114874, E:alex.morrice@windowslive.com, broadband: 01542 898140, Sat Phone: 0087 0773151728	SSF services Limited (SFFSL) Office, Tel: 01224 640906, E: ops@sff.co.uk	MGGT9 / 235008110	35.0 / 6.0 / 3.0	01.04.2017