

Weekly Notice of Operations (WNoO)

Beatrice Offshore Windfarm Limited

Construction Operations



Issue Date: 10 July 2017

LF000005-WNO-013: Weekly Notice of Operations - Rev 09

Notice of Operations at Beatrice Offshore Wind Farm

Work Planned for the Period 10.07.2017 to 16.07.2017

Construction of the Beatrice Offshore Wind Farm commenced on the 1st of April. Pre-construction works were completed on the 12th of April. This notice will be updated weekly giving information on the progress and resources involved in the offshore project. The intention 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.

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 130km² 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.

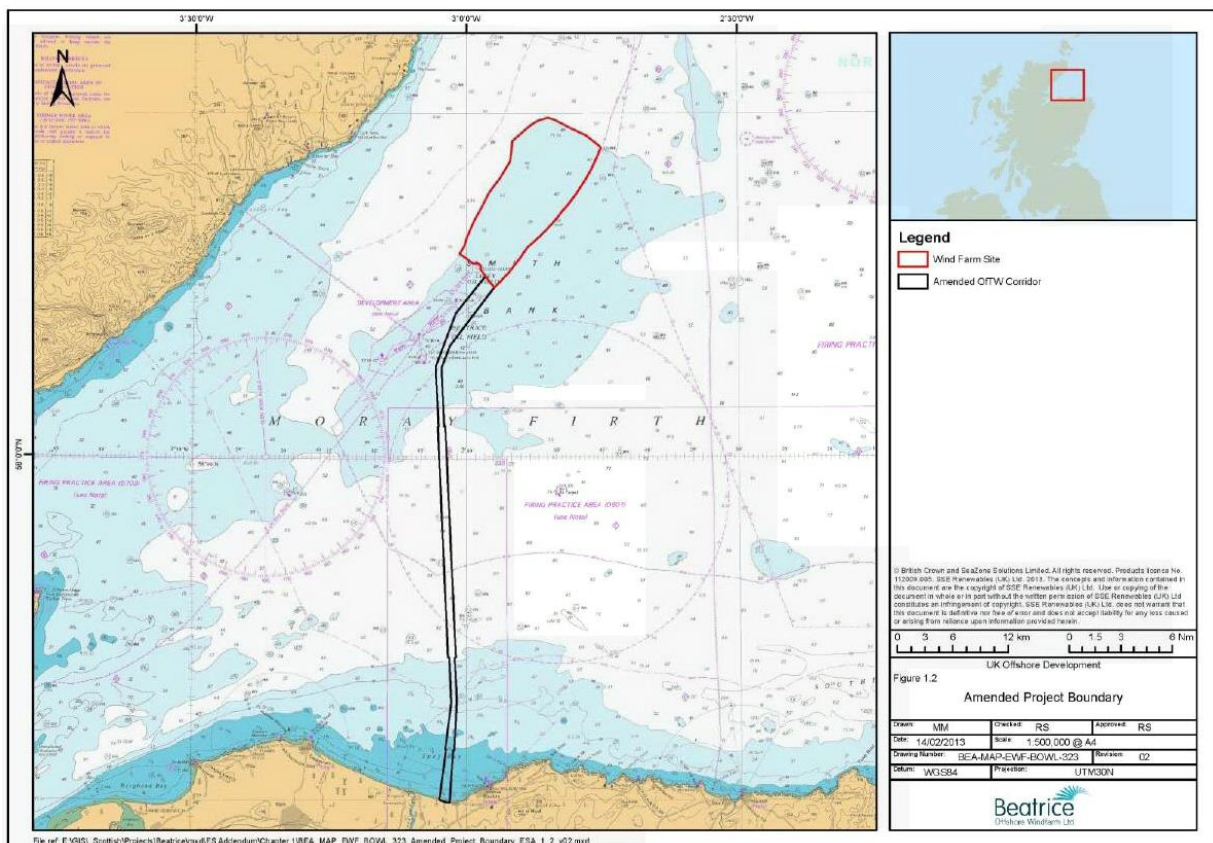


Fig 1 - Beatrice Offshore Wind Farm Location

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Installation works detailed below are ongoing.

- Piling operations.
- Guard Vessel duties.
- Installation of Direct Cable Pipes at Portgordon near Buckie.
- Export cable Installation – Backhoe works.
- Installation & Removal of Seabed Mounted Scientific Equipment

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 | +44 (0) 3302 020329 |
| Emergency Contact (24/7) | +44 (0) 7342 028207 |
| Email for Marine Coordinator | mc.bowl@sse.com |
| Address | Unit 1 Harbour Office Wick Caithness KW1 5HA |

2. Ongoing Operations

2.1 Beatrice Offshore Wind Farm Piling Campaign

| | |
|------------------------|--|
| Project: | Foundation Piling Campaign |
| Contractor: | SHL |
| Contract Purpose: | To install x 4 piles at the two OTM's and each Turbine Location within the construction site. |
| Area: | BOWL Construction Site: Foundation Locations. (See Fig 5 for details). |
| Deployment Dates: | 01 April 2017 - 31 October 2017. |
| Deployment Vessel (s): | Stanislav Yudin, Bremen Fighter, Smit Sentosa & Rix Lynx, with various tugs and associated barges. |
| Equipment: | Pile Installation Frame (PIF), Piling Hammer and Transport barges. |

On behalf of BOWL, Seaway Heavy Lifting will deploy various vessels to carry out the aforementioned work during the period 01/04/2017 – 31/10/2017 within the boundary of the BOWL construction site (See Vessel Data Matrix).

In preparation for the installation of wind turbine foundations, in the Beatrice Offshore Windfarm construction site, a set of four piles will be installed in the seabed at each of the foundation locations. On completion, the date will be recorded in Table 1 below. A chart of piled locations will be recorded in Fig 2 below.

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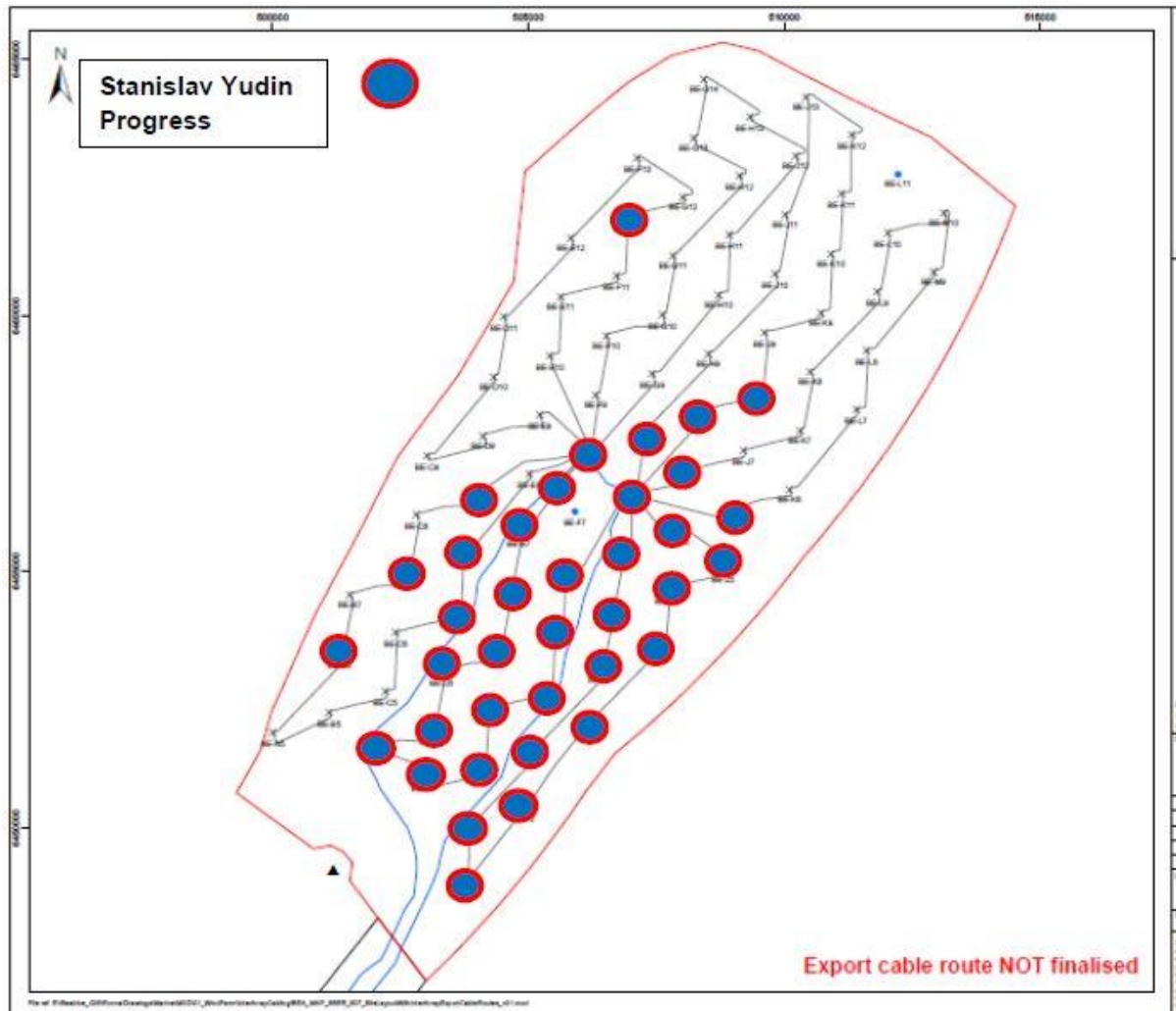


Fig 2 – Piled locations

Table 1 - WTG and OTM Location Coordinates

| Location ID | Latitude WGS84 | Longitude WGS84 | Piling Complete |
|-------------|----------------|-----------------|-----------------|
| 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 | 16.06.2017 |
| BE-B7 | 58 13.929' N | 002 58.456' W | |
| BE-C4 | 58 12.307' N | 002 57.948' W | 23.05.2017 |
| 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 | 15.06.2017 |
| 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 | 21.05.2017 |
| BE-D4 | 58 12.497' N | 002 56.834' W | 22.06.2017 |
| BE-D5 | 58 13.117' N | 002 56.626' W | 26.05.2017 |

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| Location ID | Latitude WGS84 | Longitude WGS84 | Piling Complete |
|--------------|----------------|-----------------|-----------------|
| BE-D6 | 58 13.739' N | 002 56.417' W | 13.06.2017 |
| BE-D7 | 58 14.359' N | 002 56.209' W | 31.05.2017 |
| BE-D8 | 58 14.981' N | 002 55.999' W | 02.06.17 |
| 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 | 10.04.2017 |
| BE-E2 | 58 11.470' N | 002 56.128' W | 14.04.2017 |
| BE-E3 | 58 12.090' N | 002 55.920' W | 19.04.2017 |
| BE-E4 | 58 12.712' N | 002 55.710' W | 02.07.2017 |
| BE-E5 | 58 13.333' N | 002 55.502' W | 19.05.2017 |
| BE-E6 | 58 13.954' N | 002 55.293' W | 18.05.2017 |
| BE-E7 | 58 14.575' N | 002 55.084' W | 01.06.2017 |
| BE-E8 | 58 15.196' N | 002 54.875' W | 30.05.2017 |
| 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 | 03.07.2017 |
| BE-F3 | 58 12.306' N | 002 54.796' W | 17.04.2017 |
| BE-F4 | 58 12.927' N | 002 54.588' W | 04.07.2017 |
| BE-F5 | 58 13.548' N | 002 54.378' W | 17.05.2017 |
| BE-F6 | 58 14.168' N | 002 54.169' W | 11.05.2017 |
| BE-F8 (OTM2) | 58 15.411' N | 002 53.750' W | 08.04.2017 |
| 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 | 05.07.2017 |
| BE-F13 | 58 18.516' N | 002 52.701' W | |
| BE-G3 | 58 12.544' N | 002 53.726' W | 28.05.2017 |
| BE-G4 | 58 13.142' N | 002 53.464' W | 17.06.2017 |
| BE-G5 | 58 13.762' N | 002 53.254' W | 10.05.2017 |
| BE-G6 | 58 14.384' N | 002 53.044' W | 06.05.2017 |
| BE-G7 (OTM1) | 58 15.004' N | 002 52.834' W | 03.04.2017 |
| BE-G8 | 58 15.625' N | 002 52.625' W | 07.07.2017 |
| 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 | 19.06.2017 |
| BE-H5 | 58 13.977' N | 002 52.130' W | 20.06.2017 |
| BE-H6 | 58 14.598' N | 002 51.920' W | 20.04.2017 |

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| Location ID | Latitude WGS84 | Longitude WGS84 | Piling Complete |
|-------------|----------------|-----------------|-----------------|
| BE-H7 | 58 15.219' N | 002 51.709' W | 08.07.2017 |
| BE-H8 | 58 15.840' N | 002 51.499' W | 06.05.2017 |
| 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 | 04.05.2017 |
| BE-J6 | 58 14.812' N | 002 50.795' W | 21.06.2017 |
| BE-J7 | 58 15.433' N | 002 50.585' W | |
| BE-J8 | 58 16.055' N | 002 50.373' W | 12.06.2017 |
| 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 | |

3. Beatrice Offshore Wind Farm Guard Vessel Deployment

| | |
|-------------------------------|---|
| Project: | Beatrice Offshore Windfarm Guard Vessel Deployment. |
| Contractor: | SHL – SFF Services Ltd. |
| Contract Purpose: | Guard Vessel for the Windfarm site. |
| Area: | BOWL construction site: within the array cable routes and foundation locations. (See Fig 1 for details) |
| Deployment Dates: | 28th June 2017 |
| Deployment Vessel (s): | Atlas FR101 |
| Equipment: | N/A |

On behalf of BOWL, Seaways Heavy Lifting has contracted the Scottish Fishermen's Federation to provide guard vessels during the piling and foundation installation campaigns. These vessels will change regularly, however apart from times of extreme weather, there will always be at least one guard

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vessel on station. The guard vessel's primary duty is security of the construction site by informing and warning non-construction vessels of the ongoing activities and associated Safety Zones.

The Guard Vessel Atlas assumed duties from midnight on the 28th of June.

| Atlas – FR101 | |
|------------------------------------|--|
| General Description and Dimensions | Guard Vessel: L:20.0m B:5.0m D: 4.5m |
| Call Sign: | MPUD3 |
| MMSI: | 235001670 |
| On Board Contact: | R Inkster |
| E-mail: | ops@sff.co.uk |
| Onshore Representative: | SFF Services Limited Office. Tel: 01224 646966 |



4. Export Cable Installation Stage 1 – Installation of Direct Cable Pipes at Portgordon

| | |
|------------------------|---|
| Project: | Export Cable Installation Stage 1 Commences May 2017. |
| Contractor: | Nexans |
| Contract Purpose: | Installation of Direct Cable Pipes at Portgordon |
| Area: | Portgordon near Buckie |
| Deployment Dates: | Approximately May – July 2017. |
| Deployment Vessel (s): | Haven Seariser 1, Forth Constructor & Skua |
| Equipment: | Diving operations, tunnelling & seabed preparation equipment. |

BOWL intends to install the export cables beneath Portgordon Beach. Pre-installed Direct Cable Pipes require to be installed from the shoreline to an offshore exit point. These pipes are installed using a micro-tunnelling machine pushed through the ground beneath the seabed. At the exit points approximately 420-450m offshore, the removal of the Tunnelling tool and excavation works associated with this operation will take place. During this period Diving & Underwater operations shall be conducted.

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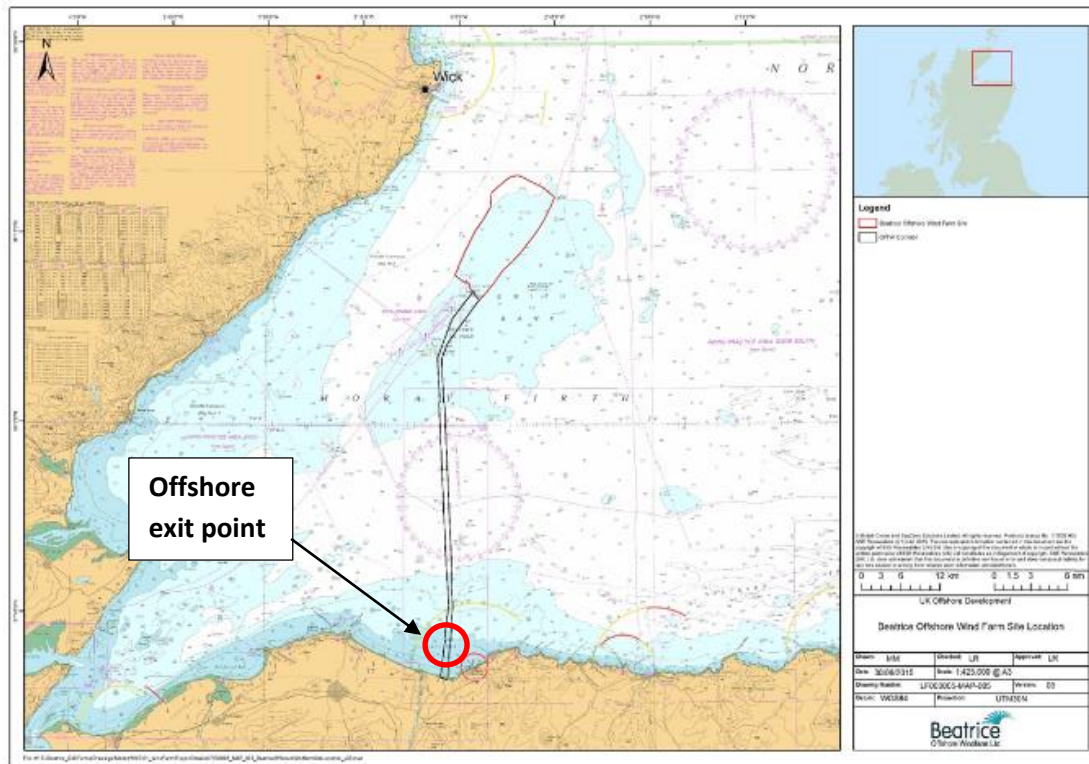


Fig 3. Offshore exit point, approximately 420-450m from the Portgordon Beach.

| Jack Up Barge Locations | Latitude WGS84 | Longitude WGS84 |
|-------------------------|----------------|-----------------|
| EC1 | 57° 40.113'N | 003° 02.471'W |
| EC2 | 57° 40.143'N | 003° 02.655'W |

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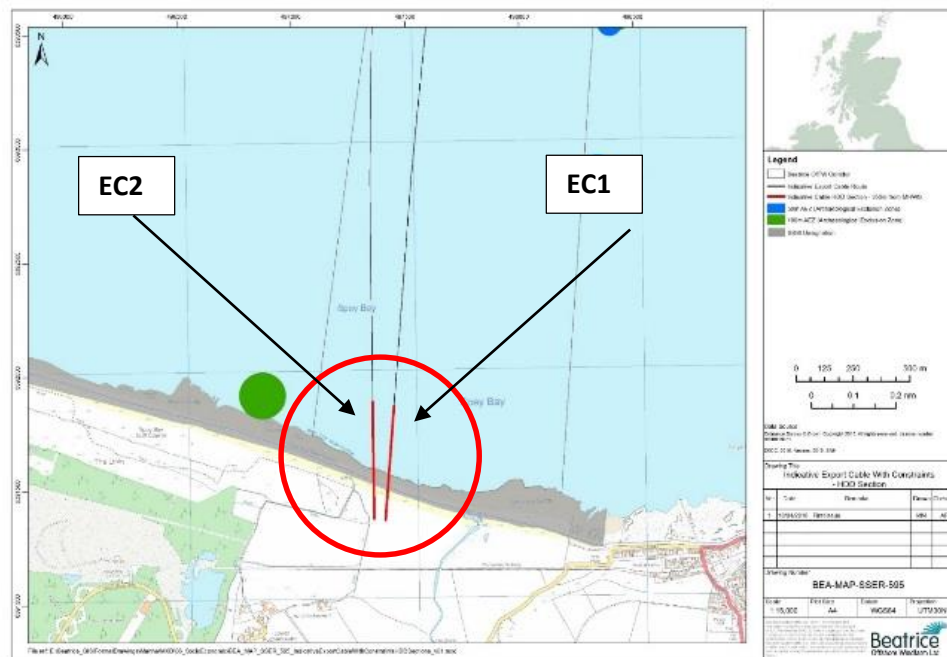
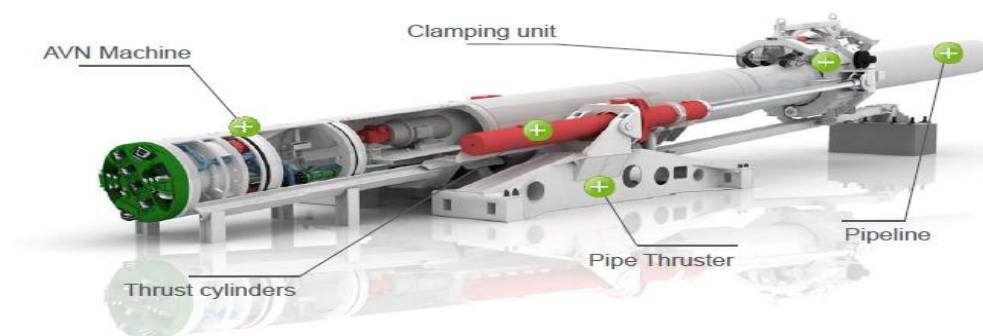


Fig 4. Work locations approximately 420-450m from the Portgordon Beach near Buckie.

Direct pipe drilling, this method installs the pipe directly as part of the drilling operation, is suitable for sea outfalls as the pipeline is simultaneously installed whilst the borehole is being drilled. The pipeline provides support reducing the risk of borehole collapse in soft sediments

This method is referred to as 'direct pipe' because in a single step, a prefabricated pipeline can be installed and the required duct excavated at the same time. Once installed, the pipeline permanently supports the ducts, thus avoiding the risk of collapse. Seabed sediments are excavated by a micro-tunnelling machine and excavated material is pumped out via the prefabricated pipeline, which is connected to the tunnelling machine. The tunnelling system is lubricated with Bentonite solution.

Fig 5. Main system components of the Direct Pipe drill method



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The micro-tunnelling machine and pipeline behind it are pushed into the ground from onshore by a pipe thruster from a launch pit. The cutting wheel at the machines head breaks down and removes the material as it is directed along the determined route beneath the seabed.

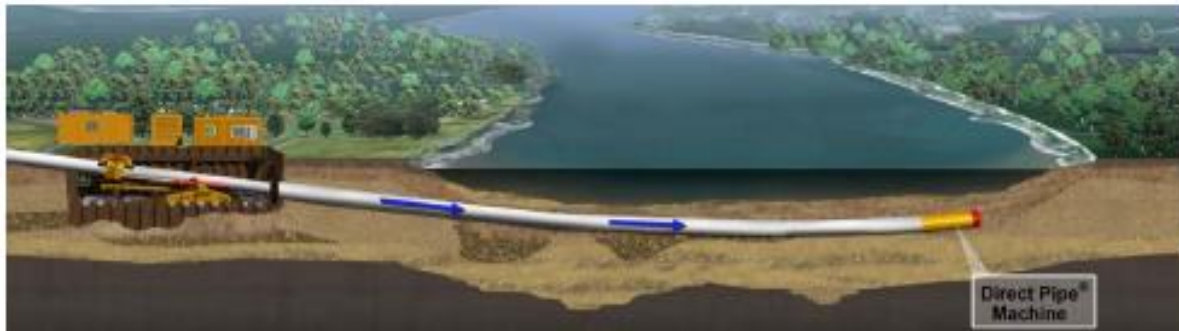


Fig 6. Micro tunnelling machine

The drill machine is disconnected once it reaches the appropriate distance offshore and is recovered by divers or crane barge once it reaches the outfall. The pipe opening is then sealed to prevent sediment entering the pipeline. If any difficulties are encountered, the pipe thruster can pull back the pipeline together with the Direct Pipe machine to begin the process again. Direct Pipe methodology offers a number of benefits over HDD for installation; allowing a shallower profile that results in fewer transmission losses and reduced installation risks.

4.1 Vessels Involved with Installation of Direct Cable Pipes at Portgordon

| Haven Seariser 1 | |
|---|--|
| General Description and Dimensions | Jack Up Barge, L:29.6 / B:17.07 / D:2.44 |
| Call Sign: | N/A |
| MMSI: | N/A |
| On Board Contact: | Kristen Branford & Paul Ridout |
| E-mail: | enquiries@r7m.co.uk |
| Onshore Representative: | Øyvind Haug BEATRICE Installation Engineering Manager Mob: +47 916 27 674 Office: +47 22 88 65 09 |



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| Forth Constructor | |
|---|--|
| General Description and Dimensions | Multicat Work Vessel.L:28.50m B:9.45m D:4.27m |
| Call Sign: | GXAD |
| MMSI: | 235004217 |
| On Board Contact: | Graham Gray |
| E-mail: | (e) marketing@briggsmarine.com |
| Onshore Representative: | Øyvind Haug BEATRICE Installation Engineering Manager Mob: +47 916 27 674 Office: +47 22 88 65 09 |
|  | |

| Skua | |
|--|--|
| General Description and Dimensions | Crew Transfer Vessel, L:10.5m B:3.51m D:1.1m |
| Call Sign: | N/A |
| MMSI: | N/A |
| On Board Contact: | Bill Ruck |
| E-mail: | bill@moraymarine.com |
| Onshore Representative: | Øyvind Haug BEATRICE Installation Engineering Manager Mob: +47 916 27 674 Office: +47 22 88 65 09 |
|  | |

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5. Export Cable Installation – Backhoe Works.

BOWL intends to install 2 offshore export cables from the offshore windfarm to land via Portgordon Beach. Pre-installed horizontal cable pipes require to be installed from the shoreline to an offshore exit point. At the exit points approximately 420-450m offshore and out along the two cable routes to around 4.5km will be trenched to a depth of 2m. Large boulders encountered along the route may also be side casted. During this period, the dredging barge Manu Pekka will be working along the route 24/7, with the BKM103 used as support vessel. The Norsemaid will also perform survey and crew transfer operations.

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 as necessary.

ALL VESSELS ARE REQUESTED to give the barge “Manu Pekka” and support vessels a wide berth and observe a safe passing distance of at least 500 metres at all times.

5.1 Vessels Associated with the Activity

The vessels that are involved with the described operation are the Barge Manu Pekka, the multicat tug BKM103 and the survey vessel the Norsemaid.

| Manu Pekka | |
|---|--|
| General Description and Dimensions | Hull Dredger L : 47.9 / B : 15 / D :3.0 |
| Call Sign: | 5BJH2 |
| MMSI: | 212701000 |
| On Board Contact: | N/A |
| E-mail: | N/A |
| Onshore Representative: | Øyvind Haug BEATRICE Installation Engineering Manager Mob: +47 916 27 674 Office: +47 22 88 65 09 |




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| BMK 103 | |
|---|--|
| General Description and Dimensions | Multicat Tug L : 26.5 / B : 11.8 / D : 3.85 |
| Call Sign: | 5BFL2 |
| MMSI: | 212492000 |
| On Board Contact: | N/A |
| E-mail: | N/A |
| Onshore Representative: | Øyvind Haug BEATRICE Installation Engineering Manager Mob: +47 916 27 674 Office: +47 22 88 65 09 |
|  | |

| Norsemaid | |
|--|--|
| General Description and Dimensions | Survey/Crew Change L : 23.5 / B : 5.1 / D : 2.9 |
| Call Sign: | VQEB2 |
| MMSI: | 235007967 |
| On Board Contact: | N/A |
| E-mail: | N/A |
| Onshore Representative: | Øyvind Haug BEATRICE Installation Engineering Manager Mob: +47 916 27 674 Office: +47 22 88 65 09 |
|  | |

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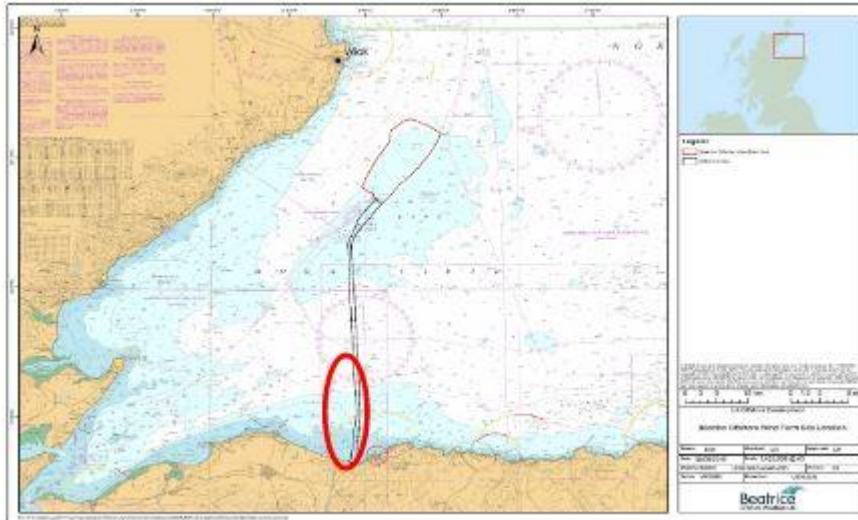
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5.2 Area of Planned Activity

Portgordon, near Buckie starting offshore approximately 420-450m continuing 4.5km offshore from Portgordon Beach



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6. Aberdeen University - Installation & Removal of Seabed Mounted Scientific Equipment

Mariners are advised that, further to notice UoA/05/2017 and in conjunction with Beatrice Offshore Windfarm Limited (BOWL), the University of Aberdeen intends to **install** scientific equipment moorings in the Moray Firth at the locations listed in table 1, below (see also chart extracts at the foot of this notice):

Table 1.

| Name | Proposed coordinates (WGS84 datum) | | Characteristics |
|------|---------------------------------------|--------------|-----------------------------------|
| 40 | 57° 48.984' N | 3° 36.382' W | Subsurface with acoustic release. |
| 41 | 57° 51.154' N | 3° 33.048' W | Subsurface with acoustic release. |
| 44 | 57° 56.416' N | 3° 21.417' W | Subsurface with acoustic release. |
| 46 | 58° 00.858' N | 3° 15.396' W | Subsurface with acoustic release. |
| 47 | 58° 00.816' N | 3° 08.539' W | Subsurface. |
| 48 | 58° 04.006' N | 3° 06.914' W | Subsurface. |
| 49 | 58° 04.449' N | 3° 00.998' W | Subsurface. |
| 54 | 58° 13.517' N | 2° 41.969' W | Subsurface. |
| 56 | 58° 18.725' N | 2° 37.063' W | Subsurface. |
| 82 | 58° 00.621' N | 3° 25.692' W | Subsurface with acoustic release. |
| 90 | 58° 01.061' N | 3° 36.584' W | Subsurface with acoustic release. |
| 98 | 57° 54.165' N | 3° 17.854' W | Subsurface with acoustic release. |
| 99 | 57° 50.856' N | 3° 24.445' W | Subsurface with acoustic release. |
| 110 | 58° 07.667' N | 2° 45.368' W | Subsurface. |
| 146 | 58° 15.231' N | 2° 53.321' W | Subsurface. |
| 149 | 58° 16.020' N | 2° 52.110' W | Subsurface with transponder. |
| 150 | 58° 16.782' N | 2° 50.982' W | Subsurface with transponder. |
| 159 | 58° 09.262' N | 2° 52.228' W | Subsurface. |
| 163 | 58° 17.960' N | 2° 44.988' W | Subsurface with transponder. |
| 165 | 58° 12.471' N | 3° 01.260' W | Subsurface. |
| 175 | 58° 18.720' N | 2° 46.860' W | Subsurface. |
| 178 | 58° 17.976' N | 2° 49.200' W | Subsurface with transponder. |
| 179 | 58° 17.976' N | 2° 50.016' W | Subsurface with transponder. |
| 180 | 58° 18.492' N | 2° 52.002' W | Subsurface with transponder. |
| 181 | 58° 19.068' N | 2° 51.264' W | Subsurface with transponder. |
| 182 | 58° 14.997' N | 2° 55.728' W | Subsurface. |
| 183 | 58° 20.210' N | 2° 50.580' W | Subsurface. |
| 184 | 58° 15.360' N | 2° 47.660' W | Subsurface with transponder. |
| 185 | 58° 11.351' N | 2° 59.448' W | Subsurface. |
| 186 | 57° 50.700' N | 3° 39.240' W | Subsurface with acoustic release. |
| 187 | 57° 56.040' N | 3° 45.720' W | Subsurface with acoustic release. |
| 188 | 57° 55.920' N | 3° 53.280' W | Subsurface with acoustic release. |
| 189 | 57° 59.400' N | 3° 48.780' W | Subsurface with acoustic release. |

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| | | | |
|-----|---------------|--------------|-----------------------------------|
| 190 | 58° 07.740' N | 3° 07.320' W | Subsurface. |
| 191 | 58° 16.530' N | 2° 46.440' W | Subsurface. |
| 192 | 58° 12.180' N | 3° 26.160' W | Subsurface with acoustic release. |
| 193 | 58° 07.200' N | 3° 34.320' W | Subsurface with acoustic release. |
| 194 | 57° 57.660' N | 3° 57.360' W | Subsurface with acoustic release. |
| 195 | 57° 54.720' N | 3° 31.740' W | Subsurface with acoustic release. |
| 196 | 58° 14.100' N | 2° 54.660' W | Subsurface. |
| 197 | 58° 12.060' N | 2° 57.540' W | Subsurface. |

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. Twenty-four of the above moorings will also be equipped with an acoustic release or transponder.

Mariners are further advised that the following moorings (table 2) will be serviced and **re-installed in their existing location** in the Moray Firth (see also chart extracts at the foot of this notice). Eight of these moorings will also be equipped with an acoustic release or transponder:

Table 2.

| Name | As laid coordinates (WGS84 datum) | | Characteristics |
|------|--------------------------------------|--------------|--|
| 1 | 57° 41.411' N | 3° 58.943' W | Subsurface |
| 2 | 57° 35.133' N | 4° 05.891' W | Surface marked (NB50 buoy, red) |
| 3 | 57° 44.083' N | 3° 19.783' W | Surface marked (dhan, 12' aluminium & RADAR reflector) |
| 4 | 57° 41.386' N | 3° 05.595' W | Surface marked (NB50 buoy, red) |
| 17 | 57° 57.759' N | 3° 31.258' W | Subsurface with acoustic release. |
| 42 | 57° 52.338' N | 3° 29.066' W | Subsurface with acoustic release. |
| 45 | 57° 57.261' N | 3° 16.063' W | Subsurface with acoustic release. |
| 89 | 57° 56.051' N | 3° 38.250' W | Subsurface with acoustic release. |
| 108 | 58° 18.995' N | 2° 59.233' W | Subsurface. |
| 160 | 58° 17.658' N | 2° 49.920' W | Subsurface with transponder. |
| 161 | 58° 13.005' N | 2° 55.956' W | Subsurface with transponder. |
| 162 | 58° 18.195' N | 2° 54.113' W | Subsurface with transponder. |
| 164 | 58° 12.831' N | 2° 51.691' W | Subsurface with transponder. |

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Mariners should note that the following existing moorings (table 3) will **remain in place** in the Moray and Cromarty Firths, as per our Notice to Mariners UoA/05/2017, and in accordance with marine licence 05594/15/0 (see also chart extracts at the foot of this notice):

Table 3.

| Name | As laid coordinates (WGS84 datum) | | Characteristics |
|------|--------------------------------------|--------------|--|
| 64 | 57° 42.521' N | 3° 30.174' W | Surface marked (dhan, 12' aluminium & RADAR reflector) |
| 65 | 57° 43.485' N | 3° 25.174' W | Surface marked (dhan, 12' aluminium & RADAR reflector) |
| 66 | 57° 43.082' N | 3° 14.977' W | Surface marked (dhan, 12' aluminium & RADAR reflector) |
| 67 | 57° 42.069' N | 3° 10.026' W | Surface marked (dhan, 12' aluminium & RADAR reflector) |

All works will be carried out by Moray First Marine Ltd., using the vessel “Coral Wind” (see below). Works will commence w/c 10th July, subject to weather and progress of BOWL piling operations.

| 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: | 235086491 |
| On Board Contact: | Bill Ruck, 07775 802963 |
| E-mail: | bill@moraymarine.com |



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

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Acoustic logger
(600 x 95mm)



Sound Recorder
(900 x 170mm)



Sound recorder
(200 x 60mm)

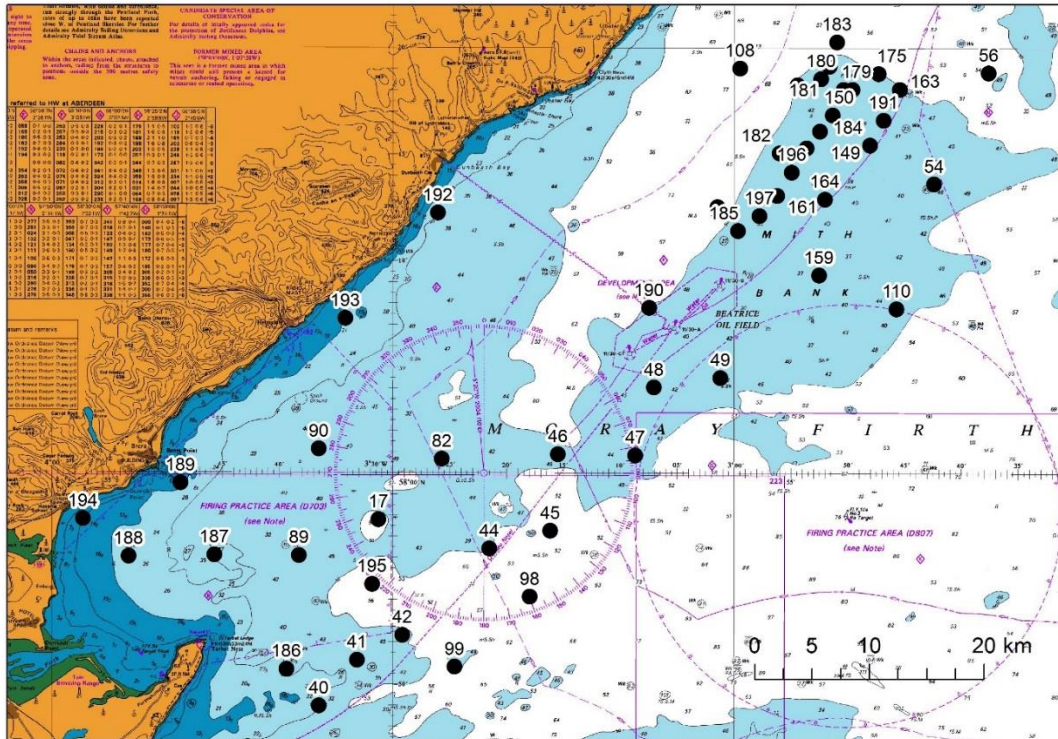
Examples of equipment which the above moorings support.

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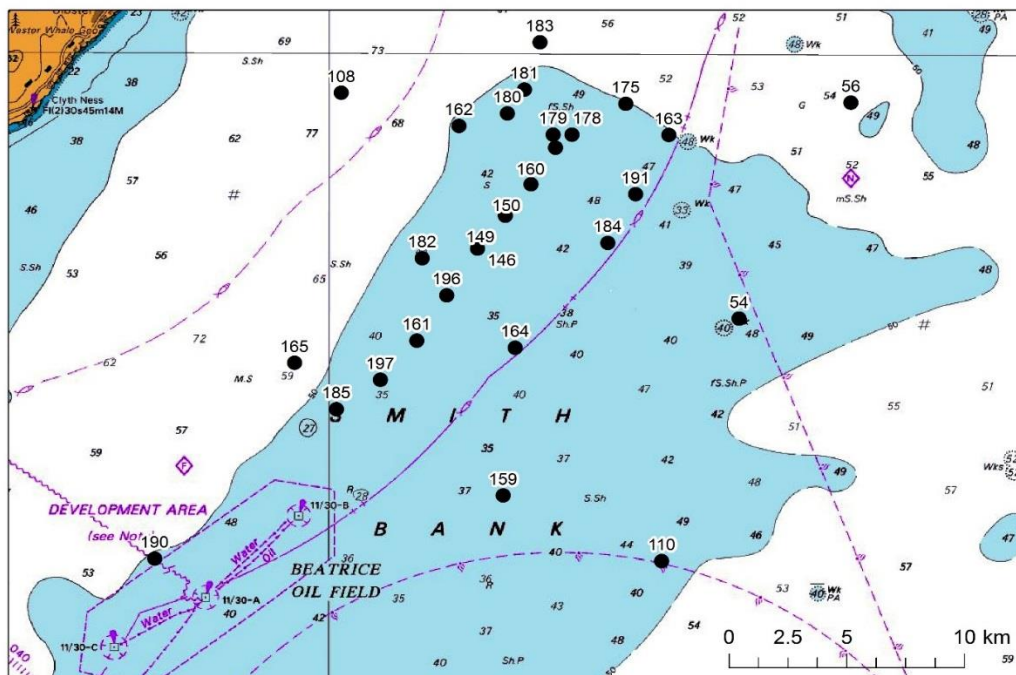
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Mooring locations – Moray Firth, excluding sites along the Moray Firth southern shore.



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

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7. 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.

1. 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.
2. 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 REMINDED to navigate with caution and keep continued watch on VHF Ch. 70 / 16 when navigating the area.

8. Dedicated Guard Vessel

Guard Vessel Atlas FR101 assumed duties from midnight on the 28th of June 2017.

Guard Vessels can be contacted on VHF Ch16 and Ch13

9. 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.

10. 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.

11. Website

The official website of Beatrice Offshore Windfarm Limited can be found at:

<https://www.beatricewind.com/>

This contains all Notices to Mariners (NtM) published by BOWL and all Weekly Notices of Operations, together with a large amount of general information about the Project.

There is also a Twitter feed at <https://twitter.com/beatricewind>.

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| Beatrice Offshore Windfarm Vessels, agents, contractors and sub-contractors | | | | | | | | Date: | 10-Jul-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 | | Bremen Fighter | Anchor Handling Tug assisting the Stanislav Yudin | Seaway Heavy Lifting (SHL) | Danny Sprangers (SHL) C/o Subsea 7 East Campus Arnhall Business Park Westhill, Aberdeenshire AB32 6FE +31 653997158 EMAIL: dsprangers@shl.nl | V20Y1 / 304742000 | 48.1 / 14.06 / 6.0 | 27.03.2017 | |
| 2 | | Stanislav Yudin | Heavy Lift Vessel | Seaway Heavy Lifting (SHL) | Danny Sprangers (SHL) C/o Subsea 7 East Campus Arnhall Business Park Westhill, Aberdeenshire AB32 6FE +31 653997158 EMAIL: dsprangers@shl.nl | 5BYM2 / 210334000 | 183.3 / 40.0 / 8.9 | 27.03.2017 | |
| 3 | | Smit Sentosa | Anchor Handling Tug assisting the Stanislav Yudin | Seaway Heavy Lifting (SHL) | Danny Sprangers (SHL) C/o Subsea 7 East Campus Arnhall Business Park Westhill, Aberdeenshire AB32 6FE +31 653997158 EMAIL: dsprangers@shl.nl | ORRX / 205698000 | 51.8 / 15.0 / 6.2 | 27.03.2017 | |
| 4 | | Rix Lynx | Crew Transfer Vessel / CTV | Seaway Heavy Lifting (SHL) | Danny Sprangers (SHL) C/o Subsea 7 East Campus Arnhall Business Park Westhill, Aberdeenshire AB32 6FE +31 653997158 EMAIL: dsprangers@shl.nl | 2JGQ8 / 235115745 | 26 / 7.0 / 2.0 | 27.03.2017 | |
| 5 | | Union Boxer | Barge Tow Vessel | Seaway Heavy Lifting (SHL) | Danny Sprangers (SHL) C/o Subsea 7 East Campus Prospect Road Arnhall Business Park Westhill, Aberdeenshire AB32 6FE +31 653997158 EMAIL: dsprangers@shl.nl | ORPS / 205575000 | 40.8/ 21.5/ 6.3 | 01.04.2017 | |
| 6 | | Union Princess | Barge Tow Vessel | Seaway Heavy Lifting (SHL) | Danny Sprangers (SHL) C/o Subsea 7 East Campus Arnhall Business Park Westhill, Aberdeenshire AB32 6FE +31 653997158 EMAIL: dsprangers@shl.nl | ORQU/205642000 | 67 / 16/ 6.2 | 16.04. 2017 | |
| 7 | | Smit Seraya | Barge Tow Vessel | Seaway Heavy Lifting (SHL) | Danny Sprangers (SHL) C/o Subsea 7 East Campus Arnhall Business Park Westhill, Aberdeenshire AB32 6FE +31 653997158 EMAIL: dsprangers@shl.nl | 9V9845/ 566804000/ | 51.8 x 16 x 6 | 13.05.2017 | |
| 8 | | Atlas FR101 | Guard Vessel | Seaway Heavy Lifting (SHL) | Danny Sprangers (SHL) C/o Subsea 7 East Campus Arnhall Business Park Westhill, Aberdeenshire AB32 6FE +31 653997158 EMAIL: dsprangers@shl.nl | MPUD3 | 20.0 X 5.0 X 4.5 | 28.06.2017 | |

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Date: 10-Jul-17

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

Reference to Marine Licence
Conditions 2.5, 2.6 and 3.1.2

Vessel Data Matrix for Buckie



| No Ref | Vessel Picture | Vessel Name / Flag | Type / Function | Vessel Contact / Master's name | Company Name / Contact / contact details | Call sign / MMSI / IMO | LOA (m) Beam (m) Draft (m) | Date on Site |
|--------|----------------|--------------------|-----------------------------|---|---|------------------------|------------------------------|-----------------|
| 1 | | Haven Seariser 1 | Jack Up mobile barge. | Kristen branford & Paul Ridout | Red7marine+44(0) 1255 886 710 www.red7marine.co.uk enquiries@r7m.co.uk | N/A | 29.6 / 17.07 / 2.44 | 18th April 2017 |
| 2 | | M/V Skua | Crew Transfer Vessel / CTV. | Bill Ruck 07775802963 bill@moraymarine.com | Moray First Marine Ltd Wester Oldtown Roseisle Elgin Moray IV30 5YD | N/A | 10.5 / 3.51 / 1.1 | 18th April 2017 |
| 3 | | Forth Constructor | Service Vessel | Graham Gray | Briggs Marine & Environmental Services Head Office Seaforth House Seaforth Place Burntisland Fife KY3 9AX | GKAD / 235004217 | L:28.50m B:9.45m D:4.27m | 18th April 2017 |
| 4 | | Norsemaird | Survey/Crew Transfer Vessel | Hilde Schoneville Project Manager Energy Division 51605202 hilde.schoneville@boskalis.com Offshore M: +31 (0)6 | Hilde Schoneville Project Manager Energy Division 51605202 hilde.schoneville@boskalis.com Offshore M: +31 (0)6 | VQEB2, 235007967 | L: 23.2/ B: 5.1/ D: 2.9. | 1st June 2017 |
| 5 | | Manu Pekka | Hull Dredger | Hilde Schoneville Project Manager Energy Division 51605202 hilde.schoneville@boskalis.com Offshore M: +31 (0)6 | Hilde Schoneville Project Manager Energy Division 51605202 hilde.schoneville@boskalis.com Offshore M: +31 (0)6 | 5BJH2, 212701000 | L:47.9/ B:15.0/ D: 3.0. | 1st June 2017 |
| 6 | | BKM 103 | Multicat Tug | Hilde Schoneville Project Manager Energy Division 51605202 hilde.schoneville@boskalis.com Offshore M: +31 (0)6 | Hilde Schoneville Project Manager Energy Division 51605202 hilde.schoneville@boskalis.com Offshore M: +31 (0)6 | 5BFL2, 212492000 | L: 26.5/ B: 11.8/ D: 3.85 | 1st June 2017 |