

Notice to Activities Associated with the Development of Beatrice Offshore Wind Farm

Date of Issue	24 th October 2019	Notice Number	LF000005-NTM058-Rev01
---------------	-------------------------------	---------------	-----------------------

Please promulgate the following as a Notice to Mariners:

Beatrice Offshore Windfarm - Completion of Works

In accordance with the BOWL Wind Farm Marine Licence (WF ML) condition 3.2.3.2 (c): Navigational Safety - Completion of the Works and BOWL Offshore Transmission Works Marine Licence (OFTW ML) condition 3.2.4.5 (c): Navigational Safety – Completion of the Works.

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) 3302 020329
Emergency Contact (24/7)	+44 (0) 7342 028207
Email for Marine Coordinator	MC.Bowl@sse.com
Address	BOWL Marine Coordination Centre Grey Coast Building Harbour Quay Wick Caithness KW1 5EN

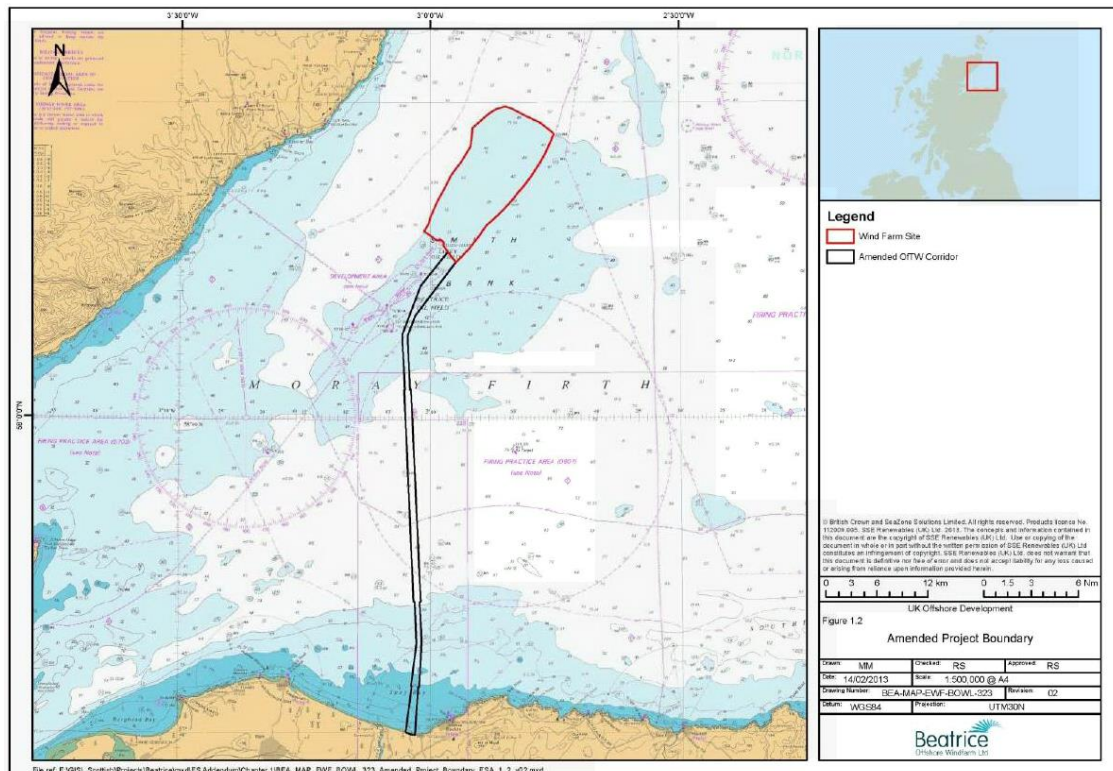


Fig 1. Location of Beatrice OWF and export cable route

2. Completion of Works

2.1 Wind Farm (WF)

The final wind turbine generator (WTG), BE-M10 was installed 14th May 2019. This is the date of completion of the wind farm Works as defined by the WF ML condition 3.2.3.2 paragraph (c). Final commissioning of the wind farm was achieved 30th May 2019, when all WTGs forming the Development supplied electricity on a commercial basis to the National Grid.

2.2 Offshore Transmission Works (OFTW)

For the Offshore Transmission Works section completion certificates are issued to the contractor on the basis that Works completion conditions as defined in the contract, are satisfied for each circuit to allow them to be put into service. The final section 2 completion certificate was issued 20th July 2018. This is the date of completion of the Offshore Transmission Works as defined by the OfTW ML condition 3.2.4.5 paragraph (c). Final testing and commissioning of the Offshore Transmission Works were then achieved 2nd April 2019. This has been formally approved by National Grid Electricity System Operator Ltd.

Please be aware there are still some minor foundation completion works on-going. However overall care, custody and control of the site has been handed over to the BOWL Operations and Maintenance Team.

3. Removal of Boundary Buoys

Statutory Sanction for the removal of the BOWL Construction Site Boundary Buoys has been approved by the Northern Lighthouse Board (NLB). The Cardinal marks and Special marks will therefore be withdrawn from the site boundary.

3.1 Current Aids to Navigation (AtoN)

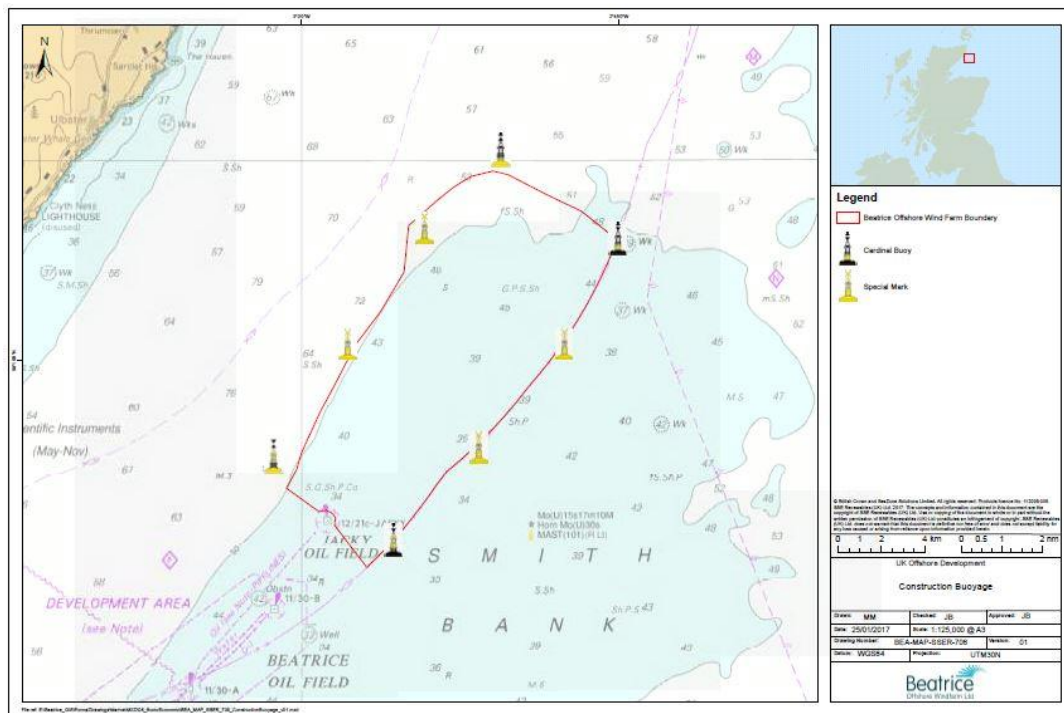


Fig2 Location of current boundary buoys

LF000005-NTM-058 Rev01 Notice to Mariners_ BOWL – Completion of Works

NOTICE TO MARINERS

Table 1 BOWL boundary buoys

Name	Provisional Coordinates	Characteristics
Beatrice OWF, Special Mark No.1	58° 12.77'N 002° 51.59'W	Yellow Special Mark 'X', Yellow Pillar, FI Y 5s Light
Beatrice OWF, Special Mark No.2	58° 15.35'N 002° 47.64'W	Yellow Special Mark 'X', Yellow Pillar, FI Y 5s Light
Beatrice OWF, Special Mark No.3	58° 18.20'N 002° 54.24'W	Yellow Special Mark 'X', Yellow Pillar, FI Y 5s Light
Beatrice OWF, Special Mark No.4	58° 15.24'N 002° 57.80'W	Yellow Special Mark 'X', Yellow Pillar, FI Y 5s Light
Beatrice OWF, East Cardinal Mark	58° 17.95'N 002° 45.00'W	East Cardinal shaped topmark, VQ(3) 5s light and AIS
Beatrice OWF, South Cardinal Mark	58° 10.43'N 002° 55.81'W	South Cardinal shaped topmark, VQ(6) +LFI 10s light and AIS
Beatrice OWF, West Cardinal Mark	58° 12.55'N 003° 01.30'W	West Cardinal shaped topmark, VQ(9) 10s light and AIS
Beatrice OWF, North Cardinal Mark	58° 20.20'N 002° 50.59'W	North Cardinal shaped topmark, QW light and AIS

3.1.1 On Behalf of BOWL, Seaway7 will remove the current Cardinal and Special marks described in table 1 above .The vessel used to de-commission the buoyage will be the multicat Green Isle.

Green Isle	
General Description and Dimensions:	Workboat, UK MCA Cat.1, 150nm from safe haven LOA 27.5m, Beam 11.5m, Draft 2.7
IMO Number: / Call Sign:	9707962 / 2IAV3
MMSI:	235108103
E-mail:	isle@greenmarineuk.com
Onshore Representative:	Vincent van Velzen Operations Engineer – Renewables & Heavy Lifting Mobile +31 6 3040 6174 email vincent.vanvelzen@subsea7.com



LF000005-NTM-058 Rev01Notice to Mariners_ BOWL – Completion of Works

4. Marine Navigation Lighting and Marking during Operational Phase

4.1 The details of the marking and lighting in the operational phase of the Development have been agreed with NLB in principle and follow the relevant requirements of:

- International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Recommendations 0-139 (The Marking of Man-Made Offshore Structures, Edition 2) (IALA, 2013).
- Department For Environment and Climate Change (DECC) Standard Marking Schedule for Offshore Installations (DECC, 2011).
- Maritime and Coastguard Agency (MCA), Marine Guidance Notice (MGN) 371, Offshore Renewable Energy Installations (OREIs) - Guidance on United Kingdom (UK) Navigational Practice, Safety and Emergency Response Issue (MCA, 2008).

Table 2 details the specification required for navigational lighting and sound signals to meet IALA and NLB requirements. Lighting will be provided on Significant Peripheral Structures (SPSs), i.e. those at the corners of the Wind Farm, and on selected Intermediate Peripheral Structures (IPSs).

Table 2 Marine navigation lights and sound signals specification during operation

Structure/Type	Specification
Significant Peripheral Structures (SPS)	<ul style="list-style-type: none"> • Located on a corner or other significant point. • Each SPS has 360° visibility, with flashing IALA special mark characteristics (yellow 5 second flash – FL.Y.5s) and with a range of not less than 5 nm. • IALA Category 1 Availability – 99.8%. • All SPS lights are synchronised. • Lights located approx. 22m above Highest Astronomical Tide (HAT).
Intermediate Peripheral Structure (IPS)	<ul style="list-style-type: none"> • Intermediate structures are those other than a SPS on the periphery. • Each IPS has 360° visibility with a flashing yellow light different to the SPS (2.5 second – FL.Y.2.5s) and at a range of not less than 2 nm. • IALA Category 1 Availability – 99.8% • All IPS lights are synchronised. • Lights located approx. 22m above Highest Astronomical Tide (HAT).
Sound Signals	<ul style="list-style-type: none"> • Sound signals Morse U in rhythmic blasts every 30 seconds. • The minimum duration of each blast 0.75 seconds. • The range not less than 2 nm. • Sound signals are remotely operated to turn on when visibility drops below 2 nm or less. • 360° audibility • IALA Category 3 Availability - 97.0%. • fitted with a functionality test. • located approx. 22m above Highest Astronomical Tide (HAT).

NOTICE TO MARINERS

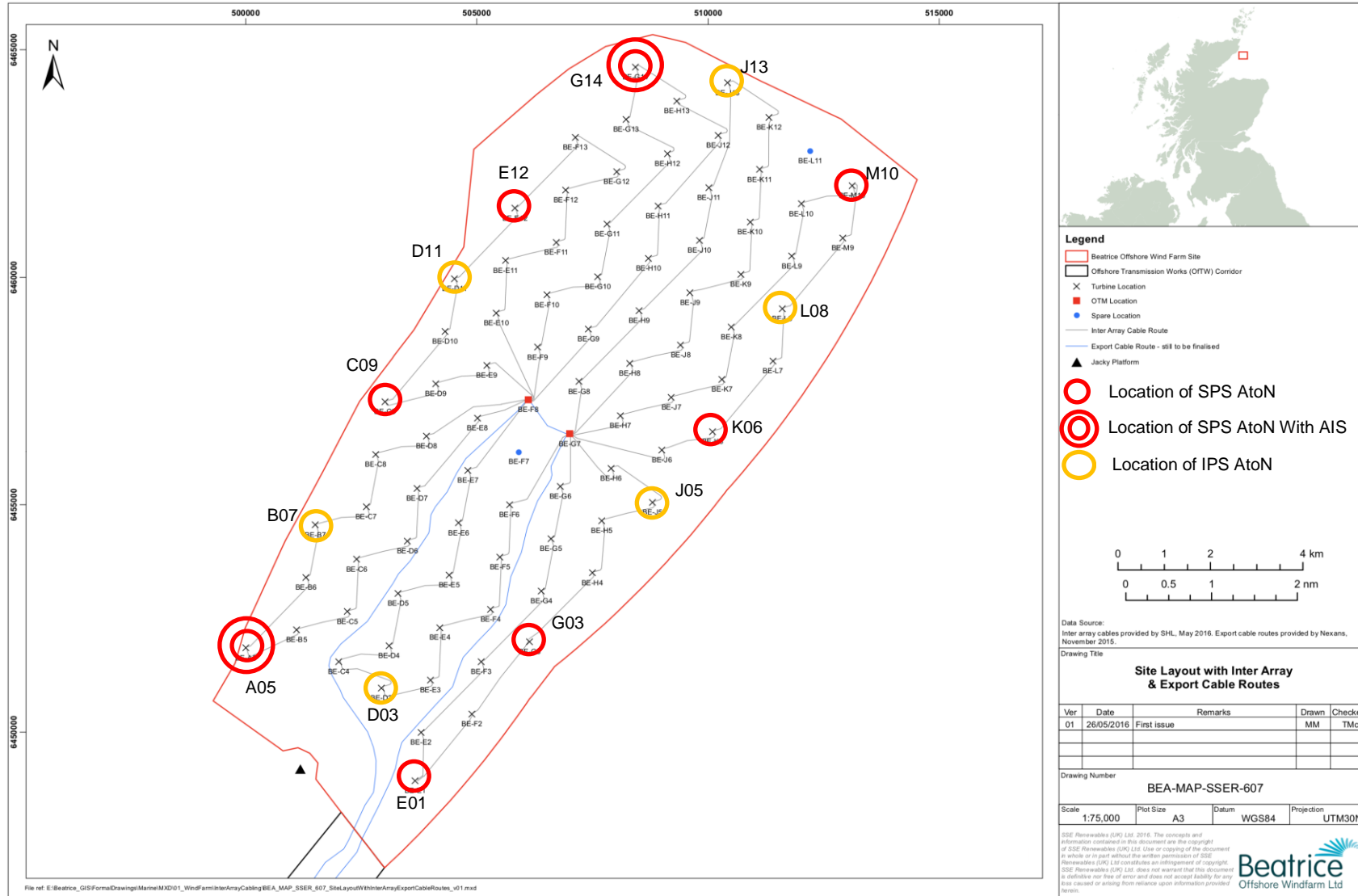


Fig 3 Marine Navigation Lighting and Marking during Operational Phase
LF000005-NTM-058 Rev01Notice to Mariners_ BOWL – Completion of Works

Table 3 Locations and description of WTG mounted AtoN

Location	Latitude		Description
E01	58° 10.899' N	002° 56.257' W	SPS + SOUND
D03	58° 11.994' N	002° 57.002' W	IPS
A05	58° 12.471' N	002° 59.996' W	SPS + SOUND + AIS MMSI 992356071
B07	58° 13.929' N	002° 58.456' W	IPS
C09	58° 15.386' N	002° 56.915' W	SPS + SOUND
D11	58° 16.844' N	002° 55.353' W	IPS
E12	58° 17.680' N	002° 54.037' W	SPS
G14	58° 19.351' N	002° 51.362' W	SPS + SOUND + AIS MMSI 992356070
J13	58° 19.159' N	002° 49.319' W	IPS
M10	58° 17.938' N	002° 46.571' W	SPS + SOUND
L08	58° 16.482' N	002° 48.122' W	IPS
K06	58° 15.027' N	002° 49.669' W	SPS + SOUND
J05	58° 14.192' N	002° 51.005' W	IPS
G03	58° 12.565' N	002° 53.765' W	SPS

5. General Safety Advice

All vessels engaged in the construction 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.

Use of Safety Zones within the Beatrice Offshore Windfarm Area:

The Secretary of State for Business, Energy and Industrial Strategy (BEIS) has approved the use of safety zones under the Energy Act 2004 for the installation and maintenance of wind turbines and offshore transformer module foundations/substructures within the Beatrice Offshore Windfarm. The approval was granted on the 17th March 2017.

The Secretary of State has declared Safety Zones under the following terms: During Construction and Operation & Maintenance phases.

- 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 / maintenance vessels.
- It is noted that the 500 metre safety zones will roll with the installation activity with no more than two construction vessels working at any one time.
- Positions of foundations installed will be promulgated within the Weekly Notice of Operations. Only vessels associated with the Beatrice Offshore Wind Farm site may enter statutory Safety Zones with prior permission.

NOTICE TO MARINERS



The Marine Coordination Centre will be responsible for monitoring and policing the Safety Zones; and can be contacted directly for advice.

Further information on the application of Safety Zones can be obtained from the Marine Coordinator. Users are advised to keep clear of construction activities, including Safety Zones, within the Beatrice Offshore Windfarm construction area in line with Marine Guidance Note 372.

ALL VESSELS ARE REQUESTED to give all construction, maintenance 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.

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:

Jen Hilton-Miller Tel + 44 (0)1379 872144 Mobile +44 (0)7519 106002 jen.miller@brownmay.com

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.

A copy of this notice can also 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>