

NOTICE TO MARINERS

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

Date of Issue	7 th December 2018	Notice Number	LF000005-NTM-053
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Please promulgate the following as a Notice to Mariners:

Beatrice Offshore Windfarm Safety Zone Monitoring

Beatrice Offshore Wind Farm Ltd (BOWL) are currently constructing the Beatrice Offshore Wind Farm within the Moray Firth. At the time of this Notice, all piles, jackets, offshore transformer modules (OTMs), and subsea cables have been successfully installed (including cable burial/protection). Installation of the turbines onto the completed jackets is ongoing. Further details on the current site status are provided in Section 2.

To date, a dedicated guard vessel has been utilised during all key construction activities. However, given that the most vulnerable operations are now complete, guard duties are now re-assigned to other on-site vessels and the Marine Coordination Centre (MCC), with the dedicated guard vessel being demobilised. This notice summarises BOWL's mitigation measures that are already in place to both monitor safety zones and manage the risk. Noting the use of safety zones, the notice summarises the additional procedure that BOWL has in place to ensure that any active safety zone will remain suitably monitored and policed.

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	Unit 1, Harbour Office Wick, Caithness KW1 5HA

2. Area of Planned Activity and Site Overview

The Project consists of 84 turbines (39 of which are fully constructed as of 6th Dec 2018), and two OTMs, as shown in Fig 1. This figure includes the buoyage currently in place to mark the construction works, the positions and specifications of which were agreed with the Northern Lighthouse Board (NLB) prior to commencement of construction.

For reference, photographs of a completed jacket prior to and post turbine installation are shown in Fig 2.

Noting the work already completed (see Fig 1.), the following activities associated with the construction of the Project are still required to be undertaken prior to final commissioning:

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- Installation of turbines on 45 jackets (noting that this has already been completed for 39 of the 84 structures as of the 6th Dec 2018);
- Personnel transfers via Crew Transfer Vessel (CTV); and Transfer of small cargo to the *Pacific Orca* (the turbine installation vessel) and the *Island Crown* (providing offshore support to the *Pacific Orca*).

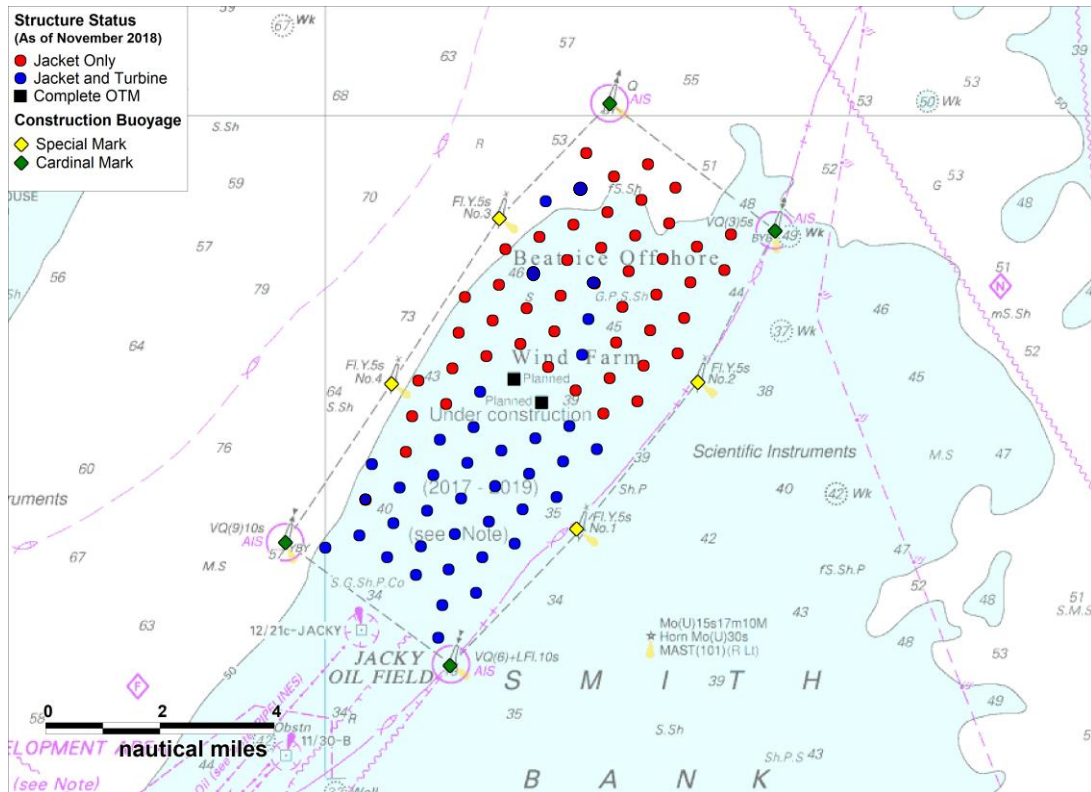


Fig.1 Site Overview (as of December 2018)



Fig 2. Foundation Jacket Pre and Post Installation of Turbine

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3. Activity Description

3.1 Marine Coordination Centre

BOWL has located its Marine Coordination Centre in Wick, as shown in Fig 3. The MCC is manned 24 hours during the construction phase, and this includes monitoring of vessel movements in the vicinity of and within the site via Automatic Identification System (AIS) and RADAR.

Radar scanners are fitted to both OTMs, which, in addition to the AIS, are integrated into the Vessel Traffic Monitoring System (VTMS). The VTMS continuously records all data input (including the AIS and radar), and stores it ensuring a permanent record is available.

The radar scanners are fitted via protruding arms to the southeast corner of the southernmost OTM (OTM1) and the northeast corner of the northernmost OTM (OTM2). There is therefore a blind sector directly to the west of the OTMs, as indicated in Fig 3. Minimum detection range of the radars is estimated at 5nm as a worst case. This 5nm range is shown relative to the site and the blind sector (shown up to the 5nm buffer) in Fig 3. With the exception of the blind sector, the radars in combination provide coverage of the entire site.

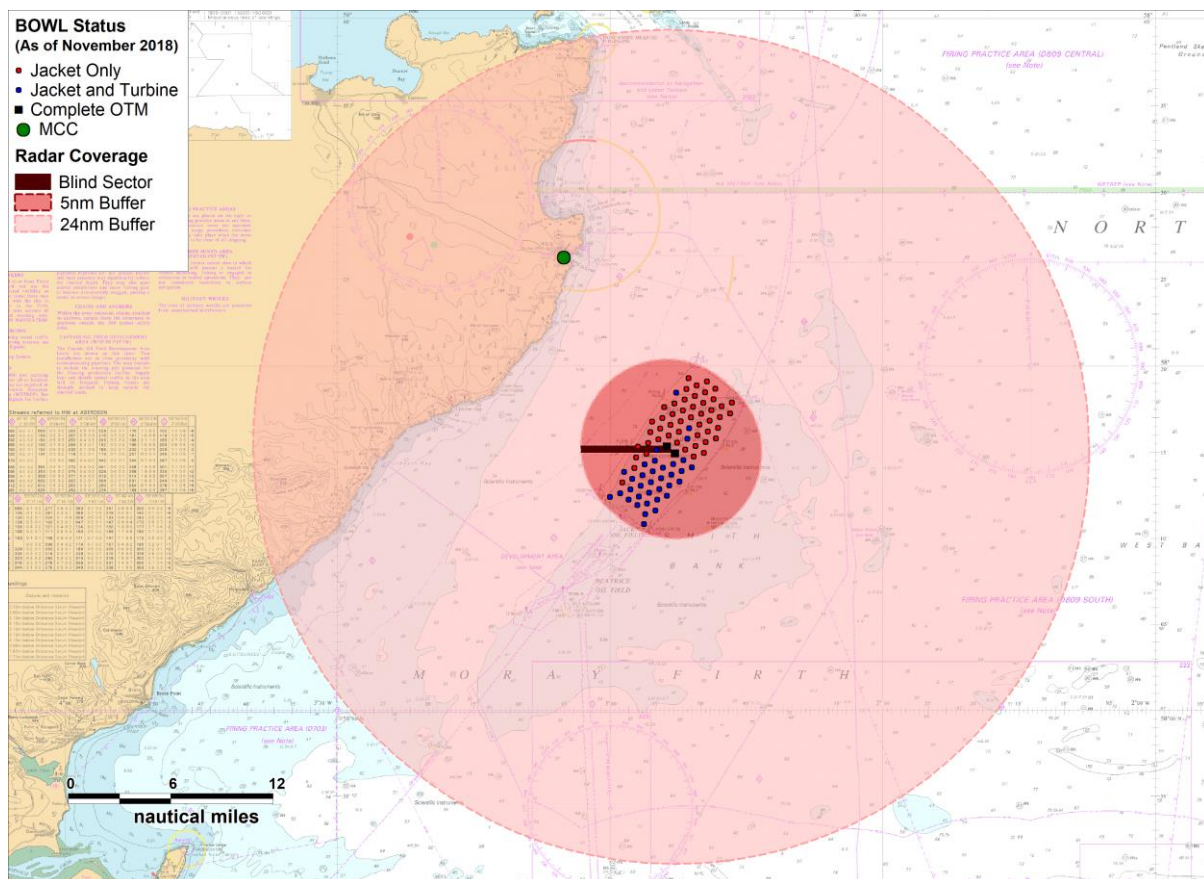


Fig 3. RADAR Coverage

In order to continue to manage the risk to traffic in the area (both to vessels associated with BOWL and third party vessels) during the activities listed above, the following mitigation measures are in place:

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- Marine coordination undertaken in Wick from the established MCC, including 24-hour site monitoring via AIS and radar (both OTMs are fitted with radars site as per Fig 3);
- 500m safety zones around any structure where active construction work is ongoing (as denoted by the presence of a construction vessel);
- 50m safety zones around any finished structure up until the point of commissioning;
- All jackets have appropriate temporary or permanent lighting in operation;
- All jackets (both pre and post turbine installation) are marked with yellow paint as required;
- The agreed cardinal marks and special marks remain in place (see Fig 1), and will continue to be in place until the NLB are satisfied that final operational lighting and marking has been commissioned;
- The cardinal marks (see Fig 1.) are broadcasting via AIS;
- Continued compliance with the BOWL Navigational Safety Plan
- The wind farm is marked on the appropriately scaled Admiralty Chart;
- Weekly notices of operations and notices to mariners will continue to be issued, and notices will be submitted via Kingfisher bulletins where appropriate.

4. 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 Construction 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 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

- 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.

- 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. Vessels are advised that anchors associated with the construction vessels may extend outside of the 500 metre safety zone.

- A 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.

- Positions of foundations installed will be promulgated within the Weekly Notice of Operations.

Only vessels associated with the Beatrice Offshore Wind Farm construction may enter statutory Safety Zones with prior permission.

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

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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 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.

5. 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 Miller Tel: +44 (0)1379 872144 Mobile: +44 (0)7519 106002 or email: jen.miller@brownmay.com

6. 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/>