

NOTICE TO MARINERS

Issue date: 27/05/2019

1. Construction works Description– Horizontal Directional Drilling (HDD)

Please be advised that Moray Offshore Windfarm (East) Limited (Moray East) will commence HDD construction works scheduled to commence 11th June 2019. There will be a total of 3 phases during 2019 with the second and third phase planned for 3rd of August and 2nd of October.

Anchors will be deployed in readiness for the 1st phase of HDPE duct pipe installation utilising the vessel Voe Jarl and will remain in place until phase 3 is complete. There will be three main ACTIVITIES as part of each phase of these works at the HDD location: HDPE duct pipe tow to HDD location, cable duct pull in and post pull in burial works on the sea bed. Each complete phase should take circa 22 days to complete. The vessel details for each phase are provided below, as well as the overall programme for Phase 1.

2. Anchor installations Inverboyndie Bay

Figure 1 below shows the anchor locations at the HDD location near Inverboyndie Bay and Table 1 provides the coordinates of the relevant anchor positions.

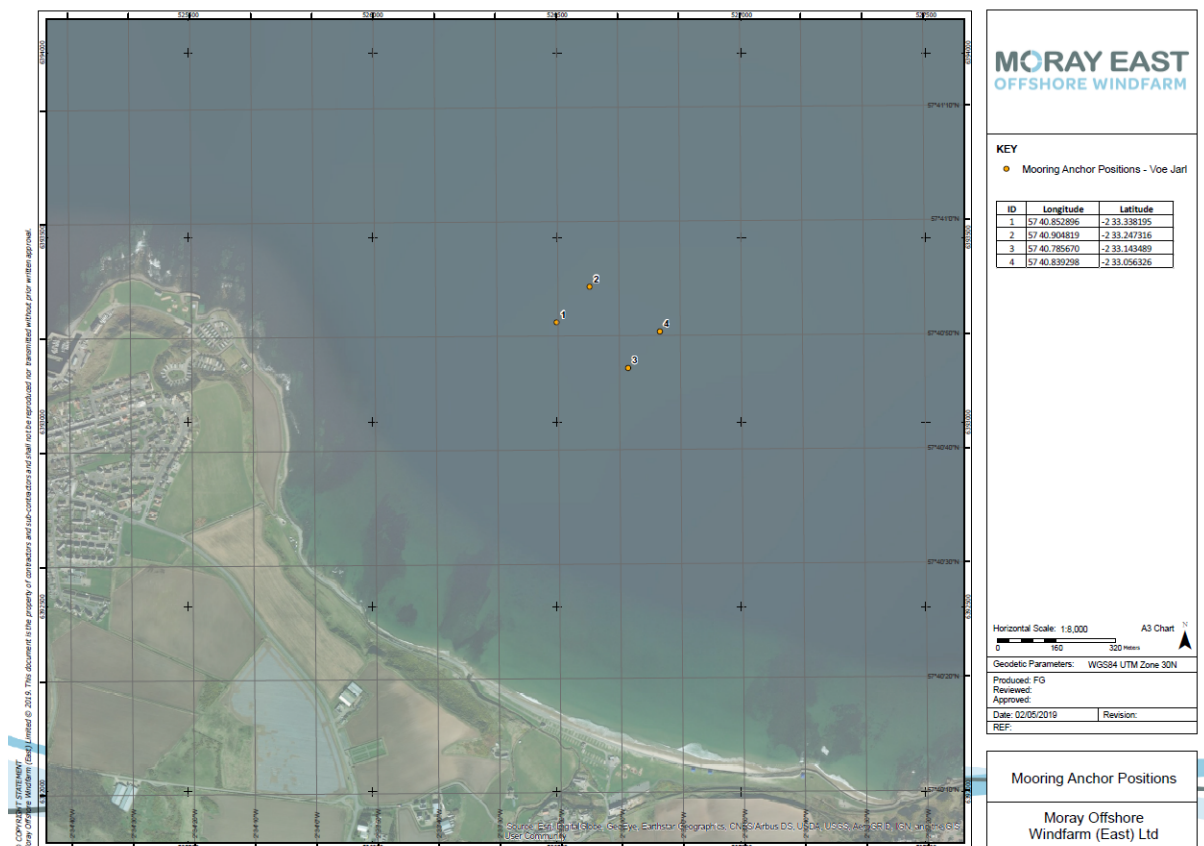


Figure 1 - Anchor locations shown on satellite map.

Table 1 - Anchor positions Lat/Long

ID	Latitude	Longitude
1	57° 40.85 N	-2° 33.33 W
2	57° 40.90 N	-2° 33.24 W
3	57° 40.78 N	-2° 33.14 W
4	57° 40.83 N	-2° 33.05 W

3. Main working vessel anchor installation and duct pull in – Multicat and DSV — Voe Jarl

Voe Jarl:	
General Description and Dimensions:	Multicat Anchoring and Dive Vessel
Call Sign:	MSBB3
MMSI:	210779000
On Board Contact:	Master 07502297888
Offshore Manager / Party Chief:	Vessel Master
E-mail:	voejarl@delta-marine.scot
Onshore Project Representative:	Gareth Ellis Gareth.ellis@morayeast.com



4. ACTIVITY 1 - Transit route for HDPE pipe tow Cromarty Firth to Inverboyndie Bay

The HDPE pipes will be towed individually to the HDD area at Inverboyndie Bay following the transit route shown in Figure 2 below. The route coordinates are provided in Table 2. The vessels engaged in the towing of the pipes are identified below.

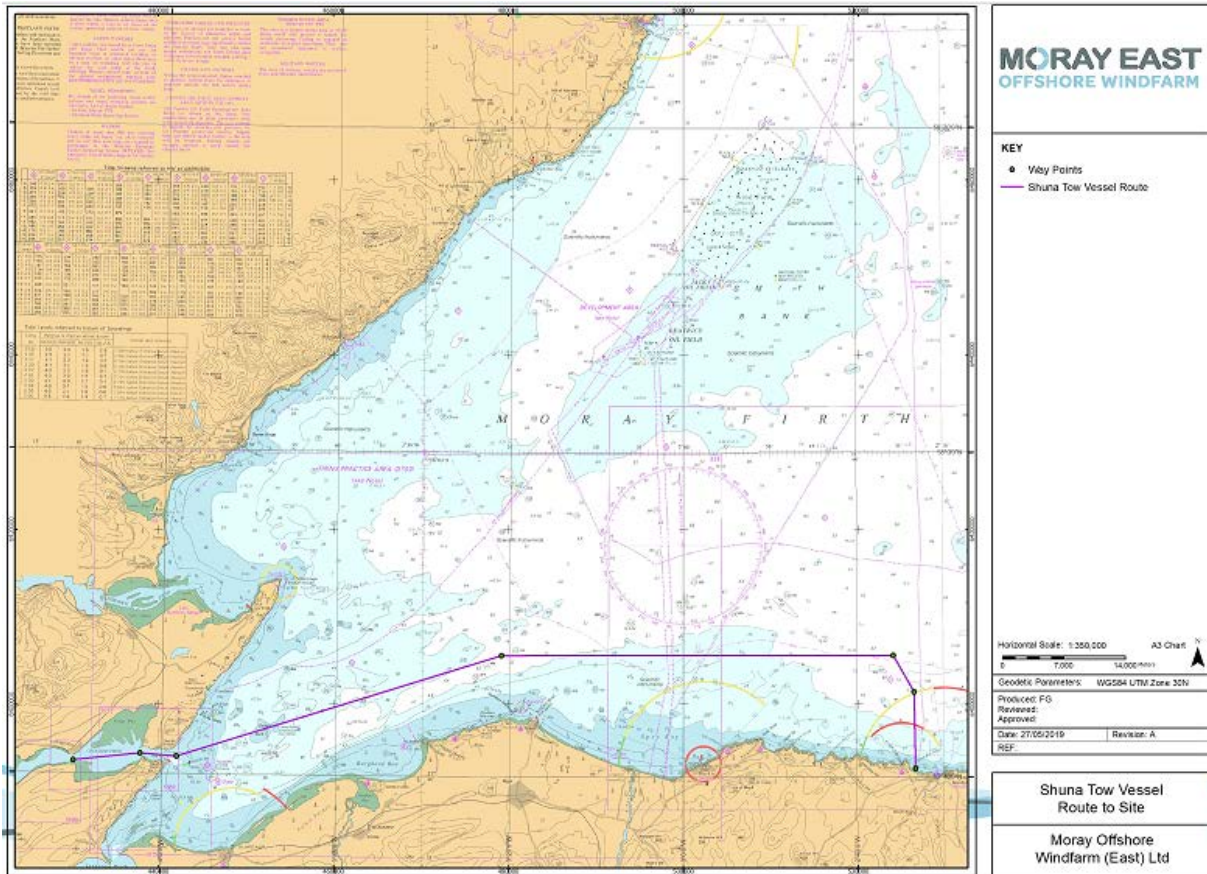


Figure 2 - Transit route/waypoints for the planned tow

Table 2 – Transit route waypoints

Way Point	Lat.	Long.	Dist.to next	Tot	Remarks
1	57° 40'.81" N	004° 10'.16" W	4.24NM	00.00 NM	Wet stow location
2	57° 41'.28" N	004° 02'.48" W	2.26 NM	04.24 NM	
3	57° 41'.11" N	003° 58'.27" W	20.77 NM	06.50 NM	
4	57° 47'.50" N	003° 20'.95" W	21.03 NM	27.27 NM	
5	57° 47.50" N	002° 35'.80' W	24.14NM	48.80 NM	
6	57° 45.25" N	002° 33'.41" W	04.77NM	72.54NM	
7	57° 40.53" N	002° 33'.28" W		77.31NM	Boyndie Bay

Shuna	
General Description and Dimensions:	Towing vessel
Call Sign:	VQBP3
MMSI:	235007528
On Board Contact:	Ian Beaton 07713064672
Offshore Manager / Party Chief:	Vessel Master
E-mail:	admin@seafastltd.co.uk
Onshore Representative:	Gareth Ellis Gareth.ellis@morayeast.com



Rhona	
General Description and Dimensions:	Tail end vessel
Call Sign:	VQBP3
MMSI:	235007528
On Board Contact:	Ian Beaton 07713064672
Offshore Manager / Party Chief:	Vessel Master
E-mail:	admin@seafastltd.co.uk
Onshore Representative:	Gareth Ellis Gareth.ellis@morayeast.com



5. ACTIVITY 2 – HDD duct pull in works [RESTRICTED AREA 1]

Once the HDPE pipes are on location they will be connected up to the HDD drill string via a pulling head and using divers from the Voe Jarl. Then pull back through the punchout hole will commence, drawing the ducts back to landfall as shown in Figure 4 below.

A restricted area as describe in Figure 3 and the coordinates in table 3 will be required for the operation lasting 72 hours. (Weather and operations dependent).

MORAY EAST OFFSHORE WINDFARM

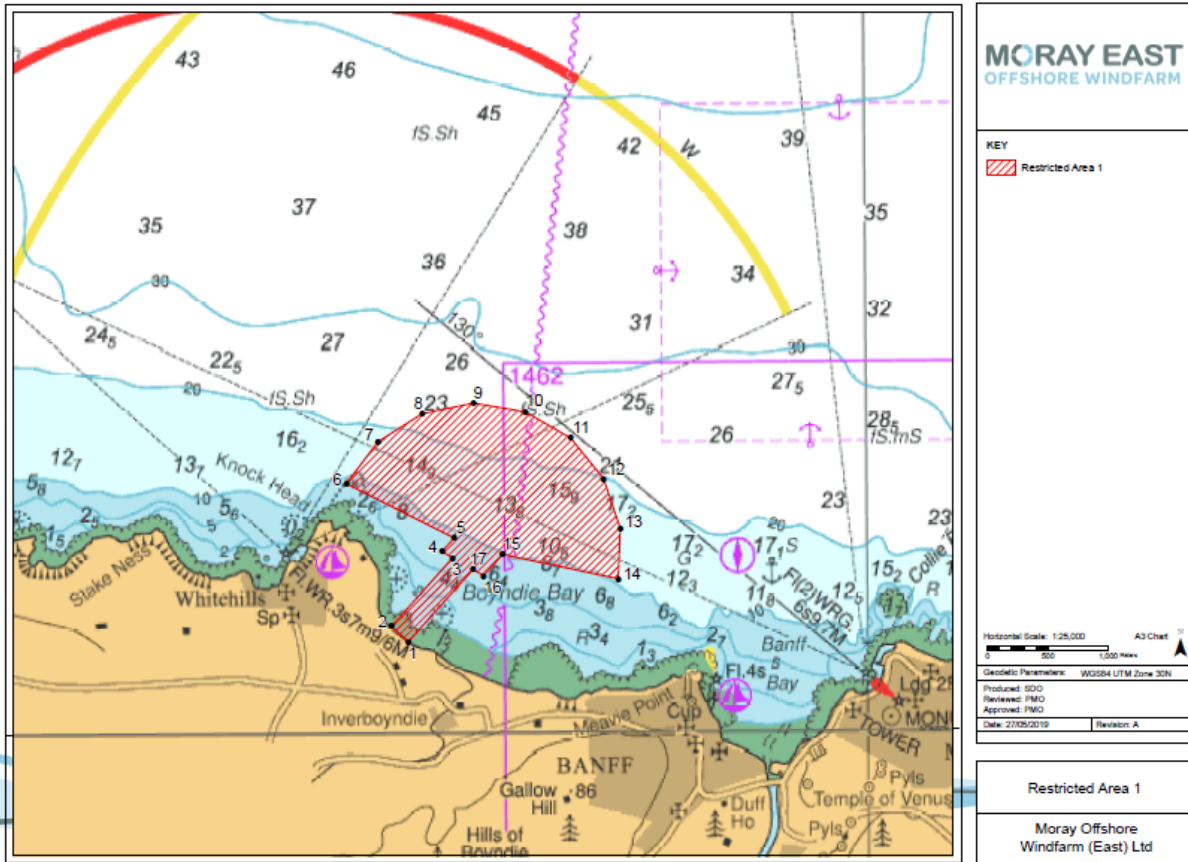


Figure 3 – Restricted area 1 for use during duct pull in

Table 3 – Restricted area 1 coordinates *duct pull in only*

Location	WGS84	
	Latitude	Longitude
1	57° 40.405'N	2° 33.820'W
2	57° 40.474'N	2° 33.960'W
3	57° 40.778'N	2° 33.448'W
4	57° 40.806'N	2° 33.536'W
5	57° 40.866'N	2° 33.434'W
6	57° 41.111'N	2° 34.328'W
7	57° 41.297'N	2° 34.063'W
8	57° 41.421'N	2° 33.693'W
9	57° 41.466'N	2° 33.265'W
10	57° 41.426'N	2° 32.835'W
11	57° 41.308'N	2° 32.459'W
12	57° 41.126'N	2° 32.186'W
13	57° 40.904'N	2° 32.052'W
14	57° 40.680'N	2° 32.070'W
15	57° 40.791'N	2° 33.032'W
16	57° 40.697'N	2° 33.190'W
17	57° 40.725'N	2° 33.279'W

The duct to drill pipe connection will be made on the Voe Jarl. The Dive spread will be situated on the Voe Jarl which will be moored up on the anchor points mentioned above. These operations are planned between the hours of 07:00 – 19:00 or all daylight hours if required, with the Dive team mobilising daily from Macduff and Transferring via Support vessel Rhona, with the route plan defined below.



Figure 4 – Daily transit routes from Macduff base port to site

Table 4 – Daily transit route waypoints from Macduff base port to site

Way Point	Lat.	Long.	Dist.to next	Tot	Remarks
1	57° 40'.20'' N	002° 30'.40'' W	0.84NM	00.00 NM	Entrance to Macduff
2	57° 40'.53'' N	002° 33'.20'' W	0.94 NM	1.78 NM	Site

6. ACTIVITY 3 - Post pull in dive works [RESTRICTED AREA 2]

A restricted area which is described by the anchor pattern of the DSV Voe Jarl in Table 1 above will be used for the duct pull operation which is expected to last 22 days weather permitting. The ducts will be lowered beneath the sea bed level by airlifting and secured in place with temporary concrete mattress. The Ducts will stay buried in the sea bed until the final cable installation and burial stage of the project in summer 2020.

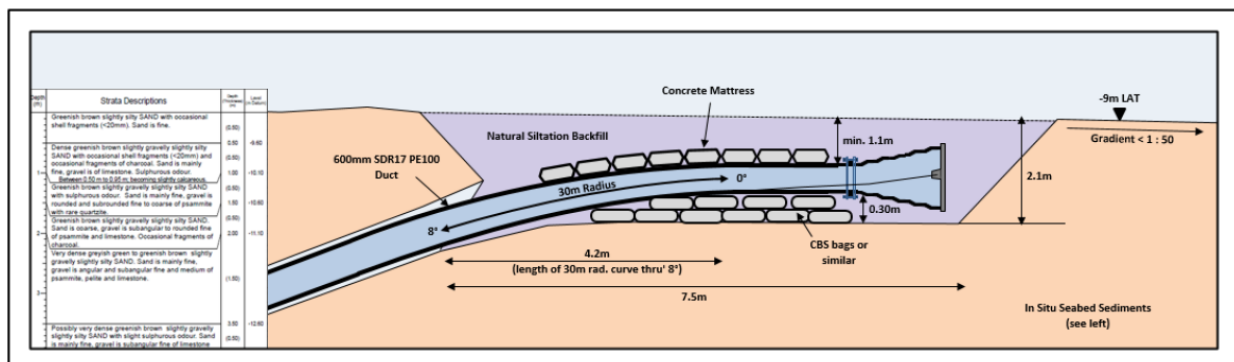


Figure 5 – As left detail of ducts in seabed

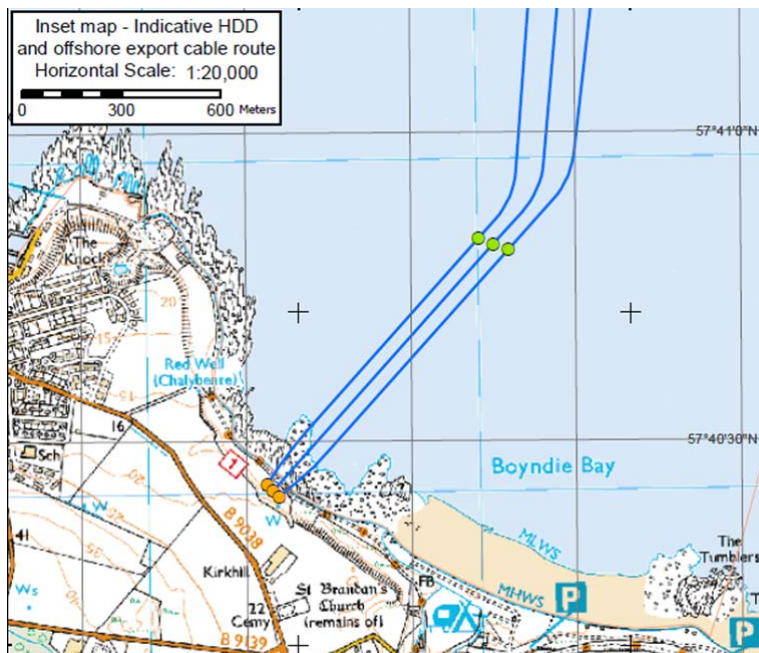


Figure 6 – Overview of export cable layout at landfall area, (green points show location of Figure 5 detail)

7. General Safety Advice

Please be aware that by virtue of their modes of operation, the Voe Jarl, Shuna and Rhona will be Restricted in their Ability to Manoeuvre (RAM) as defined under COLREGs (International Regulations for Preventing Collisions at Sea 1972, Rule 3). Masters of vessels are therefore requested to maintain their vessels and gears at a minimum safe distance from these vessels of **500 metres** when it is undertaking work and showing the appropriate shapes and lights in accordance with COLREGs Rule 18.

Whilst Diving operations are ongoing all vessels are requested to maintain their vessel and gears **outwith of the mooring anchors (described by RESTRICTED AREA 2 in Table 4 above)** from the Voe Jarl when the dive flag is shown. Mariners are requested to give all construction and support vessels a wide berth, to navigate with caution, to use all means appropriate to aid safe navigation as defined under COLREGs Rule 7, and keep continued watch on VHF Ch. 16 when navigating the area. The Voe Jarl will display the Dive Flag whilst operations are ongoing (Figure 7).

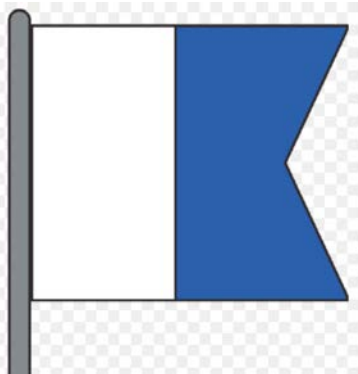


Figure 7 – Dive flag

8. Programme

Anchor Installation – 11/06/2019

Activity 1 Pipe Tow – 15/06/2019

Activity 2 - Pipe pull in [Restricted Area 1]– 15/06/2019 – 72hrs

Activity 3 – Post pull dive works (burial) [Restricted Area 2] – 18/06/2019 – for 22 days – 10/07/2019

Please note that these are all subject to operational and weather restraints

9. Contact details

CONTACT DETAILS		
Marine Coordination Centre 24/7 Gary Smailes – Lead Marine Coordinator Email: garysmailes.morayeast@morayeast.com Tel : +44 7918750025/01346 511838	For fisheries related matters Jen Miller – Brown and May Marine Ltd. Email: jen.miller@brownmay.com Tel : +44 1379 872148/ +44 7519 106002	Shefa related matters Brian Rosendahl Account manager Shefa Ltd Email : brr@ft.to Tel : +298 303602/+298 243602