

MORAY EAST WEEKLY NOTICE OF OPERATIONS	Issue Date	05/08/2019
	Ref: 8460001-PC0010-MWE-REP-0021	Rev: 01

Work Planned for the Period 05.08.2019 to 11.08.2019

Construction work for Moray East Offshore Wind Farm commenced on the 18th May 2019.

The key aim of the Weekly Notice of Operations is to give a global view of activities and vessels involved. Questions regarding the operations will be welcome preferably well in advance of each construction activity.

Moray East is developing the Moray East Offshore Wind Farm in the Outer Moray Firth on the south eastern area of the Smith Bank located to the north of the Aberdeenshire and Moray coast. The development will consist of 100 offshore wind turbines (WTGs) (with a total capacity of approximately 950 MW) and three Offshore Substation Platforms (OSPs). Water depths in the Moray East site range from approximately 38 m below LAT to 54 m below LAT. The generated power will be transmitted to the grid via three subsea export cable circuits to the landfall location at Inverboynadie bay on the Aberdeenshire coast. The onshore export cables continue underground to the Moray East substation currently under construction near New Deer. The Moray East offshore development boundary is shown in black on Figure 1 below. Details of location of work activities within this area will be provided as work progresses.

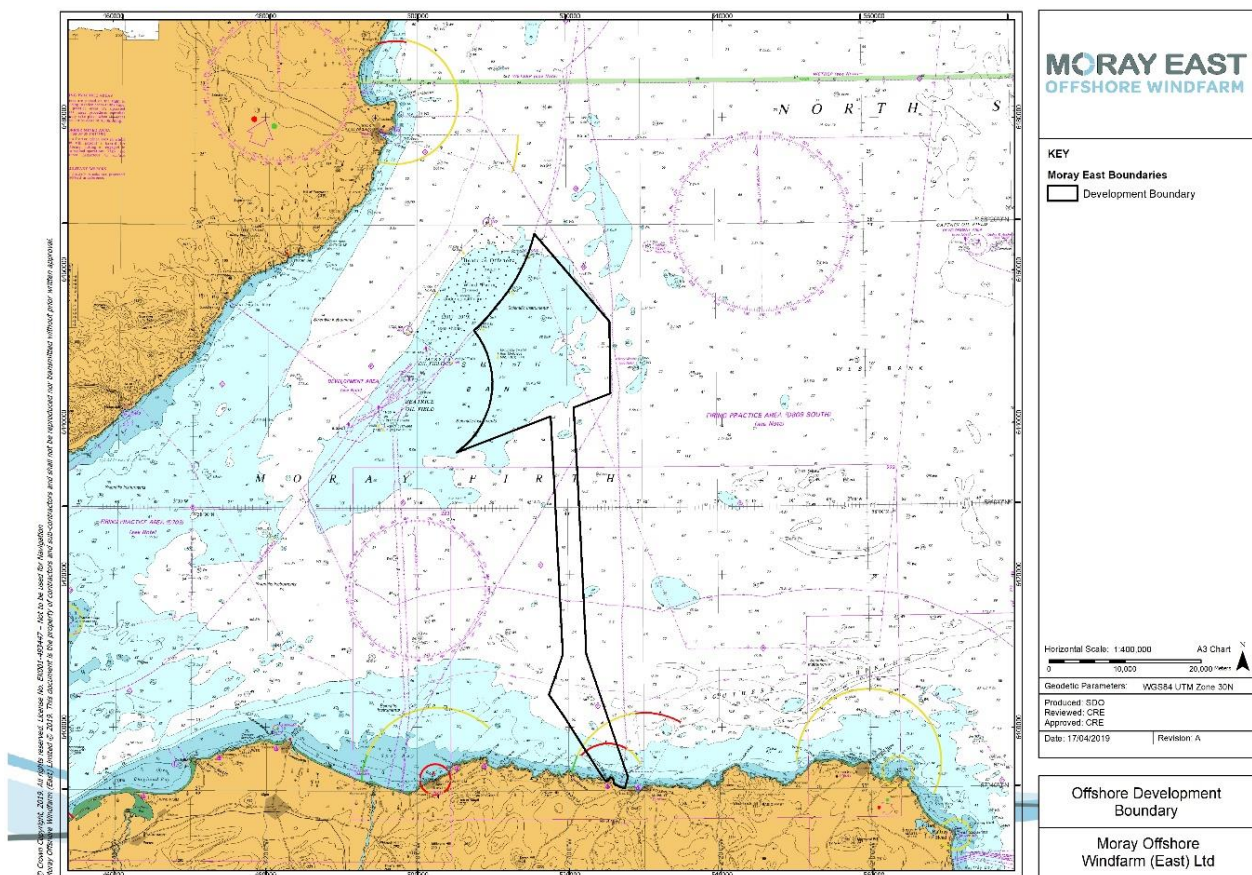


Figure 1 - Moray East Offshore Development Boundary

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It is currently anticipated that weather permitting offshore construction works will be carried out year-round and on a continuous basis (i.e. 24 hour working, seven days a week) unless notified otherwise.

Moray East's Marine Coordination Centre in Fraserburgh is manned 24 hours, 7 days per week.

The construction works, which have commenced from the 18th May 2019, are as follows:

- Piling operations (detailed in this notice);
- Guard vessel duties (detailed in this notice);
- Horizontal Directional Drilling (HDD) works (detailed in this notice); and
- ROV survey of marine growth on installed piles.

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) 778 706 5714
Emergency Contact (24/7)	+44 (0) 1346 511 838
Marine Coordinator Email	MarineCoordination.MORAYEAST@Morayeast.com
Address	Dalrymple Hall, Dalrymple St, Fraserburgh, AB43 9BD

2 Completed Operations

2.1 Moray East Construction Markers

Moray East has completed the deployment of nine construction marker buoys around the Moray East site. The marker buoys will remain in place until after construction of the Moray East Offshore Wind Farm is complete. The co-ordinates for the as-built marker buoys are provided in the Table 1 below.

Table 1 – Marker buoy locations

Name	WGS84		WGS84 UTM Zone 30N	
	Latitude (dms)	Longitude (dms)	Easting (m)	Northing (m)
Buoy 1 - North Cardinal Buoy, Pillar shaped with a north cardinal shaped top mark, exhibiting a Quick (Q) White (W) light character and AIS.	58° 18' 6.600" N	2° 41' 4.800" W	518481.96	6462358.27
Buoy 2 - Special Mark Buoy, Pillar shaped with a yellow 'x' shaped top mark, exhibiting a Fl Y 5s light character.	58° 16' 48.300" N	2° 37' 55.380" W	521579.08	6459952.33

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Name	WGS84		WGS84 UTM Zone 30N	
	Latitude (dms)	Longitude (dms)	Easting (m)	Northing (m)
Buoy 3 - Special Mark Buoy, Pillar shaped with a yellow 'x' shaped top mark, exhibiting a Fl Y 5s light character.	58° 15' 8.460" N	2° 35' 57.300" W	523521.05	6456875.58
Buoy 4 - East Cardinal Buoy, Pillar shaped with an east cardinal shaped top mark, exhibiting a Very (V) Q (3) 5 second (s) W light character and AIS.	58° 10' 44.10" N	2° 32' 45.85" W	526697.39	6448719.65
Buoy 5 - Special Mark Buoy, Pillar shaped with a yellow 'x' shaped top mark, exhibiting a Fl Y 5s light character.	58° 7' 49.680" N	2° 35' 20.640" W	524201.44	6443309.27
Buoy 6 - Special Mark Buoy, Pillar shaped with a yellow 'x' shaped top mark, exhibiting a Fl Y 5s light character.	58° 6' 43.980" N	2° 38' 19.860" W	521280.40	6441260.65
Buoy 7 - Special Mark Buoy, Pillar shaped with a yellow 'x' shaped top mark, exhibiting a Fl Y 5s light character.	58° 4' 57.240" N	2° 47' 9.360" W	512624.16	6437922.64
Buoy 8 – South Cardinal, Pillar shaped with a south cardinal shaped top mark, exhibiting a V Q (6) + L Fl 10s W light character and AIS.	58° 4' 1.140" N	2° 52' 6.660" W	507757.35	6436175.21
Buoy 9 - Special Mark Buoy, Pillar shaped with a yellow 'x' shaped top mark, exhibiting a Fl Y 5s light character.	58° 8' 37.080" N	2° 50' 37.080" W	509205.67	6444712.15

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Figure 2 - Layout of demarcation buoyage

3 Piling Operations

GeoSea NV Geotechnical & Offshore Solutions have been contracted by Moray East to carry out pile foundation installation at the Moray East site. The vessels associated with the planned works are detailed in Section 3.1 below.

The piling operations commenced on the 19th May 2019 and are scheduled to take place over a period of approximately 11 months. Information on the WTG and OSP foundation locations in the Moray East site and the piling operations anticipated in the next four weeks are provided in Sections 3.2 and 3.4 below.

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3.1 Vessels associated with the planned works

3.1.1 Pin Pile Support Vessel

MV Normand Service	
General Description and Dimensions:	DP 2 PSV vessel LOA: 88.0 m, Beam: 18.0 m, Draught: 4.5 m
Call Sign:	LAFR8
MMSI:	257062690
On Board Contact:	Mob: +32 486 36 42 31
Offshore Manager / Party Chief:	Tobe Possimiers/Hans Miedema
E-mail:	possemiers.tobe@deme-group.com
Onshore Representative:	Edward Maycock



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3.1.2 Pin Pile Installation Vessel

MV Apollo	
General Description and Dimensions:	Offshore Heavy Lift DP2 jack up vessel LOA: 89 m, Beam: 45 m, Draught: 15 m
Call Sign:	LXBP
MMSI:	253586000
On Board Contact:	Mob: +32 486 36 42 31
Offshore Manager / Party Chief:	Tobe Possimiers/Hans Miedema
E-mail:	possemiers.tobe@deme-group.com
Onshore Representative:	Edward Maycock



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3.2 Foundation Locations

Foundation locations for piling operations are shown in Table 2 below. Locations where piling has been completed are highlighted in Figure 3 – Turbine location map.

Table 2 – WTG locations and Installation Status

Turbine ID	Latitude (DD MM.mmm)	Longitude (DD MM.mmm)	Piling Complete
ME-A01	58° 4.550' N	2° 52.147' W	
ME-A02	58° 5.158' N	2° 52.144' W	
ME-B02	58° 5.147' N	2° 50.570' W	
ME-B03	58° 5.755' N	2° 50.567' W	
ME-B04	58° 6.364' N	2° 50.564' W	
ME-B05-OFF	58° 6.967' N	2° 50.544' W	
ME-B13	58° 11.838' N	2° 50.540' W	
ME-B14	58° 12.446' N	2° 50.538' W	09/07/2019
ME-C05	58° 6.961' N	2° 48.986' W	
ME-C07	58° 8.177' N	2° 48.980' W	
ME-C08	58° 8.785' N	2° 48.977' W	
ME-C09	58° 9.394' N	2° 48.973' W	
ME-C10	58° 10.002' N	2° 48.970' W	
ME-C11	58° 10.610' N	2° 48.967' W	
ME-C12	58° 11.218' N	2° 48.964' W	
ME-C13	58° 11.826' N	2° 48.961' W	
ME-C14	58° 12.435' N	2° 48.958' W	08/07/2019
ME-C15	58° 13.043' N	2° 48.955' W	10/07/2019
ME-C16	58° 13.651' N	2° 48.951' W	12/07/2019
ME-D04	58° 6.341' N	2° 47.414' W	
ME-D05	58° 6.949' N	2° 47.410' W	
ME-D07	58° 8.166' N	2° 47.403' W	
ME-D08	58° 8.774' N	2° 47.399' W	
ME-D09	58° 9.382' N	2° 47.396' W	
ME-D10	58° 9.990' N	2° 47.392' W	
ME-D11	58° 10.598' N	2° 47.389' W	
ME-D12	58° 11.207' N	2° 47.385' W	
ME-D13	58° 11.815' N	2° 47.381' W	
ME-D14	58° 12.423' N	2° 47.378' W	
ME-D15	58° 13.031' N	2° 47.374' W	
ME-D16	58° 13.639' N	2° 47.371' W	11/07/2019
ME-D17	58° 14.248' N	2° 47.367' W	13/07/2019
ME-E04	58° 6.329' N	2° 45.838' W	
ME-E05	58° 6.937' N	2° 45.834' W	
ME-E19	58° 15.452' N	2° 45.778' W	14/07/2019

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Turbine ID	Latitude (DD MM.mmm)	Longitude (DD MM.mmm)	Piling Complete
ME-F04	58° 6.317' N	2° 44.263' W	
ME-F21	58° 16.656' N	2° 44.187' W	16/07/2019
ME-G05	58° 6.913' N	2° 42.683' W	
ME-G06	58° 7.521' N	2° 42.678' W	
ME-G07	58° 8.129' N	2° 42.673' W	
ME-G09	58° 9.345' N	2° 42.663' W	
ME-G10	58° 9.954' N	2° 42.658' W	
ME-G11	58° 10.562' N	2° 42.653' W	
ME-G13	58° 11.778' N	2° 42.643' W	05/07/2019
ME-G15	58° 12.995' N	2° 42.633' W	27/06/2019
ME-G16	58° 13.603' N	2° 42.629' W	24/06/2019
ME-G17	58° 14.211' N	2° 42.624' W	17/06/2019
ME-G18	58° 14.819' N	2° 42.619' W	16/06/2019
ME-G19	58° 15.428' N	2° 42.614' W	09/06/2019
ME-G20	58° 16.036' N	2° 42.609' W	
ME-G21	58° 16.644' N	2° 42.604' W	22/07/2019
ME-G22	58° 17.252' N	2° 42.599' W	17/07/2019
ME-H05	58° 6.900' N	2° 41.107' W	
ME-H06	58° 7.508' N	2° 41.102' W	
ME-H07	58° 8.116' N	2° 41.096' W	
ME-H08	58° 8.724' N	2° 41.091' W	
ME-H09	58° 9.333' N	2° 41.086' W	
ME-H10	58° 9.941' N	2° 41.080' W	
ME-H13	58° 11.765' N	2° 41.064' W	04/07/2019
ME-H14	58° 12.374' N	2° 41.059' W	28/06/2019
ME-H16	58° 13.590' N	2° 41.048' W	23/06/2019
ME-H17	58° 14.198' N	2° 41.042' W	19/06/2019
ME-H18	58° 14.806' N	2° 41.037' W	
ME-H19	58° 15.415' N	2° 41.032' W	08/06/2019
ME-H20	58° 16.023' N	2° 41.026' W	24/07/2019
ME-H21	58° 16.631' N	2° 41.021' W	21/07/2019
ME-H22	58° 17.239' N	2° 41.015' W	18/07/2019
ME-I06	58° 7.495' N	2° 39.526' W	
ME-I07	58° 8.103' N	2° 39.520' W	
ME-I19	58° 15.401' N	2° 39.450' W	05/06/2019
ME-I20	58° 16.010' N	2° 39.444' W	07/06/2019
ME-J07	58° 8.090' N	2° 37.943' W	
ME-J08	58° 8.698' N	2° 37.937' W	
ME-J09	58° 9.306' N	2° 37.930' W	
ME-J10	58° 9.914' N	2° 37.924' W	04/08/2019
ME-J12	58° 11.131' N	2° 37.912' W	

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Turbine ID	Latitude (DD MM.mmm)	Longitude (DD MM.mmm)	Piling Complete
ME-J13	58° 11.739' N	2° 37.905' W	02/07/2019
ME-J14	58° 12.347' N	2° 37.899' W	30/06/2019
ME-J16	58° 13.563' N	2° 37.886' W	21/06/2019
ME-J17	58° 14.172' N	2° 37.880' W	02/06/2019
ME-J18	58° 14.780' N	2° 37.874' W	20/06/2019
ME-J19-OFF	58° 15.383' N	2° 37.887' W	
ME-K09	58° 9.292' N	2° 36.353' W	
ME-K10	58° 9.900' N	2° 36.346' W	29/07/2019
ME-K11	58° 10.509' N	2° 36.339' W	29/07/2019
ME-K16	58° 13.550' N	2° 36.306' W	31/05/2019
ME-K17-OFF	58° 14.189' N	2° 36.133' W	30/05/2019
ME-L09	58° 9.278' N	2° 34.775' W	27/07/2019
ME-L11	58° 10.494' N	2° 34.761' W	27/07/2019
ME-L12	58° 11.103' N	2° 34.754' W	25/07/2019
ME-L13	58° 11.711' N	2° 34.747' W	
ME-E18	58° 14.844' N	2° 45.782' W	14/07/2019
ME-E14	58° 12.411' N	2° 45.798' W	07/07/2019
ME-I18	58° 14.793' N	2° 39.455' W	
ME-F08	58° 8.750' N	2° 44.245' W	
ME-G08	58° 8.737' N	2° 42.668' W	
ME-H11	58° 10.549' N	2° 41.075' W	
ME-C04	58° 6.353' N	2° 48.989' W	
ME-C02	58° 5.136' N	2° 48.995' W	
ME-D06	58° 7.557' N	2° 47.407' W	
ME-OSP1	58° 7.546' N	2° 45.830' W	
ME-OSP2	58° 13.007' N	2° 44.214' W	
ME-OSP3	58° 9.928' N	2° 39.502' W	

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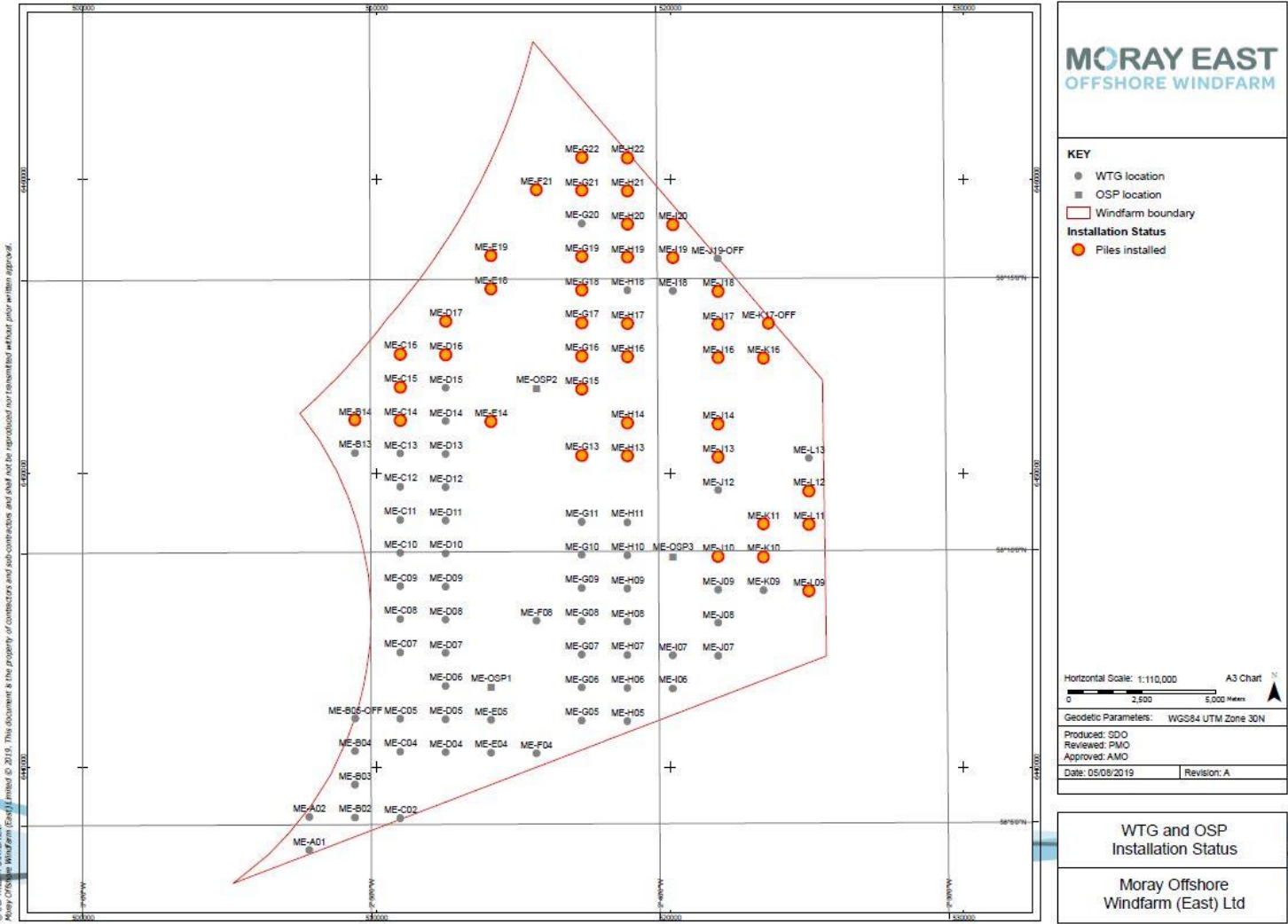


Figure 3 – Turbine location and Installation Status

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3.3 Piling Operations

Pile foundations will be installed by the Heavy Lift Vessel (HLV) Apollo which will arrive at the proposed foundation installation location and will be positioned in readiness for the foundation installation works. This will involve the vessel entering DP2 and then jacking up to operational draft.

Pile foundations will be installed by the use of a Pile Installation Template (see Figure 4 below), where 3 pin piles will be stabbed into the seabed through the piling temple then driven to target depth in readiness for the Jacket installation.

The Piling Template will then be recovered to the Apollo, then she will relocate to the next location for installation.

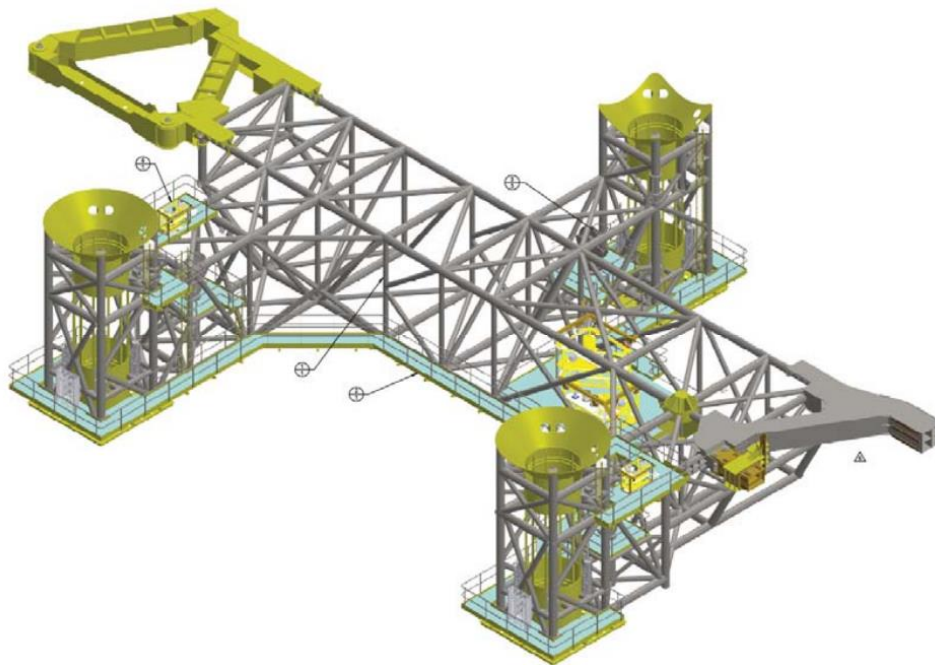


Figure 4 – Piling Template

3.4 Piling works for the month ahead

Piling works are expected to take place for the next four weeks from the date this notice is issued in the area highlighted in yellow in Figure 5 below. Construction works could take place out of this area due to unforeseen circumstances.

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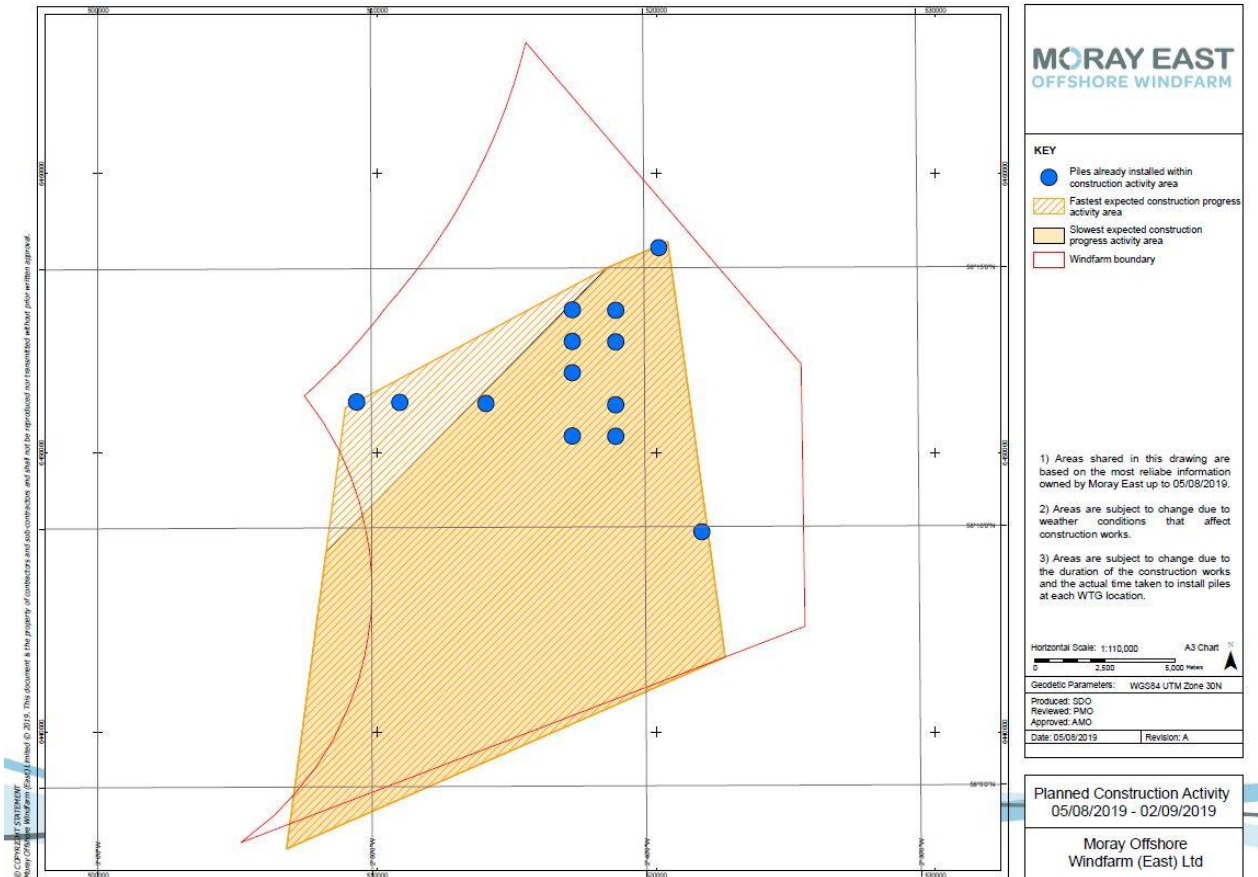


Figure 5 – Piling activity area expected for between 05th August and 2nd September 2019

The latitude and longitude for the piling activity in the above highlighted area is referenced in the Table 3 below.

Table 3 – Coordinates for piling activity area expected for 05th August and 2nd September 2019 Fastest expected construction progress activity area

ID	Latitude (DMS)	Longitude (DMS)	Latitude (DM)	Longitude (DM)
1	58° 15' 1.274" N	2° 41' 22.112" W	58° 15.021' N	2° 41.369' W
2	58° 15' 31.163" N	2° 39' 7.149" W	58° 15.519' N	2° 39.119' W
3	58° 7' 29.888" N	2° 37' 6.395" W	58° 7.498' N	2° 37.107' W
4	58° 3' 49.434" N	2° 53' 7.725" W	58° 3.824' N	2° 53.129' W
5	58° 12' 19.926" N	2° 50' 57.341" W	58° 12.332' N	2° 50.956' W

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Slowest expected construction progress activity area

ID	Latitude (DMS)	Longitude (DMS)	Latitude (DM)	Longitude (DM)
1	58° 9' 33.500" N	2° 51' 39.964" W	58° 9.558' N	2° 51.666' W
2	58° 15' 1.274" N	2° 41' 22.112" W	58° 15.021' N	2° 41.369' W
3	58° 15' 31.163" N	2° 39' 7.149" W	58° 15.519' N	2° 39.119' W
4	58° 7' 29.888" N	2° 37' 6.395" W	58° 7.498' N	2° 37.107' W
5	58° 3' 49.434" N	2° 53' 7.725" W	58° 3.824' N	2° 53.129' W

The above figure and coordinates for the area where piling works are expected in the month ahead will be updated on a weekly basis through the Weekly Notice of Operations together with confirmation of the piles that have been installed in the previous week.

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4 Guard Vessels

Kinnaird Marine Limited has been appointed by Moray East to provide guard vessels during the piling campaign. Apart from times of extreme weather, there will always be at least one guard vessel on station during piling operations. 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.

Mariners are requested to navigate with caution and keep continued watch on VHF Ch. 16, 87 and 73 when navigating the area.

4.1 Guard Vessel – GV Replenish

GV Replenish	
General Description and Dimensions:	Guard Vessel LOA: 24.36 m, Beam: 7.17 m, Draught 3.48 m
Call Sign:	MASY7
MMSI:	235055180
On Board Contact:	Master
Offshore Manager / Party Chief:	N/A
E-mail:	gvreplenish@gmail.com
Onshore Representative:	Enrique Alvarez



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4.2 Guard Vessel – KMS Ability N294

KMS Ability N294	
General Description and Dimensions:	Guard Vessel LOA: 23.14 m, Beam: 6.63 m, Draught: 3.20 m
Call Sign:	MDFW3
MMSI:	235014666
On Board Contact:	Master
Offshore Manager / Party Chief:	N/A
E-mail:	gvability@gmail.com
Onshore Representative:	Enrique Alvarez



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5 Construction works Description– Horizontal Directional Drilling (HDD)

Please be advised that Moray Offshore Windfarm (East) Limited (Moray East) have commenced HDD construction works. There will be a total of 3 phases during 2019 with the second and third phase planned for August and October.

Anchors have been 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 relevant vessel details are provided below, as well as the overall programme for Phase 1.

5.1 Anchor installations Inverboyndie Bay

Figure 6 below shows the anchor locations at the HDD location near Inverboyndie Bay and Table 4 provides the coordinates of the relevant anchor positions.

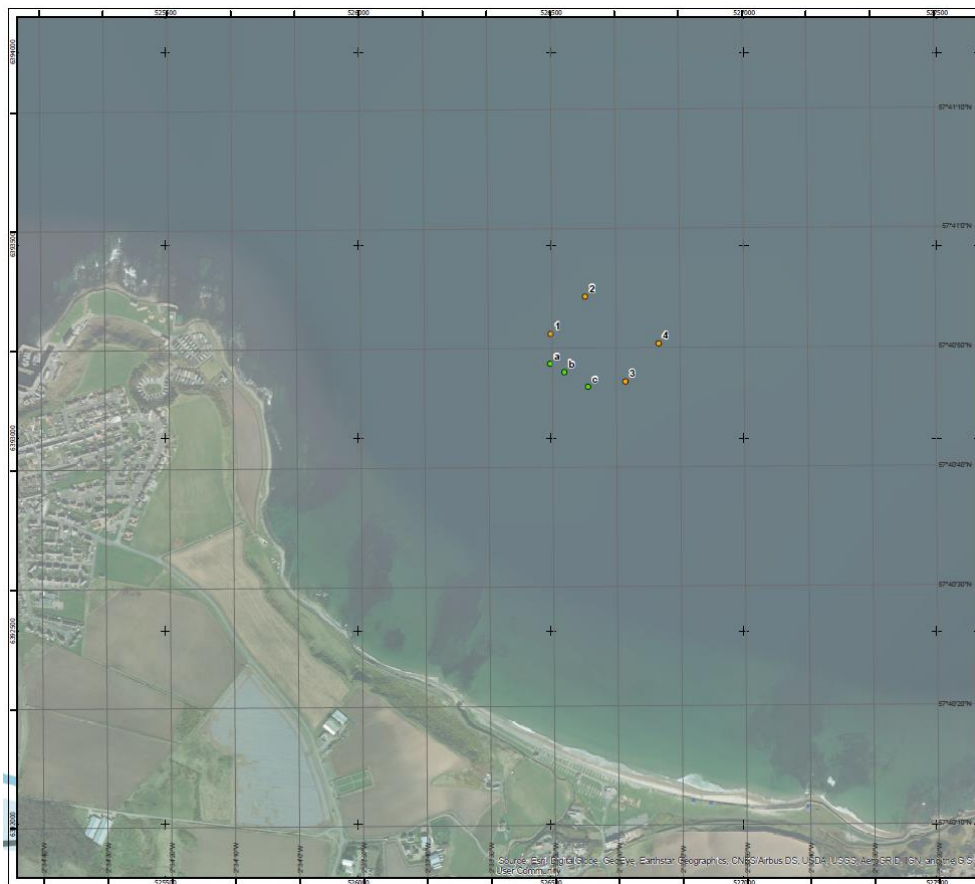


Figure 6 - Anchor locations shown on satellite map.

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Table 4 - Anchor positions Lat/Long

ID	Longitude	Latitude
1	57° 40.852 N	2° 33.338 W
2	57° 40.904 N	2° 33.247 W
3	57° 40.785 N	2° 33.143 W
4	57° 40.839 N	2° 33.056 W
a	57° 40.811 N	2° 33.339 W
b	57° 40.799 N	2° 33.302 W
c	57° 40.778 N	2° 33.241 W

5.2 Vessels associated with the planned works

5.2.1 Main working vessel anchor installation and duct pull in

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



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5.2.2 *Support Vessel*

Rhona	
General Description and Dimensions:	Support 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



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Figure 7 – Daily transit routes from Macduff base port to site

Table 5 – 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

5.3 ACTIVITY 3 - Post pull in dive works

A restricted area which is described by the anchor pattern of the DSV Voe Jarl 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 (Figure 8). 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 in Figure 7 and Table 5 above. The Ducts will stay buried in the sea bed until the final cable installation and burial stage of the project in summer 2020.

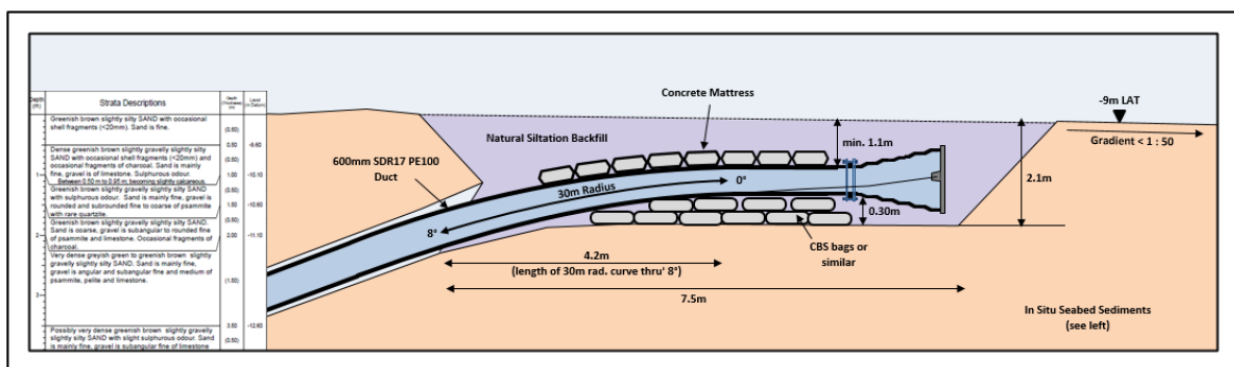


Figure 8 – As left detail of ducts in seabed

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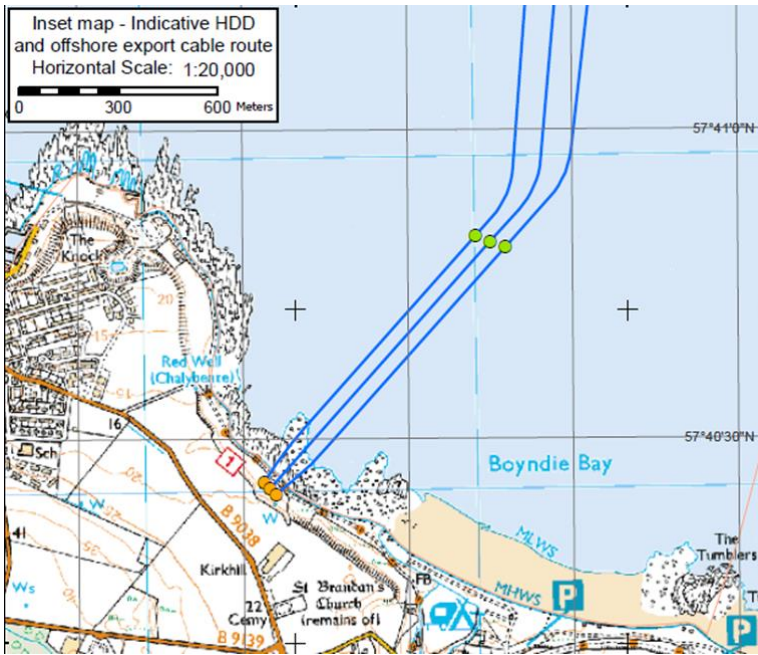


Figure 9 – Overview of export cable layout at landfall area, (green points show location of Figure 6 detail)

5.4 General Safety Advice for HDD operations

Whilst Diving operations are ongoing all vessels are requested to maintain their vessel and gears 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 10).

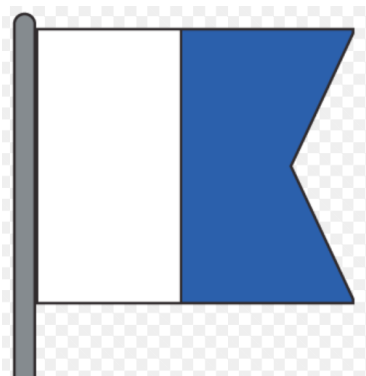


Figure 10 – Dive flag

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5.5 Programme

Anchor Installation – Complete

Activity 1 Pipe Tow – Complete

Activity 2 - Pipe pull in [Restricted Area]— Complete

Activity 3 – Post pull dive works (burial) [Restricted Area] – 02/08/2019 – 24/08/2019

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

6 ROV Survey of Marine Growth on Installed Piles

Please be advised that Moray Offshore Windfarm (East) Limited (Moray East) will commence ROV Survey Operations monitoring marine growth on installed piles using a 4 point mooring system circa 06/08/2019.

The Teal of Wick will be surveying the locations indicated in Figure 11 below. The relevant coordinates are included in Table 8.

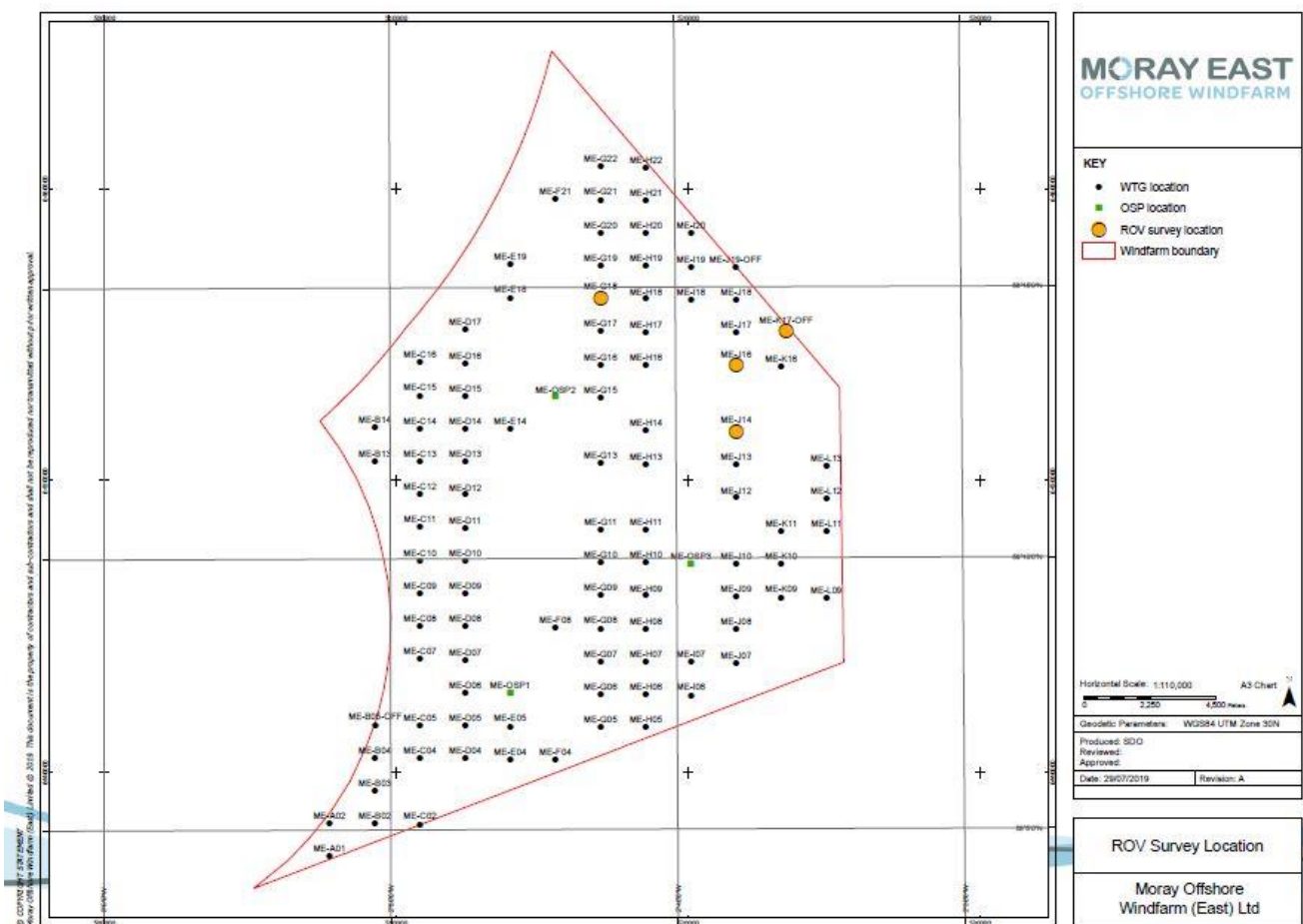


Figure 11 – Turbine location map

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Table 8 – Pile locations to be surveyed

Turbine ID	Latitude (DD MM.mmm)	Longitude (DD MM.mmm)
ME-G18	58° 14.819' N	2° 42.619' W
ME-J14	58° 12.347' N	2° 37.899' W
ME-J16	58° 13.563' N	2° 37.886' W
ME-K17-OFF	58° 14.189' N	2° 36.133' W

6.1 Vessel associated with the planned works

Teal Of Wick	
General Description and Dimensions:	Survey Vessel
Call Sign:	ZQXM9
MMSI:	235000773
On Board Contact:	Ian Beaton 07713064672
Offshore Manager / Party Chief:	Offshore Manager
E-mail:	admin@seafastltd.co.uk
Onshore Representative:	Gareth Ellis Gareth.ellis@morayeast.com



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6.2 ROV Specifications

SURFACE EQUIPMENT



INPUT POWER REQUIREMENTS:
Single phase universal auto sensing input, 100-270 VAC at 2.8 kW.

FALCON SURFACE UNIT

The Falcon's switch mode power supplies, control system, fold out 15 inch LCD monitor and keyboard are installed in a 19 inch rack transportable case.

All connections to the surface unit are on the front panel for easy access including the hand controller with its 5 metre flying lead.

The power output from the surface unit to the umbilical is a galvanically isolated 500 VDC protected by a L.I.M. (Line Isolation Monitor).

VEHICLE CONTROLS ON THE HAND CONTROL UNIT

The following vehicle controls are provided on the hand controller:

- Single 3 axis joystick for horizontal vehicle control
- Rotary trim controller for vertical thrust up or down
- Push button dive and surface control
- Thruster enable / disable and power setting

- Camera selection
- Rotary control for lights intensity
- Auto pilot function for both heading and depth
- Auxiliary vehicle controls (including manipulator open / close).

A video overlay system is incorporated as standard providing the following information to the pilot:

- Compass heading
- Depth
- Camera tilt position
- Auto pilot function status
- Umbilical turns counter
- Vehicle pitch and roll
- CP reading
- Date and time
- Lat and Long
- Free text using a QWERTY keyboard.

SEAEYE FALCON & FALCON DR SPECIFICATIONS

SPECIFICATIONS	FALCON	FALCON DR
System power requirements	Single phase 100-270 VAC at 2.8 kW	Single phase 100-270 VAC at 2.6 kW
Maximum umbilical length	450 m	1100 m
Depth rating	300 msw	1000 msw
Length	1000 mm	1055 mm
Height	500 mm	635 mm
Width	600 mm	600 mm
Launch weight	55 kg	100 kg
Forward speed	> 3 knots	> 3 knots
Thrust forward	50 kgf	50 kgf
Thrust lateral	28 kgf	28 kgf
Thrust vertical	13 kgf	13 kgf
Payload	14 kg	15 kg



STANDARD FALCON WITH WIRE ROPE CUTTING SKID

Figure 14 – ROV specifications

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7 General Safety Advice

Please be aware that by virtue of their mode of operation and the equipment deployed the MV Apollo, Voe Jarl, Rhona, Teal of Wick and the MV Normand Service 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 its work and showing the appropriate shapes and lights in accordance with COLREGs Rule 18.

In order to not compromise the safety of the MV Apollo and the MV Normand Service, the crew of each, and each vessel's ability to undertake its contracted works, fishermen who have static fishing gears deployed within the defined Moray East site (see Figure 2) are requested to provide the coordinates of such deployed gears in DMS and details of whether the surface markers used are visible at all states of visibility to Jen Miller using the below contact information (Section 58 of the Merchant Shipping Act 1995).

Fishermen who have static gears deployed beyond 12 nm are reminded that static gear must be marked in accordance with Commission Implementing Regulation (EU) No. 404/2011 (<https://www.gov.uk/guidance/markings-of-fishing-gear-retrieval-and-notification-of-lost-gear#markings-of-fishing-gear>).

The Scottish Ministers have authorised the use of the following safety zones as per Notice to Mariners to follow:

1. A 500 metre radius around each WTG and OSP where construction works are taking place that include sensitive activities being undertaken by vessels RAM. A maximum of three of such zones is permitted at any one time.
2. A 50 metre radius around partially completed WTGs and OSPs where work is not underway and the risk assessments identify a need.
3. A 50 metre radius around each completed WTG and OSP prior to commissioning and as required by a risk assessment process.

All mariners are requested to give all construction and support vessels a wide berth.

Mariners are requested 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, 87 and 73 when navigating the area.

8 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 - Brown and May Marine Ltd.

Email: jen.miller@brownmay.com

Tel: +44 1379 872148 / + 44 7519 106002

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Fisheries liaison support is also available through the Fisheries Liaison Officer onboard of the MV Apollo.
Contacts provided below:

Name: William Spence

Email: williamspence14@yahoo.co.uk

Mobile: +44 7773 880786

9 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.

10 Website

The official website of Moray Offshore Windfarm (East) Limited can be found at:

<http://www.morayoffshore.com/moray-east/the-project/>

This website will contain all Notices to Mariners (NtMs) published by Moray East during the construction phase of the project, Weekly Notices of Operations and general information about the project.