

MORAY EAST WEEKLY NOTICE OF OPERATIONS	Issue Date	18/05/2020
	Ref: 8460001-PC0010-MWE-REP-0063	Rev: 01

Work Planned for the Period 18.05.2020 to 24.05.2020

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:

- Guard vessel duties (detailed in this notice); and
- Boulder clearance works on the export cable route and inter-array cable routes (detailed in this notice).

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
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

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Name	WGS84		WGS84 UTM Zone 30N	
	Latitude (dms)	Longitude (dms)	Easting (m)	Northing (m)
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	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
Wave rider Buoy Spherical Yellow buoy FL(5) Y 20s, Light sector Y360	58° 13' 55.600" N	2° 44' 59.700" W		

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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. Note that the MV Apollo demobilised from the Moray East project on 11 May 2020.

The piling operations commenced on the 19th May 2019 and were completed on 27th February 2020. Information on the WTG and OSP foundation locations in the Moray East site are provided in Sections 3.2 and 3.4 below.

The Data/positions for the installed piles are available for the following Electronic chart Plotters:

- Maxsea
- Sodena
- Olex
- Time Zero

The information is made available by contacting John Watt (Brown and May)

John.watt@brownmay.com 07590880746

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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	19/08/2019
ME-A02	58° 5.158' N	2° 52.144' W	13/10/2019
ME-B02	58° 5.147' N	2° 50.570' W	02/11/2019
ME-B03	58° 5.755' N	2° 50.567' W	20/11/2019
ME-B04	58° 6.364' N	2° 50.564' W	01/09/2019
ME-B05-OFF	58° 6.967' N	2° 50.544' W	14/10/2019
ME-B13	58° 11.838' N	2° 50.540' W	01/11/2019
ME-B14	58° 12.446' N	2° 50.538' W	09/07/2019
ME-C05	58° 6.961' N	2° 48.986' W	30/08/2019
ME-C07	58° 8.177' N	2° 48.980' W	17/10/2019
ME-C08	58° 8.785' N	2° 48.977' W	22/01/2020
ME-C09	58° 9.394' N	2° 48.973' W	17/10/2019
ME-C10	58° 10.002' N	2° 48.970' W	29/10/2019
ME-C11	58° 10.610' N	2° 48.967' W	30/10/2019
ME-C12	58° 11.218' N	2° 48.964' W	31/10/2019
ME-C13	58° 11.826' N	2° 48.961' W	20/01/2019
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	26/01/2020
ME-D05	58° 6.949' N	2° 47.410' W	16/12/2019
ME-D07	58° 8.166' N	2° 47.403' W	22/01/2020
ME-D08	58° 8.774' N	2° 47.399' W	07/12/2019
ME-D09	58° 9.382' N	2° 47.396' W	07/12/2019
ME-D10	58° 9.990' N	2° 47.392' W	04/12/2019
ME-D11	58° 10.598' N	2° 47.389' W	24/01/2020
ME-D12	58° 11.207' N	2° 47.385' W	31/01/2020
ME-D13	58° 11.815' N	2° 47.381' W	06/12/2019
ME-D14	58° 12.423' N	2° 47.378' W	02/02/2020
ME-D15	58° 13.031' N	2° 47.374' W	13/11/2019
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	17/11/2019
ME-E05	58° 6.937' N	2° 45.834' W	18/11/2019
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	28/01/2020
ME-F21	58° 16.656' N	2° 44.187' W	16/07/2019
ME-G05	58° 6.913' N	2° 42.683' W	01/12/2019
ME-G06	58° 7.521' N	2° 42.678' W	12/01/2020
ME-G07	58° 8.129' N	2° 42.673' W	24/08/2019
ME-G09	58° 9.345' N	2° 42.663' W	07/08/2019
ME-G10	58° 9.954' N	2° 42.658' W	18/08/2019
ME-G11	58° 10.562' N	2° 42.653' W	05/01/2020
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	13/02/2020
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	30/11/2019
ME-H06	58° 7.508' N	2° 41.102' W	25/12/2019
ME-H07	58° 8.116' N	2° 41.096' W	24/12/2019
ME-H08	58° 8.724' N	2° 41.091' W	18/12/2019
ME-H09	58° 9.333' N	2° 41.086' W	05/08/2019
ME-H10	58° 9.941' N	2° 41.080' W	31/12/2019
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	08/08/2019
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	23/10/2019
ME-I07	58° 8.103' N	2° 39.520' W	26/12/2019
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	23/08/2019
ME-J08	58° 8.698' N	2° 37.937' W	22/08/2019
ME-J09	58° 9.306' N	2° 37.930' W	05/02/2020
ME-J10	58° 9.914' N	2° 37.924' W	04/08/2019
ME-J12	58° 11.131' N	2° 37.912' W	06/02/2020

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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	27/02/2020
ME-K09	58° 9.292' N	2° 36.353' W	28/12/2019
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	30/12/2019
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	17/08/2019
ME-F08	58° 8.750' N	2° 44.245' W	29/08/2019
ME-G08	58° 8.737' N	2° 42.668' W	23/12/2019
ME-H11	58° 10.549' N	2° 41.075' W	22/12/2019
ME-C04	58° 6.353' N	2° 48.989' W	21/10/2019
ME-C02	58° 5.136' N	2° 48.995' W	06/11/2019
ME-D06	58° 7.557' N	2° 47.407' W	15/12/2019
ME-OSP1	58° 7.546' N	2° 45.830' W	21/08/2019
ME-OSP2	58° 13.007' N	2° 44.214' W	19/08/2019
ME-OSP3	58° 9.928' N	2° 39.502' W	20/08/2019

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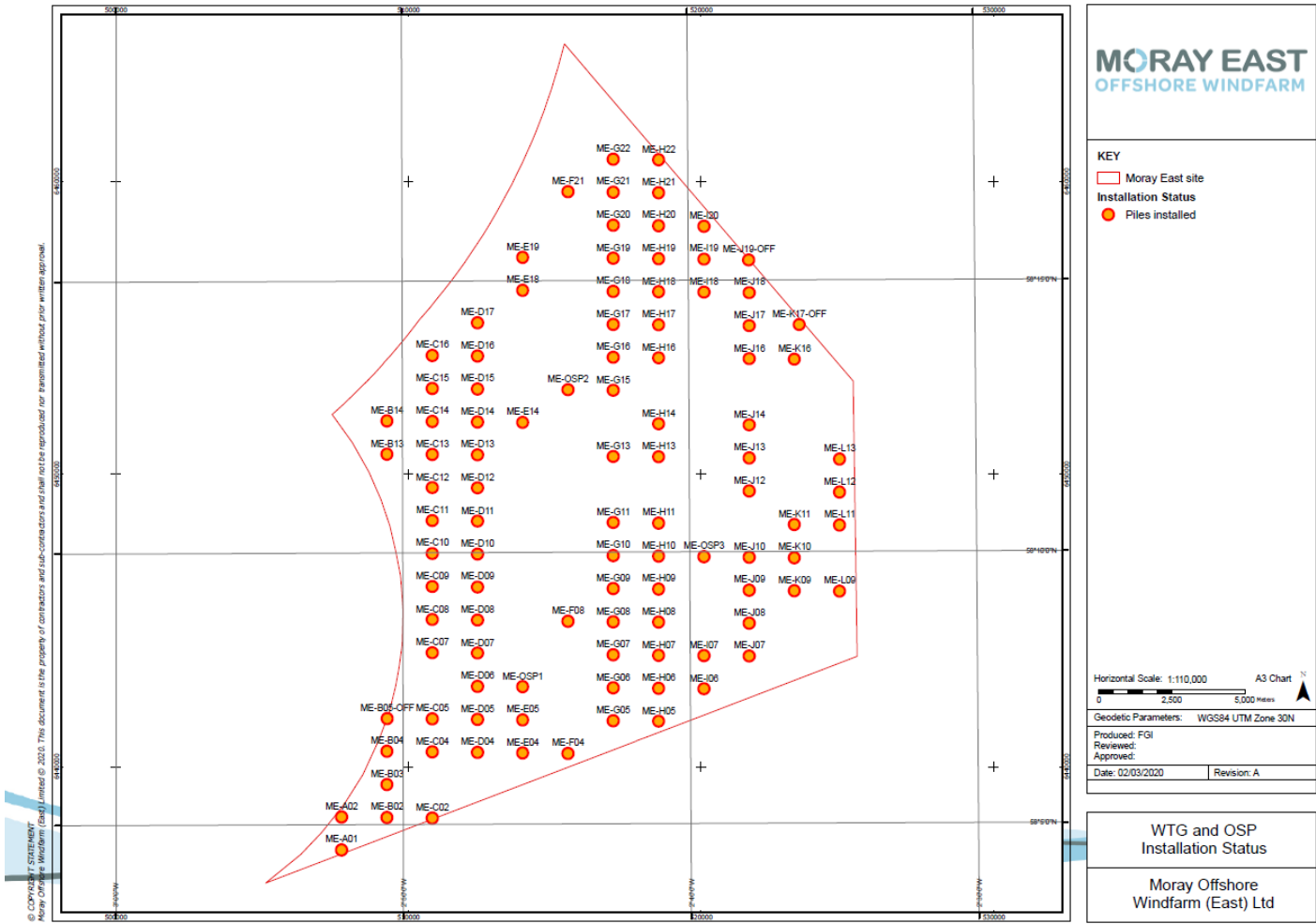


Figure 3 – Turbine location and Installation Status

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3.3 Piling Operations – Complete

Installation of all piles was completed on 27/02/2020.

3.4 Soil Plug Removal works

The MV Apollo (which has been undertaking soil plug removal works since the completion of piling in February) has demobilised and left the wind farm site. Soil plug removal from the remaining pile locations will continue later in the year and details will be posted in the relevant Weekly Notice of Operations.

3.5 Soil plug removal works for the month ahead

There are no soil plug removal works planned for the month ahead.

4 Guard Vessels

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

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Guard Vessel – Bountiful

Bountiful	
General Description and Dimensions:	Guard Vessel LOA: 21.1m, Beam: 6.9 m, Draught 3.8m
Call Sign:	MJLF4
MMSI:	232004846
On Board Contact:	Master
Offshore Manager / Party Chief:	N/A
E-mail:	kmsability@gmail.com
Onshore Representative:	Magnus Currie

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5 Horizontal Directional Drilling (HDD) Completed

Please be advised that Moray Offshore Windfarm (East) Limited (Moray East) have completed HDD construction works, the site is currently marked with a G1500 Buoy (Position and photograph shown below)

Table 4 - Buoy Position

Latitude	Longitude
57 40.8431	002 33.2214
Light Characteristics	Flash Yellow every 5 seconds – Fl.Y (5s).



Figure 4 - Photograph of installed G1500 buoy

6 General Safety Advice

Please be aware that by virtue of their mode of operation and the equipment deployed the Havila Venus 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 Havila Venus, 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

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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 Alex Winrow-Griffin (Brown & May Marine) using the contact information in the Fisheries Liaison section below (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#marking-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.

7 Meteorological Mast Unlit

Please be advised that Moray Offshore Windfarm (East) Limited (Moray East) Meteorological Mast (Figure 5 and 6, Table 3) the aviation light is still currently not operating.

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Figure 5 – Photograph of the Meteorological Mast

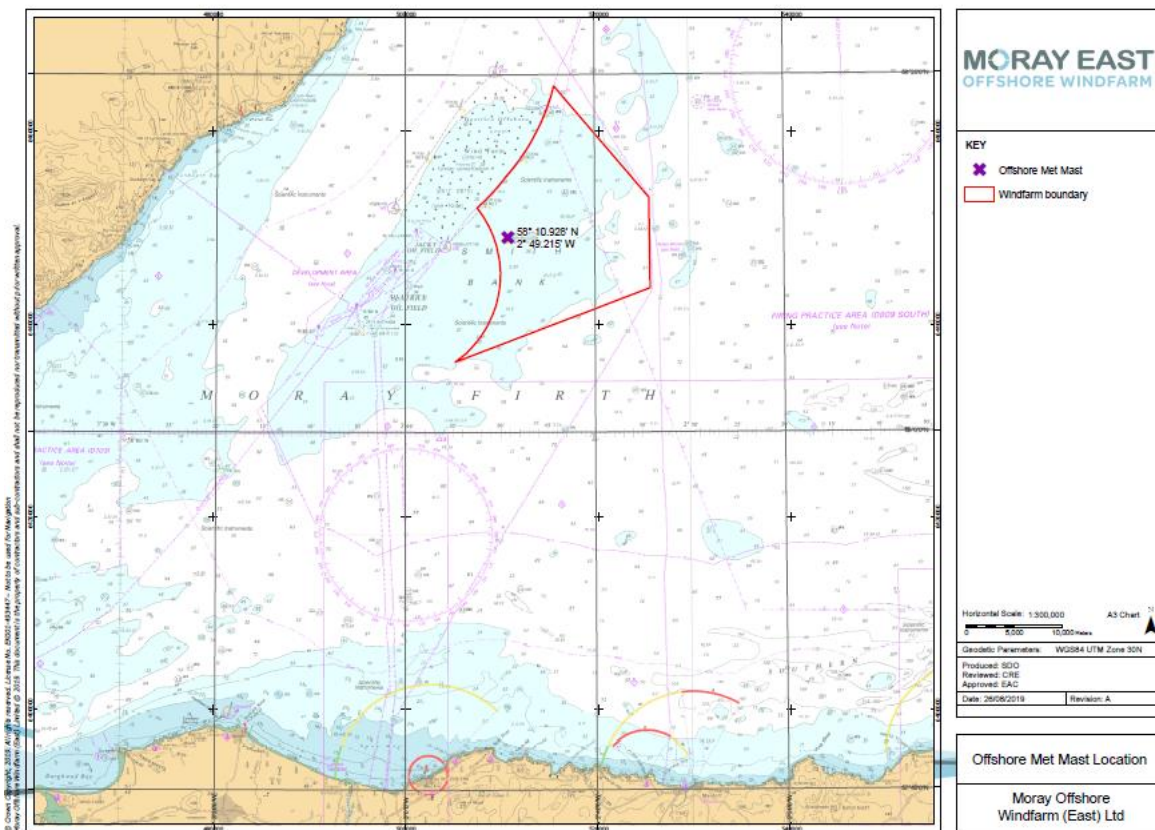


Figure 6 – Meteorological Mast location map

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Table 3 – Met mast coordinates

Name	Latitude (DMS)	Longitude (DMS)	Latitude (DM)	Longitude (DM)
Met Mast	58° 10' 55.680" N	2° 49' 12.892" W	58° 10.928' N	2° 49.215' W

8 Boulder Clearance

Please be advised that Inter Array Cable (IAC) Boulder Clearance (within the wind farm site, as shown in Figures 7 and 8) commenced on 13th May 2020 with an expected duration of approximately 28 days.

The work comprise boulder clearance operations using the OISL RP15 boulder clearance system (Figure 9) towed from the AHTS Havila Venus to create a 20m wide lay corridor in areas where boulder accumulations exist on the seabed followed by pre and post lay surveys conducted by the ROV.

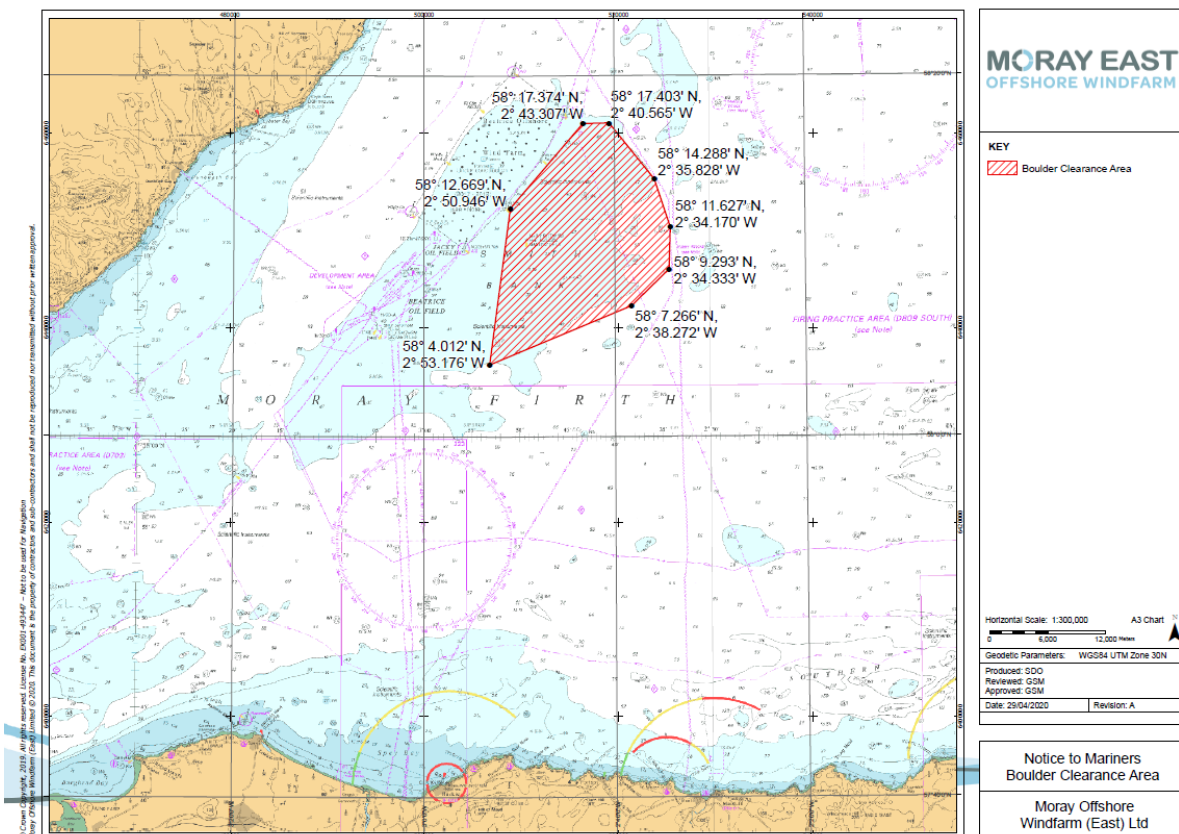


Figure 7. Boulder Clearance area (IAC, within wind farm)

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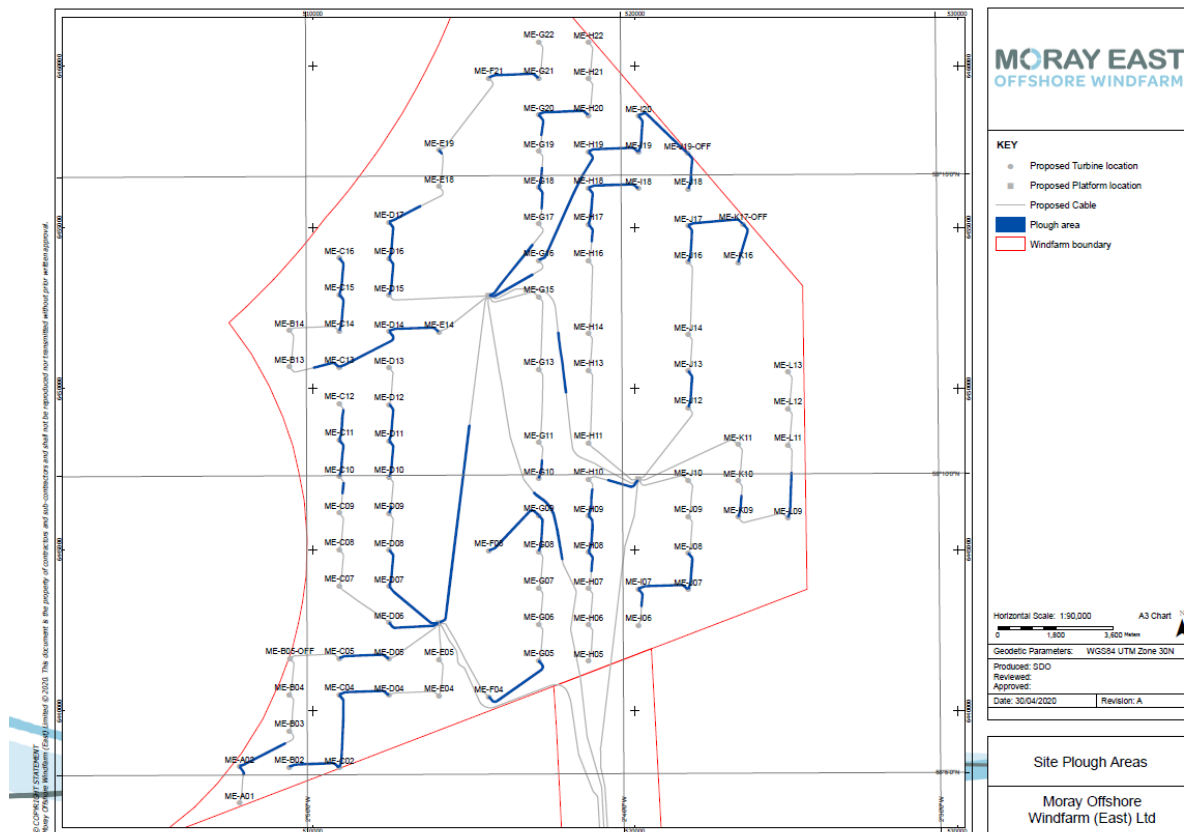


Figure 8. Site Plough areas on the IAC routes.

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The 15m Route Preparation Plough is designed to clear debris or obstructions such as boulders from the proposed route corridor in order to allow cable lay and burial operations to proceed with minimal risk.

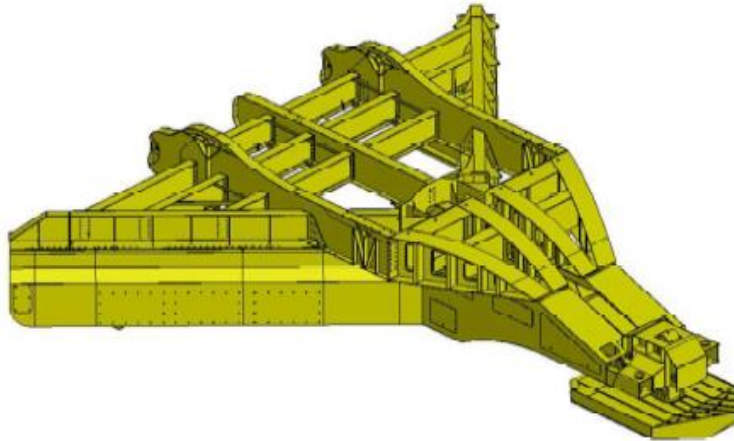


Figure 8: 15m Route Preparation Plough

Item	Value
Width	15.8m
Length	16.1m
Height	3.8m
Mass in air	85,000kg
Submerged Mass	74,000kg

Figure 9. Description of Plough

8.1 Boulder clearance vessel

Havila Venus	
General Description and Dimensions:	LOA: 92 m, Beam: 22 m, Draught: 7.1 m
Call Sign:	LAZC
MMSI:	259305000
On Board Contact:	Mob: +47 23675864
Offshore Manager / Party Chief:	Vessel Master
E-mail:	Bridge.venus@havalaship.com
Onshore Representative:	Andy Small

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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 - Brown and May Marine Ltd.

Email: alex@brownmay.com

Tel: +44 1379 872148 / + 44 7760 160039

Fisheries liaison support is also available through the Fisheries Liaison Officer onboard the Havila Venus. Contacts provided below:

Name: Stephen Richie (Havila Venus)

Email: saeritchie@btinternet.com

Mobile: +44 7921 842853

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 Moray Offshore Windfarm (East) Limited can be found at:

<https://www.morayeast.com/current-works/offshore-works>

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.