

<b>MORAY EAST WEEKLY NOTICE OF OPERATIONS</b>	Issue Date	03/06/2019
	Ref: 8460001-PC0010-MWE-REP-0010	Rev: 01

## Work Planned for the Period 03.06.2019 to 09.06.2019

*Construction work for Moray East Offshore Wind Farm commenced on the 18<sup>th</sup> 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 Inverboyndie 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.

A number of pre-construction activities are continuing offshore, alongside the construction works, which have commenced from on the 18<sup>th</sup> May 2019:

- Boulder relocation works (Work complete 01/06/2019);
- Piling operations (detailed in this notice);
- Guard vessel duties (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.

<b>Telephone Number (Day Operations)</b>	+44 (0) 778 706 5714
<b>Emergency Contact (24/7)</b>	+44 (0) 1346 511 838
<b>Marine Coordinator Email</b>	<a href="mailto:MarineCoordination.MORAYEAST@Morayeast.com">MarineCoordination.MORAYEAST@Morayeast.com</a>
<b>Address</b>	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)
<b>Buoy 1 - North Cardinal Buoy,</b> 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
<b>Buoy 2 - Special Mark Buoy,</b> 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)
<b>Buoy 3 - Special Mark Buoy,</b> 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
<b>Buoy 4 - East Cardinal Buoy,</b> 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' 44.094" N	2° 32' 45.804" W	526698.14	6448719.47
<b>Buoy 5 - Special Mark Buoy,</b> 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
<b>Buoy 6 - Special Mark Buoy,</b> 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
<b>Buoy 7 - Special Mark Buoy,</b> 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
<b>Buoy 8 – South Cardinal,</b> 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
<b>Buoy 9 - Special Mark Buoy,</b> 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



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2.2 Boulder Relocation and Gemini Survey (Works Complete).

Moray East has contracted Utility ROV Services Limited to carry out boulder relocation and Gemini Survey works within the Moray East site and export cable corridor (Area 1 and Area 2) as shown in Figure 3 below. Coordinates of the export cable corridor are included in Table 2.

The boulder relocation activities commenced on 4<sup>th</sup> March 2019 and the scope of works are now complete.

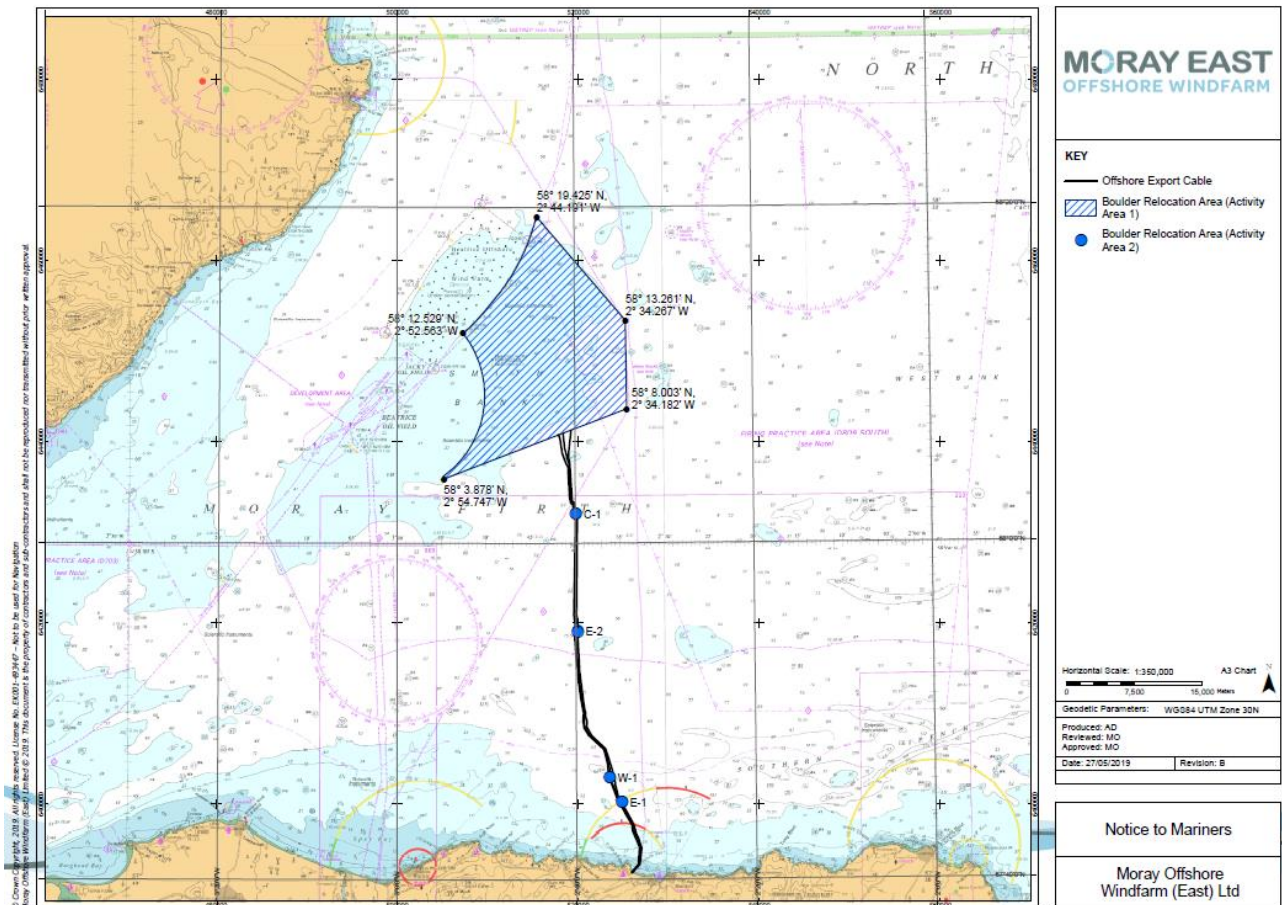


Figure 3 – Boulder relocation works area

Table 2 – Coordinates of the boulder relocation works along the offshore export cable corridor

ID	WGS84	
	Latitude (DD MM.mmm)	Longitude (DD MM.mmm)
C-1	58° 1.751' N	2° 39.987' W
E-1	57° 44.595' N	2° 34.999' W
E-2	57° 54.775' N	2° 39.830' W
W-1	57° 46.100' N	2° 36.341' W

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### 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 19<sup>th</sup> May 2019 and are scheduled to take place over a period of approximately 11 months. Information on the wind turbine foundation locations in the Moray East site and the piling operations anticipated in the next four weeks is provided in Section 3.2 and 3.4 below.

#### 3.1 Vessels associated with the planned works

##### 3.1.1 Pin Pile Support Vessel

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



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3.1.2 Pin Pile Installation Vessel

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



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### 3.2 Foundation Locations

Foundation locations for piling operations are shown in Table 3 below. Locations where piling has been completed are highlighted in figure 5 – Turbine location map.

**Table 3 – 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	
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	
ME-C15	58° 13.043' N	2° 48.955' W	
ME-C16	58° 13.651' N	2° 48.951' W	
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	
ME-D17	58° 14.248' N	2° 47.367' W	
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	



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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	
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	
ME-G15	58° 12.995' N	2° 42.633' W	
ME-G16	58° 13.603' N	2° 42.629' W	
ME-G17	58° 14.211' N	2° 42.624' W	
ME-G18	58° 14.819' N	2° 42.619' W	
ME-G19	58° 15.428' N	2° 42.614' W	
ME-G20	58° 16.036' N	2° 42.609' W	
ME-G21	58° 16.644' N	2° 42.604' W	
ME-G22	58° 17.252' N	2° 42.599' W	
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	
ME-H14	58° 12.374' N	2° 41.059' W	
ME-H16	58° 13.590' N	2° 41.048' W	
ME-H17	58° 14.198' N	2° 41.042' W	
ME-H18	58° 14.806' N	2° 41.037' W	
ME-H19	58° 15.415' N	2° 41.032' W	
ME-H20	58° 16.023' N	2° 41.026' W	
ME-H21	58° 16.631' N	2° 41.021' W	
ME-H22	58° 17.239' N	2° 41.015' W	
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	
ME-I20	58° 16.010' N	2° 39.444' W	
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	
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	
ME-J14	58° 12.347' N	2° 37.899' W	
ME-J16	58° 13.563' N	2° 37.886' W	
ME-J17	58° 14.172' N	2° 37.880' W	02/06/2019
ME-J18	58° 14.780' N	2° 37.874' W	
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	
ME-K11	58° 10.509' N	2° 36.339' W	
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	
ME-L11	58° 10.494' N	2° 34.761' W	
ME-L12	58° 11.103' N	2° 34.754' W	
ME-L13	58° 11.711' N	2° 34.747' W	
ME-E18	58° 14.844' N	2° 45.782' W	
ME-E14	58° 12.411' N	2° 45.798' W	
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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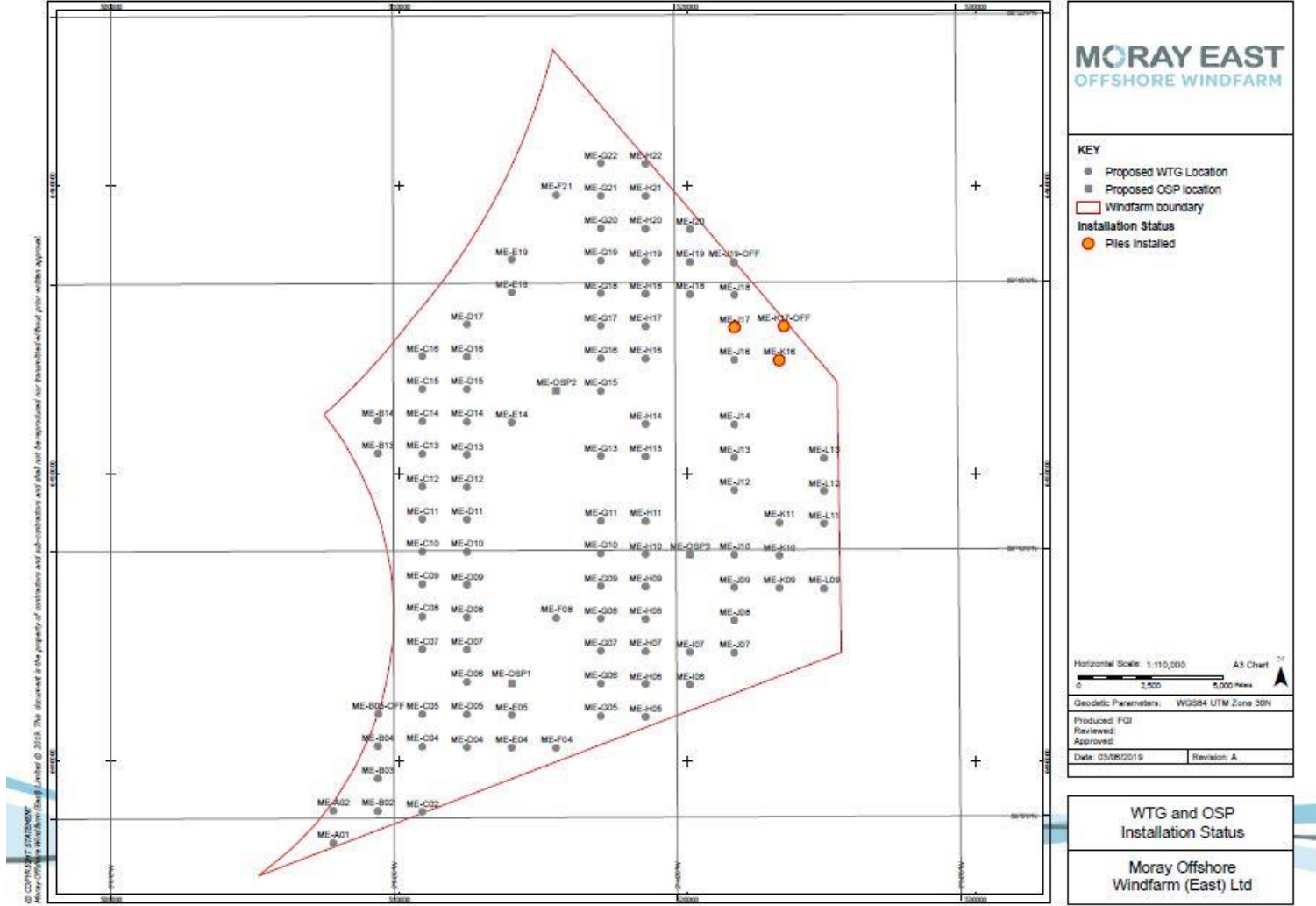


Figure 5 – Turbine location and Installation Status

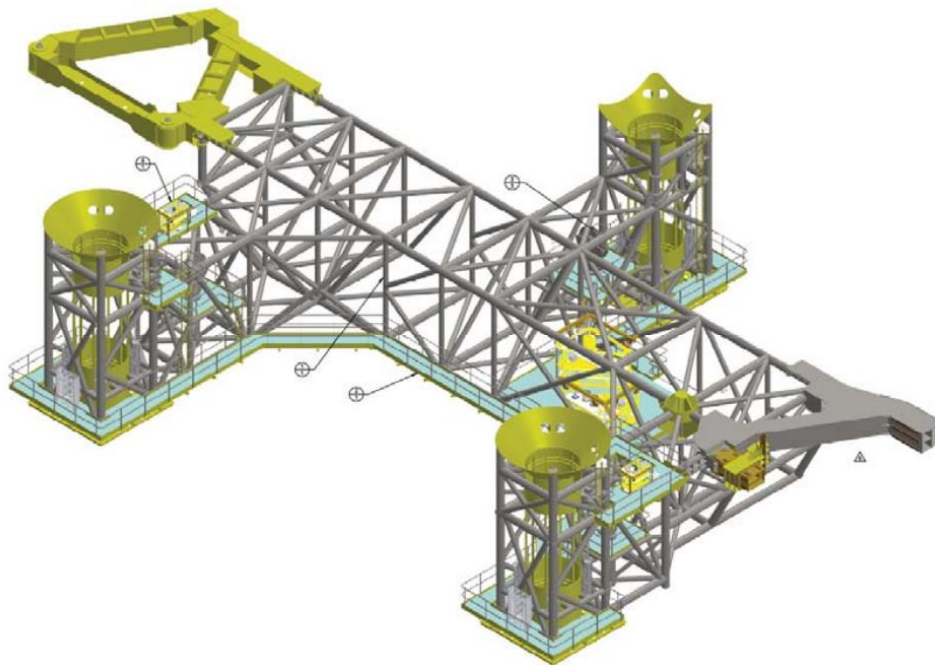
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### 3.3 Piling Operations

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 6 below), where 3 pin piles will be stabbed into the seabed through the piling template 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.



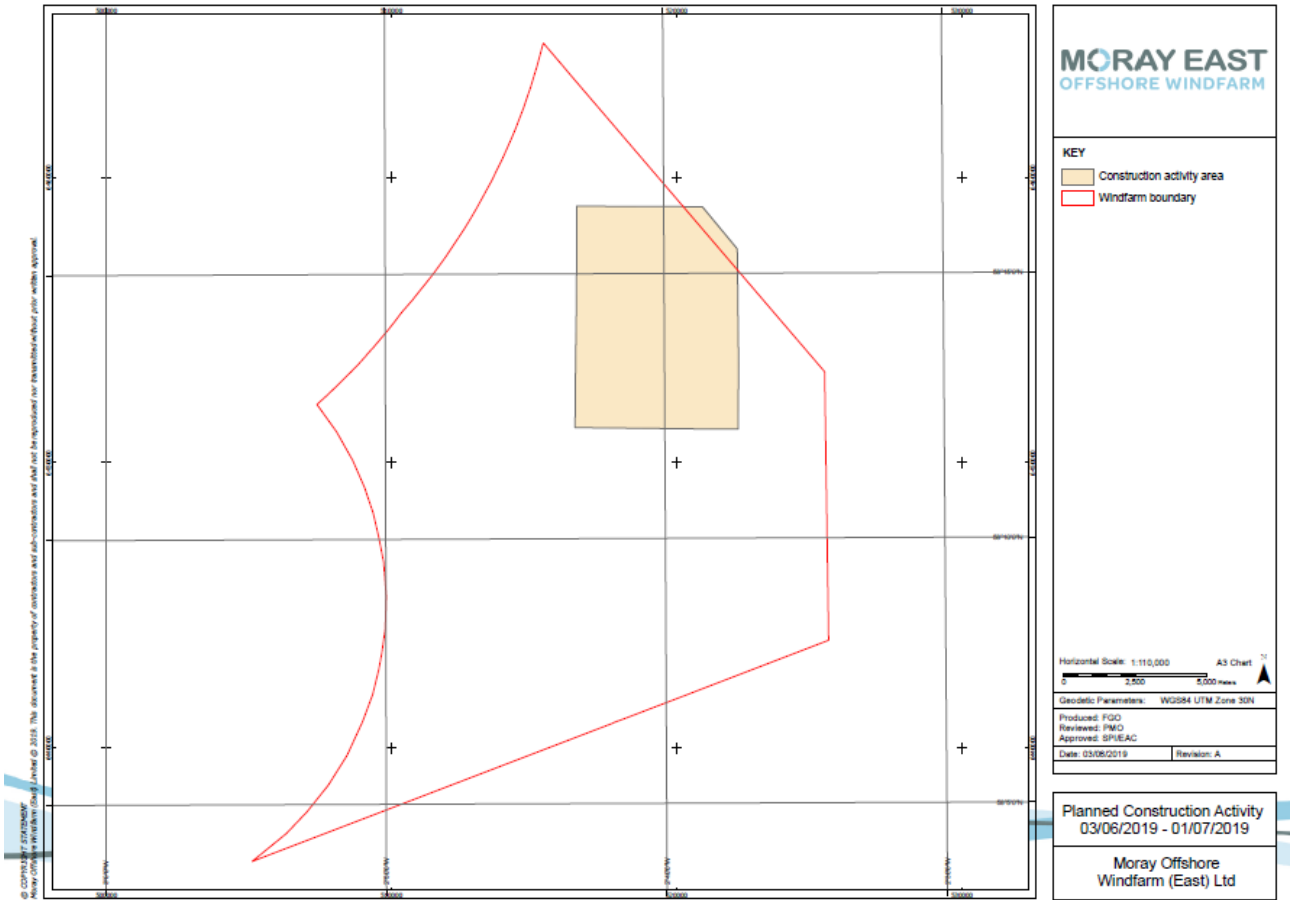
**Figure 6 – Piling Template**

### 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 7 below. Construction works could take place out of this area due to unforeseen circumstances.



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**Figure 7 – Piling activity area expected for between 03<sup>rd</sup> June and 01st July 2019**

The latitude and longitude for the piling activity in the above highlighted area is referenced in the Table 4 below.

**Table 4 – Coordinates for piling activity area expected for between 03<sup>rd</sup> June and 01st July 2019**

Id	Lat (DMS)	Lon (DMS)	Lat (DD)	Lon (DD)
1	58° 16' 17.808" N	2° 43' 7.727" W	58° 16.297' N	2° 43.129' W
2	58° 12' 7.240" N	2° 43' 13.162" W	58° 12.121' N	2° 43.219' W
3	58° 12' 4.389" N	2° 37' 22.912" W	58° 12.073' N	2° 37.382' W
4	58° 15' 28.612" N	2° 37' 22.349" W	58° 15.477' N	2° 37.372' W
5	58° 16' 16.327" N	2° 38' 36.905" W	58° 16.272' N	2° 38.615' 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**

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



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4.2 Guard Vessel – KMS Ability N294

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



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## 5 General Safety Advice

Please be aware that by virtue of its mode of operation and the equipment deployed the MV Apollo and the MV Normand Service (piling operations) will be Restricted in its 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#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.

## 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 Miller** - Brown and May Marine Ltd.

**Email:** [jen.miller@brownmay.com](mailto: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](mailto:williamspence14@yahoo.co.uk)

**Mobile:** +44 7773 880 786

## **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.

## **8 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.