

<b>Project Title</b>	Seagreen Wind Energy Ltd
<b>Document Reference Number</b>	LF000009-MIP-MA-MAN-NOT-0001

# Seagreen Offshore Wind Farm.

## Weekly Notice of Operations 49/2021

**Issue Date – 6<sup>th</sup> December 2021.**

**Notice of Operations on Seagreen Offshore Wind Farm.**

**Work planned for the period 06-12-2021 to 13-12-2021.**

**Construction activities commenced on Seagreen Offshore Wind Farm on Thursday 17<sup>th</sup> December with works at the export cable landfall site. This notice will be updated weekly giving information of the progress and resources involved in the construction of the windfarm. The intention is to give notice of the activities involved in the construction phase of the project. Should anyone have any questions regarding construction operations we kindly ask that you put them forward well in advance.**

The Seagreen Offshore Wind Farm is located in the outer Firth of Forth and Firth of Tay region of the North Sea. The site is situated approximately 17.5 nautical miles East-southeast of the Port of Montrose where the project Marine Coordination Centre will be located during the construction and operational phases. The first phase of the development will consist of 114 suction bucket foundation structures, with associated 114 10MW offshore wind turbine generators, 1 HVAC offshore substation platform, associated inter array and export cabling. The generated power will be transmitted to the National Grid via 3 subsea transmission cables making landfall at Carnoustie, Angus, to the Southwest of the development site. Grid connection will

be achieved at the Tealing onshore substation. The second phase of the project will consist of 36 piled foundation structures, with associated 36 Wind Turbine Generators, associated inter array and export cabling and one additional 1 HVAC offshore substation platform. The phase 2 transmission cable is proposed to make landfall at Cockenzie, East Lothian (subject to appropriate licensing).

The Seagreen development site is highlighted below in red, the export cable corridor is highlighted in blue.

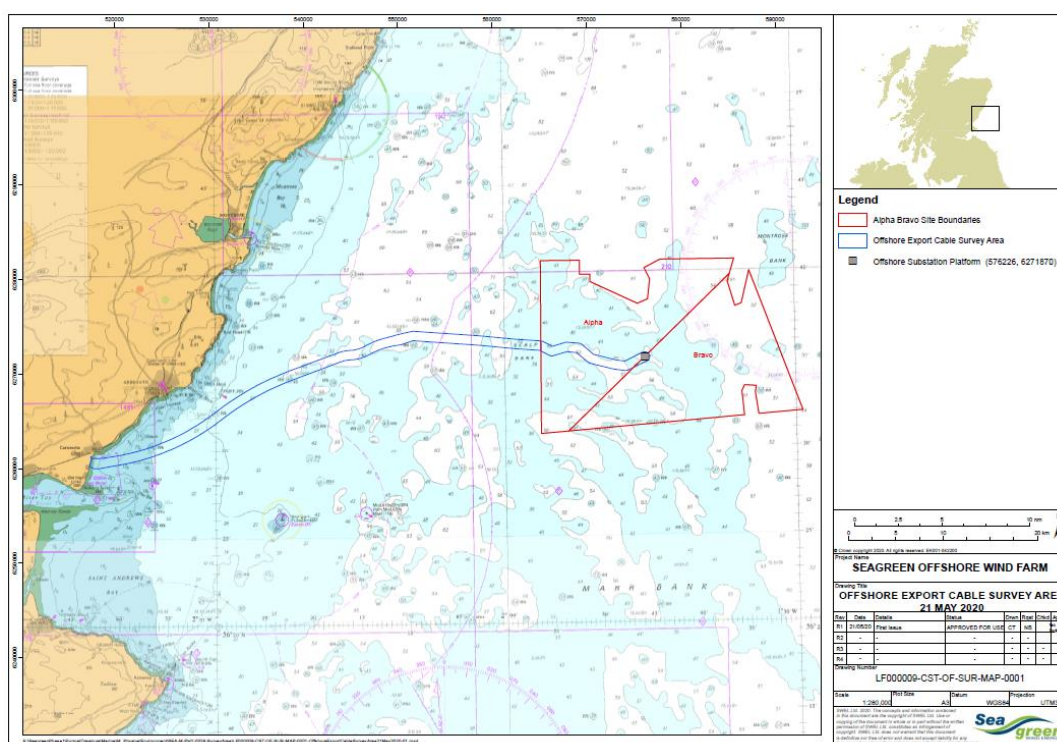


Fig 1 – Seagreen offshore wind farm location and export cable corridor.

## 1. Contact details for Marine Coordination

The following contact can provide more information if required.

Telephone Number (24/7 Operations)	+44 (0) 333 344 5255
Email for Marine Coordinator	seagreenmarinecoordination@sse.com
Address	Seagreen Wind Energy Ltd, Inchbraoch House Montrose Port Authority, South Quay Ferryden, Montrose, Angus DD10 9SL

## 2. Export cable works.

### 2.1 Export Cable Landfall works.

Works continue on the reinstatement of Carnoustie beach revetement. Works on the three export cable protection pipes has recommenced ahead of export cable installation in December. Further details are below in section 2.2. The landfall works area is shown below in Fig 2.



Fig 2 – Landfall works area located at Carnoustie Barry Golf Links.

### 2.2 Nearshore export cable protection and diving works.

Operations on the 3 self-submersible cable protection pipes has recommenced ahead of export cable installation in December. Works will be conducted from the DSV Sophie, details below.

Six temporary rock bag moorings have been placed on the seabed. They will remain in place and be used during the export cable pull-in. These temporary moorings will be surface marked by day-glo pellet buoys. The locations and coordinates of these temporary moorings are shown below in Fig 3 and Table 1.

**Vessel Name – MPV Sophie**

<b>General Description and Dimensions:</b>	Multi-Purpose vessel. 14.9m x 7.0m x 1.0m
<b>Call Sign:</b>	LK7943
<b>MMSI:</b>	258003500
<b>Direct Bridge/ Masters Number</b>	+47 928 35 222
<b>Onshore Representative:</b>	<a href="mailto:anders@dykkerteknikk.no">anders@dykkerteknikk.no</a> ; <a href="mailto:halvor@dykkerteknikk.no">halvor@dykkerteknikk.no</a>





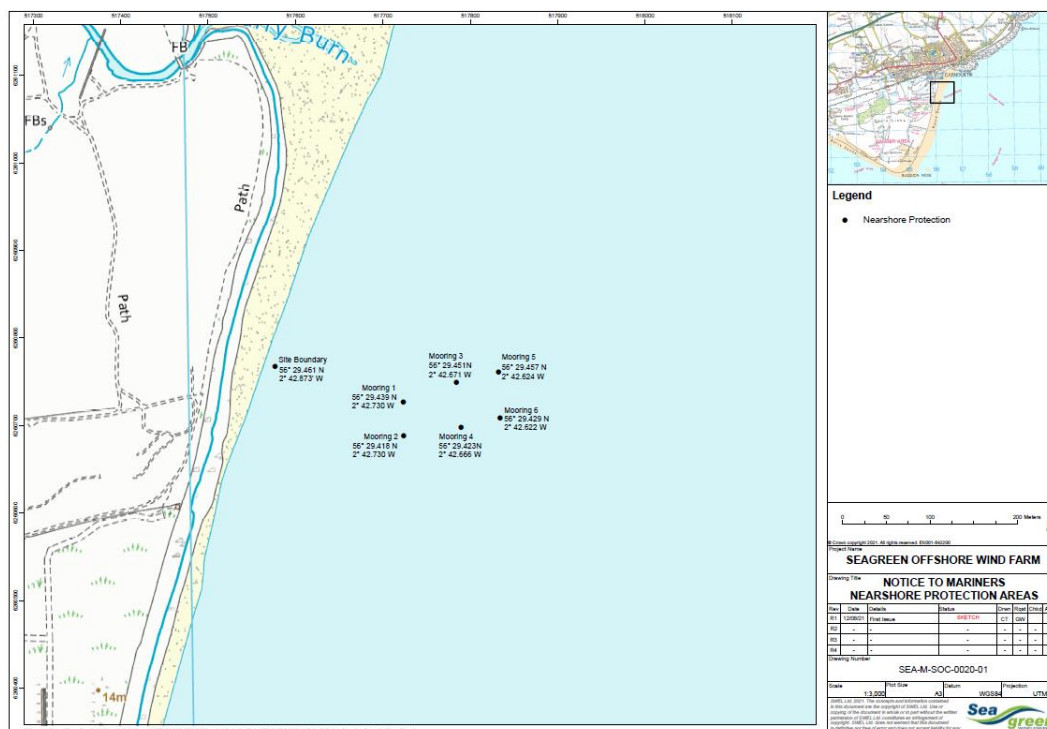


Fig 3

ID	Latitude (DDM WGS 84)	Longitude (DDM WGS 84)
Site Boundary	56° 29.461' N	2° 42.873' W
Mooring 1	56° 29.439' N	2° 42.730' W
Mooring 2	56° 29.418' N	2° 42.730' W
Mooring 3	56° 29.451' N	2° 42.671' W
Mooring 4	56° 29.423' N	2° 42.666' W
Mooring 5	56° 29.457' N	2° 42.624' W
Mooring 6	56° 29.429' N	2° 42.622' W

Table 1 – Temporary mooring coordinates.

### 3. Boulder clearance works.

A boulder clearance campaign will continue within the Seagreen Offshore Windfarm site boundary. The boulder clearance vessel Siem Dorado is equipped with a ROV and integrated tine grab tool. The vessel will relocate boulders which are considered a hazard to the inter array cable routes and areas surrounding the wind turbine generator locations.

Details of the Siem Dorado are shown below.

Vessel Name – Siem Dorado	
General Description and Dimensions:	93.6m x 19.74m
Call Sign:	C6YG5
MMSI:	311031800
Direct Bridge/ Masters Number	
Onshore Representative:	George Cooper Seaway 7 +44 (0) 7545 642881



#### 4. Inter Array Cable Installation.

On behalf of Seagreen Wind Energy Ltd, Seaway 7 will install and trench inter-array cabling between the wind turbine generator foundation structures and offshore sub-station platform within the Seagreen site boundary as shown in fig 1. Operations will commence with cable pull-in and laying operations between wind turbine generator foundation structures, inter array cables will also be installed into the Offshore Substation Platform at a date to be confirmed. The inter array cables will be trenched at a date to be confirmed.

**Siem Day** – This vessel will act as the Installation Support vessel. Cable installation technicians will be deployed to the wind turbine generator foundation structures using the vessels' motion compensated gangway system.

Vessel Name – Siem Day	
<b>General Description and Dimensions:</b>	120.8m x 25.9m x 6.1m
<b>Call Sign:</b>	LAFB8
<b>MMSI:</b>	257651000
<b>Direct Bridge/ Masters Number</b>	+47 919 04982
<b>Onshore Representative:</b>	George Cooper Seaway 7 +44 (0) 7545 642881



**Maersk Connector** – This vessel will lay the inter array cable between adjacent foundation structures.

Prior to cable laying operations commencing Maersk Connector will perform a pre lay grapnel run along the cable route between the two foundations, this is required to remove any debris that may hamper cable lay operations, any debris will be brought ashore for disposal.

Vessel Name – Maersk Connector	
General Description and Dimensions:	138.0m x 28.0m x 5.5m
Call Sign:	OWEB2
MMSI:	219275000
Direct Bridge/ Masters Number	+47 2103 8003 +870 773 805 074
Onshore Representative:	George Cooper Seaway 7 +44 (0) 7545 642881



## 5. Offshore Sub-station jacket installation

Installation of the Seagreen offshore sub-station jacket structure will commence this week. The jacket structure will be lifted from the Heavy Transport Vessel Dongbang Giant 8 by the Heavy Lift Vessel Saipem 7000.

Once in position the Saipem 7000 will upend the jacket structure and set it down on the seabed. The Saipem 7000 will then collect 12 piles from the Dongbang Giant 8 and return to the sub-station platform location.

Saipem 7000 will then upend and stab the piles into the jacket pile sleeves, a hammer will then be utilised to drive the piles into position.

2 piles will be driven into each leg of the platform.

On completion of pile driving the area between the piles and the pile sleeve will be filled with grout.



There shall be four vessels involved in substation jacket installation activities. The Heavy Transport Vessel Dongbang Giant 8 will transport the jacket structure and piles to the work site. The Saipem 7000 will lift the jacket and set it down on the seabed, Saipem 7000 will also install and grout the 12 piles in the jacket legs.

The location and coordinates of the Offshore sub-station jacket are shown below in fig 4 and table 2.

Details of the vessels involved are also shown below.

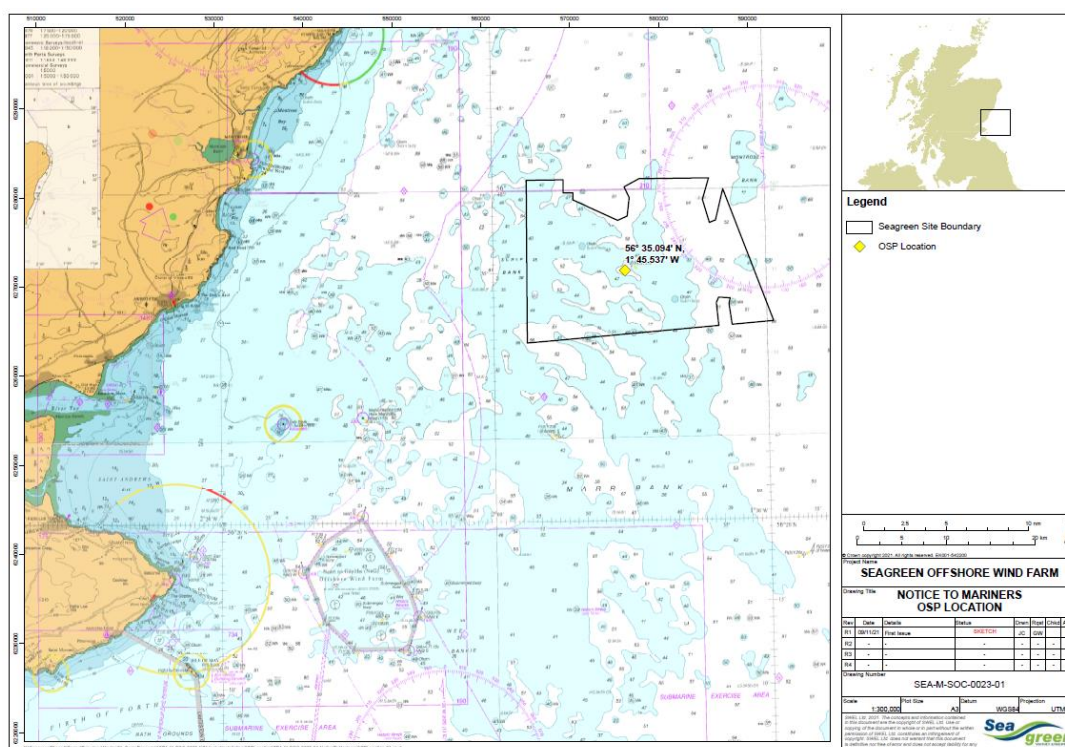




Fig 4

Sub-station jacket	Latitude (DDM WGS 84)	Longitude (DDM WGS 84)
	56° 35.094' N	1° 45.537' W

Table 2

Vessel Name – Saipem 7000	
General Description and Dimensions:	Heavy lift vessel: LOA 129.9 x 87m Beam
Call Sign:	C6NOS
MMSI:	219275000
Direct Bridge/ Masters Number	Inmarsat 00870773163946 V-Sat 00390252027520

<b>Onshore Representative:</b>	Ram Jeyaraman ram.jeyaraman@petrofac.com
	
<b>Vessel Name – Dongbang Giant 8</b>	
<b>General Description and Dimensions:</b>	Heavy Transport Vessel 165m LOA, 42m beam, 5.7m draught
<b>Call Sign:</b>	DSRM5
<b>MMSI:</b>	441915000
<b>Direct Bridge/ Masters Number</b>	Inmarsat : +870 7731 10678 Vsat : +82 70 8894 1288
<b>Onshore Representative:</b>	Ram Jeyaraman ram.jeyaraman@petrofac.com
	

**Vessel Name – BB Octopus**

<b>General Description and Dimensions:</b>	Tug/Supply vessel 78.3m LOA, 17.3m beam, 6.5m draught
<b>Call Sign:</b>	LFMZ
<b>MMSI:</b>	258184000
+4751229006	+47 51229006
<b>Onshore Representative:</b>	Ram Jeyaraman ram.jeyaraman@petrofac.com



**Vessel Name – Bugsier 10**

<b>General Description and Dimensions:</b>	Tug LOA, 12.6m beam, 6m draught	32m
<b>Call Sign:</b>	DFWB2	
<b>MMSI:</b>	218321000	
<b>Direct Bridge/ Masters Number</b>	0087 0764933997	
<b>Onshore Representative:</b>	Ram Jeyaraman ram.jeyaraman@petrofac.com	



## 6. Wind Turbine Generator Installation & Commissioning.

On behalf of Seagreen Wind Energy Ltd, MHI Vestas Offshore Wind will commence the installation and commissioning of 114 wind turbine generators.

There shall be four vessels utilised during this operation. The Jack up Vessel **Wind Osprey** will be the main installation vessel. Wind Osprey will transport the WTG components to site, jack up to the required height next to the foundation structure and install the WTG components.

The Service Operation Vessel (SOV) **Acta Centaurus** will provide accommodation for the WTG commissioning technicians. Personnel will utilise the Acta Centaurus's walk to work gangway system to access the WTG structures for commissioning activities.

Two Crew Transfer Vessels (CTV's), **HST Euan** and the **HST Harri** will support the above two vessels during installation and commissioning activities.

Wind Turbine Generator installation activities shall continue until late 2022.

Vessel Name – Wind Osprey	
General Description and Dimensions:	JUV 161.3m LOA, 49.03m beam, 5.6m draught
Call Sign:	5BUF3
MMSI:	210286000
Satellite communications details	V-Sat Number - +44 203 005 68630 / +44 203 005 68631
Direct Bridge/ Masters Number	+45 5167 1390
Onshore Representative:	Morten Guldberg – Installation Manager +45 314 314 63





**Vessel Name – Acta Centaurus**

<b>General Description and Dimensions:</b>	SOV DP 2 Vessel 93.4m LOA, 18.0m beam, 5.6m draught
<b>Call Sign:</b>	PBOI
<b>MMSI:</b>	244341000
<b>Satellite communications details</b>	V-Sat Number - +31 (0) 85 30 12 161
<b>Direct Bridge/ Masters Number</b>	Mobile - +31 (0) 6 139 733 63
<b>Offshore Fisheries Liaison Officer</b>	Alan Addison - +44 (0) 7734 033742
<b>Onshore Representative:</b>	Paul Grant – Commissioning Manager +44 7587630374



**Vessel Name – HST Harri**

<b>General Description and Dimensions:</b>	CTV- 27.0m LOA, 11.0m beam, 2.4m draught
<b>Call Sign:</b>	MGBN4
<b>MMSI:</b>	23202433
<b>Direct Bridge/ Masters Number</b>	+441792272235. euan@highspeedtransfers.com
<b>Onshore Representative:</b>	Paul Grant – Commissioning Manager +44 7587630374



**Vessel Name – HST Euan**

<b>General Description and Dimensions:</b>	CTV- 27.0m LOA, 10.0m beam, 2.4m draught
<b>Call Sign:</b>	MGQ03
<b>MMSI:</b>	232025959
<b>Direct Bridge/ Masters Number</b>	+447939930258. harri@highspeedtransfers.com
<b>Onshore Representative:</b>	Paul Grant – Commissioning Manager +44 7587630374



## 7. Construction progress update.



## 8. Guard Vessel Deployment.

In line with foundation installation activities commencing Seaway 7 has deployed a site Guard Vessel. The Guard vessel will make six hourly VHF radio broadcasts containing information regarding the Seagreen development including installation activity, safety zone information and site demarcation buoyage information. The Guard Vessels' shall be relieved regularly, the Guard Vessel Renown is on station until further notice.

Vessel Name – GV Renown FR246	
<b>General Description and Dimensions:</b>	Fishing vessel. 14.9m x 7.0m x 1.0m
<b>Call Sign:</b>	GJLQ
<b>MMSI:</b>	235001860
<b>Direct Bridge/ Masters Number</b>	+44 7542 772777 renownfr246@hotmail.co.uk
<b>Onshore Representative:</b>	Alastair Macdonald <a href="mailto:Alastair.Macdonald@Subsea7.com">Alastair.Macdonald@Subsea7.com</a>





## 9. Offshore Fisheries Liaison Officers.

During the construction phase of the Seagreen project there will be Offshore Fisheries Liaison Officers (OFLO) deployed on selected construction vessels. The principal role of the OFLO is to establish and maintain effective communications with any fishing vessels encountered and to monitor compliance with good practice guidelines whilst doing so. The OFLO will record details of any fishing activity in and around the site including fishing vessels, gear and communications with fishing vessels and will provide regular updates to the Seagreen FLO. Please contact Seagreen Marine Coordination for further information.

## 10. Safety Zones.

Following consideration by Scottish government ministers it has been agreed that during the construction phases of the Seagreen development mandatory rolling 500m safety zones will be established around each Wind Turbine Generator and/or their foundations whilst construction works are in progress, as indicated by the presence of a construction vessel. The safety zones will be triggered whenever a vessel is on station at a WTG and undertaking construction activities.

In addition, mandatory pre commissioning 50m safety zones will be established around each Wind Turbine Generator and/or their foundations when construction works have been completed but prior to Wind Farm commissioning or where construction works have only been partially completed. These safety zones will be



active at any structure during the construction phase where a construction vessel is not present at a Wind Turbine Generator.

## 11. Website

The official website for Seagreen Offshore Wind Farm can be found at

<https://seagreenwindenergy.com>

This contains all Seagreen Weekly Notices of Operations and Notices to Mariners, together with a large amount of general information about the project.






There is also a Twitter feed at [@seagreenwind](https://twitter.com/seagreenwind)













## 12. Distribution List

A central list of recipients is maintained by Seagreen Marine Coordination, if you are not the appropriate recipient or do not wish to receive these notices please contact Marine Coordination as per the details in section 1 of this notice.

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## 13. Seagreen weekly vessel report.

Seagreen Offshore Windfarm Vessels & Operators									
Reference to Marine Licence Conditions 3.1.2 (OVF Alpha and Bravo ML), 3.1.2 (OTA ML) and 3.1.2 (Open Cut at Landfall ML)									
Vessel Data Matrix OVF/OTA/Open Cut at Landfall									
	Vessel Picture	Vessel Name / Flag	Type / Function	Operator	Contact / contact details	Call sign / MMSI / IMO	LDA (m) Beam (m) L (m)	Date on Site	Marine Licence(s) applicable
1		GV Renown	Guard Vessel	Seaway7	George Cooper Seaway 7 +44 (0) 7545 642881	JULQ 235001650	27m x 8m	26/10/2021	OVF Alpha & Bravo ML
2		Dong Bang Giant 8	Cargo	Petrofac	Ram Jegaraman ram.jegaraman@petrofac.com	DSRM5 441915000	165.0m x 42m	19/11/2021	OTA ML
3		Seacat Volunteer	CTV	SWEL	Graeme Vatters Lead Marine Coordinator +44 (0) 7932 229828	2HCP6 235102528	25.1m x 8m	15/10/2021	OVF Alpha & Bravo ML
4		Siem Dag	Installation Support Vessel	Seaway7	George Cooper Seaway 7 +44 (0) 7545 642881	LAFB8 257651000	129.8x25.9x6.1	09/11/2021	OVF Alpha & Bravo ML
5		Maersk Connector	Cable Layer	Seaway7	George Cooper Seaway 7 +44 (0) 7545 642881	OWEB2 219275000	138x28x5.5	13/11/2021	OVF Alpha & Bravo ML

6		Siem Dorado	Bolder Clearance	Seaway 7	George Cooper Seaway 7 +44 (0) 7545 642881	C6YG5 31031800	93.6m x 19.74m	17/11/2021	OVF Alpha & Bravo ML
7		Saipem 7000	Heavy Lift Vessel	Seaway7	Ram Jeyaraman ram.jeyaraman@petrofac.com	C6N05 309461000	175m x 87m	01/10/2021	OTA ML
8		Bugsier 10	Tug	Petrofac	Ram Jeyaraman ram.jeyaraman@petrofac.com	DFWB2 218321000	3.0m x 13.0m	03/12/2021	OTA ML
9		AHT BB Octopus	Tug	Petrofac	Ram Jeyaraman ram.jeyaraman@petrofac.com	LFMZ 258184000	78.3m x 17.2m	17/11/2021	OTA ML
10		Aota Centaurus	Multi Purpose Offshore Vessel	Vestas	Paul Grant Vestas +44 7587630374	PBCI 244341000	63.4 x 18m	06/11/2021	OTA ML
11		HST Harri	CTV	Vestas	Paul Grant Vestas +44 7587630374	MGBM4 232024313	27 x 11m	06/11/2021	OTA ML
11		HST Harri	CTV	Vestas	Paul Grant Vestas +44 7587630374	MGBM4 232024313	27 x 11m	06/11/2021	OTA ML
12		HST Euan	CTV	Vestas	Paul Grant Vestas +44 7587630374	MGQD3 232029959	27 x 10m	06/11/2021	OTA ML
13		Wind Osprey	VTG Jack-up Vessel	Vestas	Morton Guldberg Vestas +45 514 514 63	SDUF3 210286000	161.3 x 49.03m	06/11/2021	OTA ML
14		Sea Gull	PSV	Seaway7	George Cooper Seaway 7 +44 (0) 7545 642881	LAGK8 257504000	88.08 x 20m	06/11/2021	OTA ML
15		MPV Sophie	Multi Purpose Vessel	Nexans AS	*Per-Kristian Pedersen Nexans Senior Project Engineer +47 476 40 021 Per-Kristian.Pedersen@nexans.com	*LK7943 25800350*	14.3m x 7m x 1m	20/08/2021	OTA ML & Open Cut at Landfall ML
16		Manor Venture	CTV	Seaway 7	George Cooper Seaway 7 +44 (0) 7545 642881	MAV16 23200074444	27m x 12m x 2.5m	03/12/2021	OVF Alpha & Bravo ML