

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

Seagreen Offshore Wind Farm.

Weekly Notice of Operations 36/2021

Issue Date – 06th September 2021.

Notice of Operations on Seagreen Offshore Wind Farm.

Work planned for the period 06-09-2021 to 12-09-2021.

Construction activities commenced on Seagreen Offshore Wind Farm on Thursday 17th 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 yellow.

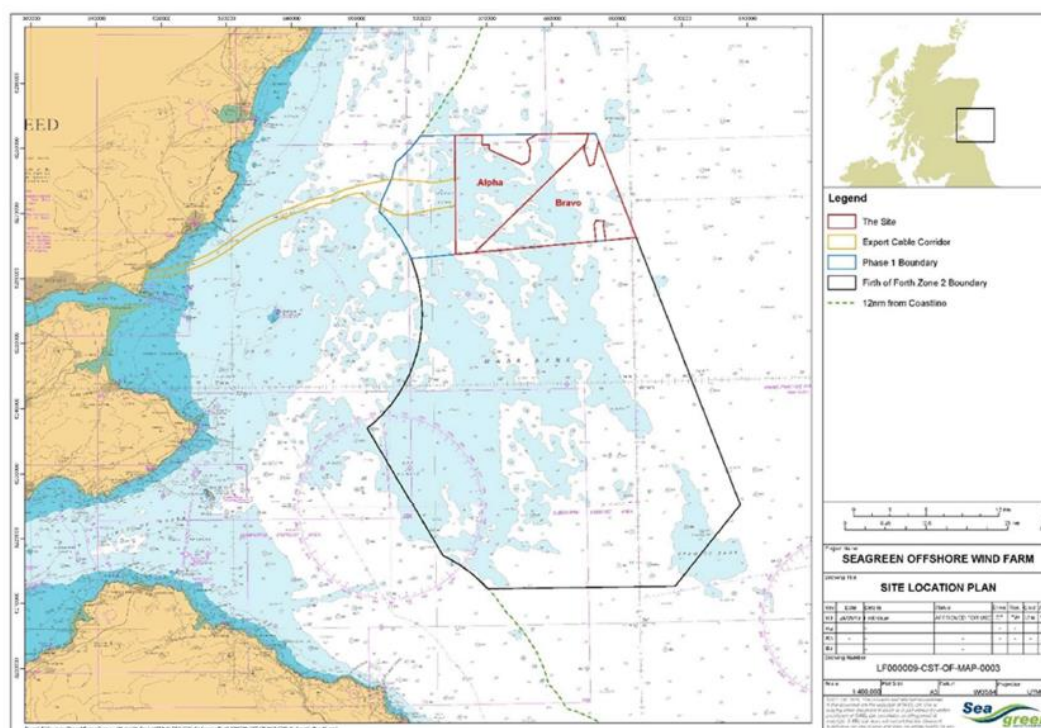


Fig 1 – Seagreen offshore wind farm location and export cable corridor.

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. Ongoing Operations

2.1 Export Cable Landfall works.

Export cable nearshore protection and diving support operations will continue this week. All sheet piles have been removed and work continues on the reinstatement of Carnoustie beach revetement. 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.

On behalf of Seagreen Wind Energy Ltd, Nexans Norway Dykkerteknikk AS will deliver nearshore protection services and diving assistance in preparation for the pull-in of three export cables at the Carnoustie export cable landfall site.

Works continue at the export cable landfall site at Carnoustie beach as shown above in fig 2. A spool piece has been fitted to each cable duct. A 272m self-submersible cable protection pipe will then be connected to each of the 3 export cable ducts. The 3 self-submersible cable protection pipes will then be trenched awaiting export cable pull-in at a date to be confirmed.

Installation activities and diving operations will take place from the MPV Sophie. Tug Cormorant & multi-cat Aileen M will also be used to tow the 272m self-submersible cable protection pipes from Dundee Harbour.

Six temporary rock bag moorings have been placed on the seabed. They will be used during the self-submersible cable protection pipe installation and 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	
General Description and Dimensions:	Multi Purpose vessel. 14.9m x 7.0m x 1.0m
Call Sign:	LK7943
MMSI:	258003500
Direct Bridge/ Masters Number	+47 928 35 222
Onshore Representative:	anders@dykkerteknikk.no ; halvor@dykkerteknikk.no



Vessel Name – Tug Cormorant	
General Description and Dimensions:	Tug. 11.95m x 5.5m x 1.7m

Call Sign:	MIFOF7
MMSI:	232032672
Direct Bridge/ Masters Number	+47 928 35 222
Onshore Representative:	anders@dykkerteknikk.no ; halvor@dykkerteknikk.no



Vessel Name – Aileen M

General Description and Dimensions:	Multi Cat. 25m x 9.9m
Call Sign:	2DAL6
MMSI:	235077287
Direct Bridge/ Masters Number	+44 79176233408
Onshore Representative:	anders@dykkerteknikk.no ; halvor@dykkerteknikk.no



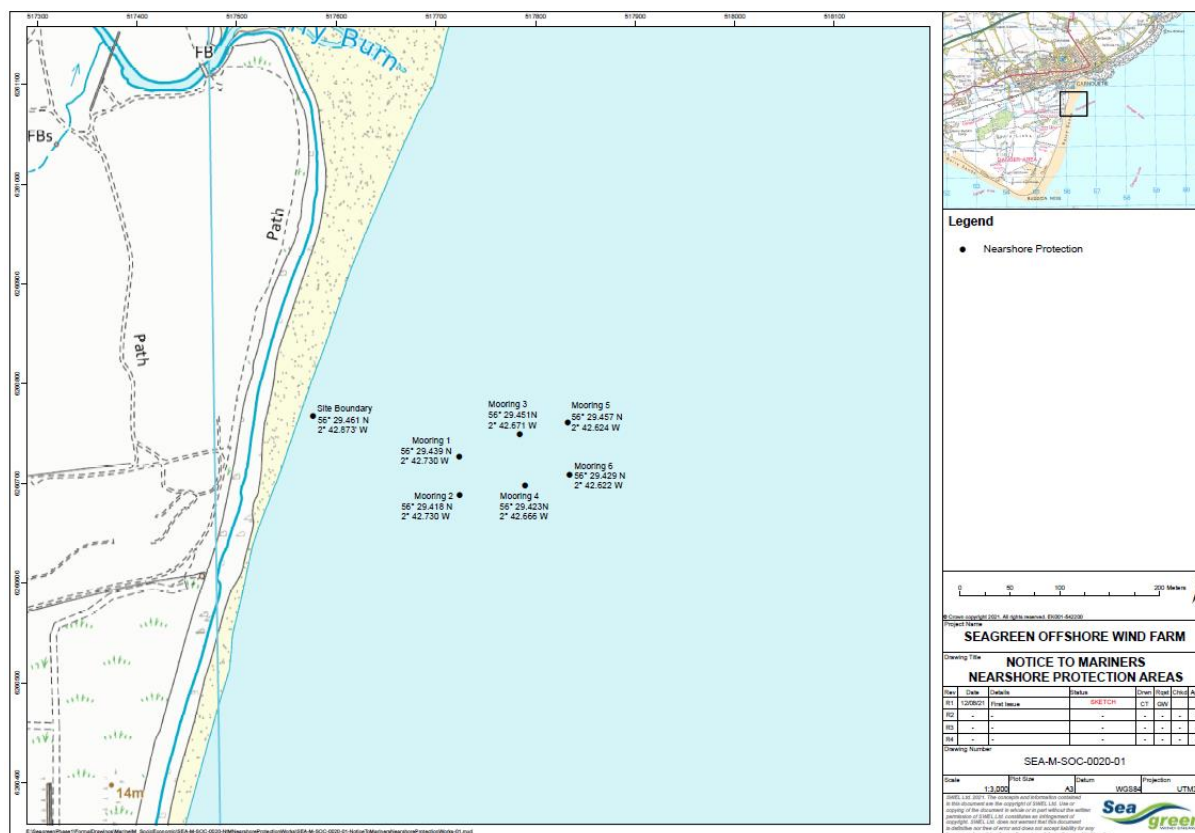


Fig 3

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. Pre-construction Unexploded Ordnance and Boulder clearance works.

3.1 Unexploded Ordnance & Boulder clearance Geophysical Survey works.

An unexploded ordnance and boulder clearance geophysical survey will take place within the Seagreen Offshore Wind Farm site boundary. The survey vessel, Kommandor Iona has demobilised and a replacement vessel will arrive on site at a date to be confirmed. The vessel will utilise towed array

equipment with side scan sonar, sub bottom profiler and magnetometer to complete the survey of the remaining WTG locations.

Survey works are expected to be concluded by September 21 however this period may be extended due to weather conditions.

The coordinates of the Seagreen site boundary are below in Table 2 and shown in Fig 1. Details of the replacement survey vessel will be promulgated in due course.

ID	Latitude (DDM WGS 84)	Longitude (DDM WGS 84)
01	56° 40.631' N	1° 43.829' W
02	56° 40.606' N	1° 36.151' W
03	56° 39.317' N	1° 36.884' W
04	56° 37.913' N	1° 36.151' W
05	56° 39.923' N	1° 34.627' W
06	56° 31.903' N	1° 29.311' W
07	56° 31.724' N	1° 33.882' W
08	56° 32.983' N	1° 34.195' W
09	56° 33.051' N	1° 35.583' W
10	56° 31.666' N	1° 35.352' W
11	56° 30.803' N	1° 56.378' W
12	56° 40.653' N	1° 56.226' W
13	56° 40.648' N	1° 52.170' W
14	56° 39.836' N	1° 51.101' W
15	56° 38.138' N	1° 46.249' W
16	56° 38.383' N	1° 45.181' W
17	56° 40.157' N	1° 45.487' W

Table 2 – Site Boundary coordinates.

3.2 Potential Unexploded Ordnance Identification Survey

A Potential Unexploded Ordnance (pUXO) identification survey will take place within the Seagreen Offshore Wind Farm site boundary. The vessel, Glomar Worker will utilise a ROV mounted magnetometer and video camera to conduct the survey of numerous targets to identify any possible UXO risk. Wind Turbine Generator positions, Inter Array Cable routes and 1 Offshore Sub-station location within the Seagreen site boundary will be surveyed.

Survey works are expected to be concluded by September 21 however this period may be extended due to weather conditions.

The coordinates of the Seagreen site boundary are above in Table 1 and shown in Fig 1. Details of the survey vessel, Glomar Worker are shown below.

Vessel Name – Glomar Worker	
General Description and Dimensions:	Survey vessel. 60.0m LOA, 15.6m beam, 4.5m draught
Call Sign:	3EKK8
MMSI:	352110000
Satellite communications details	+87 0773281351 & +31 852088024
Direct Bridge/ Masters Number	+31 645027717
Onshore Representative:	Alexandru Lepadatu, Alexandru.Lepadatu@subsea7.com +31(0)61 057 48 75
Onboard Survey rep.	Alice Bamkin +44 (0)7845 554353



3.3 Boulder removal campaign

A boulder removal campaign will take place within the Seagreen Offshore Windfarm site boundary. The boulder removal vessel MMA Pinnacle is equipped with a ROV and integrated tine grab tool. The vessel will relocate boulders which are considered a hazard from the inter array cable routes and areas surrounding the wind turbine generator locations.

The works commenced on 30th August and should be concluded in approximately six weeks.

Details of the MMA Pinnacle are shown below.

Vessel Name – MMA Pinnacle	
General Description and Dimensions:	Multi Purpose Supply Vessel with DP 2 capabilities
Call Sign:	9WNM1
MMSI:	533130779
Satellite communications details	+65 3163 2965
Direct Bridge/ Masters Number	+65 901 80775
Onshore Representative:	Guy Butler
On-board Survey rep.	Barry Sutherland



4. Deployment of Site Demarcation and Wave Data Buoys.

On behalf of Seagreen Wind Energy Ltd. Seaway 7 will deploy temporary construction site demarcation and wave data buoys. The Seagreen offshore wind farm will be marked and lit as a construction area during the construction phase of the project via the use of temporary construction buoyage. This will be a combination of cardinal marks and special marks as shown in Figure 1. Coordinates and specifications of each buoy are then given in tables 1 & 2. At NLB request, the cardinal marks at each corner of the development site will transmit via Automatic Identification System (AIS). Three wave data buoys will also be deployed in the coordinates listed in table 1 and shown in Fig 1. These buoys will provide real time wave data within the development site. The supply vessel Kingdom of Fife is expected on site to commence the buoyage installation on or around the 7th of September, further details of the Kingdom of Fife are below in section 4.2.

4.1 Location of Equipment

Demarcation buoys will be deployed to mark the boundary of the Seagreen offshore wind farm. Furthermore, three wave data buoys will be deployed inside the site boundary. The coordinates and characteristics of the buoyage are listed in tables 1 & 2 and shown in Fig 1.

ID	Latitude (DDM WGS 84)	Longitude (DDM WGS 84)
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North Cardinal Mark 1 AIS	56° 40.578' N	1° 56.746' W
North Cardinal Mark 2	56° 40.710' N	1° 38.857' W
East Cardinal Mark 1 -AIS	56° 38.616' N	1° 33.305' W
East Cardinal Mark 2 -AIS	56° 31.848' N	1° 29.282' W
South Cardinal Mark - AIS	56° 30.798' N	1° 56.137' W
Special Mark 1	56° 40.632' N	1° 50.517' W
Special Mark 2	56° 40.746' N	1° 44.622' W
Special Mark 3	56° 35.232' N	1° 30.473' W
Special Mark 4	56° 31.374' N	1° 35.618' W
Special Mark 5	56° 31.107' N	1° 42.151' W
Special Mark 6	56° 30.870' N	1° 49.017' W
Special Mark 7	56° 33.774' N	1° 57.149' W
Special Mark 8	56° 37.176' N	1° 57.182' W
Wave data buoy 1	56° 36.202' N	1° 46.937' W
Wave data buoy 2	56° 40.107' N	1° 45.231' W
Wave data buoy 3	56° 31.510' N	1° 42.394' W

Table 1 – Buoy coordinates

Buoy	Light Characteristics
North Cardinal	Quick (Q) White (W) 3m, 5 NM.
East Cardinal	Very (V) Q (3)5s White 3m, 5 NM.
South Cardinal	Very(V) Q(6) + Long (L) Flash 10s White 3m, 5 NM
Special Mark	Flashing Yellow 5s, 3m, 5 NM
Wave data buoy	Flashing (Y) 5 (20s)

Table 2 – Light characteristics

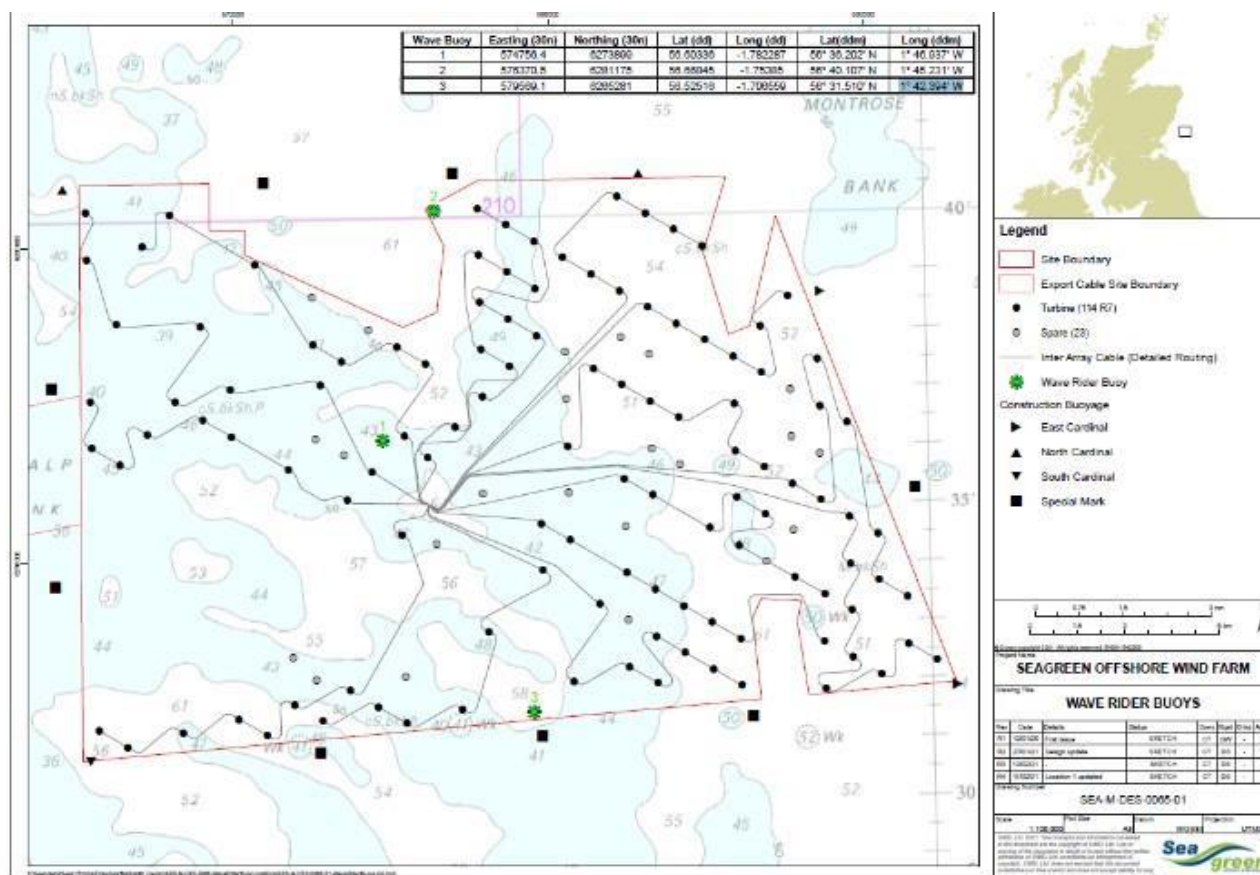


Fig 1 – Demarcation and wave data buoys location.

4.2 Vessel associated with this activity

Vessel Name – Kingdom of Fife	
General Description and Dimensions:	Supply vessel. 61.2m LOA, 13.8m beam
Call Sign:	2BKR2
MMSI:	235066953
Satellite communications details	V-Sat – 01592 320180
Direct Bridge/ Masters Number	+44 (0) 07595 070262
Onshore Representative:	Alastair Macdonald, Alastair.macdonald@subsea7.com +44 7714 983369

On-board installation rep.

Alistair Noble - +44 7833 323939



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.

5. 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)

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Document Reference

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6. Seagreen weekly vessel report.



Seagreen Offshore Windfarm
Vessels & Operators

Insert date 06-09-21

Reference to Marine Licence
Conditions 3.1.2 (OWF Alpha and
Bravo ML), 3.1.2 (OTA ML) and
3.1.2 (Open Cut at Landfall ML)



Vessel Data Matrix OWF/OTA/Open Cut at Landfall

No	Vessel Picture	Vessel Name / Flag	Type / Function	Operator	Contact / contact details	Call sign / MMSI / IMO	LOA (m) Beam (m) Draft (m)	Date on Site	Marine Licence(s) applicable
1		MPV Sophie	Multi Purpose Vessel	Nexans AS	Per-Kristian Pederson Nexans Senior Project Engineer +47 476 40 021 Per-Kristian.Pedersen@nexans.com	LK7943 25800350	14.9m x 7m x 1 m	20/08/2021	OTA ML & Open Cut at Landfall ML
2		Cormorant	Tug	Nexans AS	Per-Kristian Pederson Nexans Senior Project Engineer +47 476 40 021 Per-Kristian.Pedersen@nexans.com	MIFOF7 232032672	12m x 5m x 1.7m	06/09/2021	OTA ML & Open Cut at Landfall ML
3		Aileen M	Multi-cat	Nexans AS	Per-Kristian Pederson Nexans Senior Project Engineer +47 476 40 021 Per-Kristian.Pedersen@nexans.com	2DAL6 235077287	25m x 9.9m	06/09/2021	OTA ML & Open Cut at Landfall ML