



NOTICE TO MARINERS

Offshore Wind Power Limited West of Orkney Windfarm Reconnaissance Geophysical Survey 2021

Rev 01 – Issued: 03/08/2021

Mariners are advised that a survey vessel and equipment will be used in the nearshore coastal sea areas at 9 potential cable landfall locations in the Caithness and Orkney areas.

Nearshore Geophysical survey work will be carried out by SEP Hydrographic using survey vessel 'Pulsar' from 17th August 2021.

Launched	2006
Length (LOA)	7.2m
Beam	2.7m
Draft	0.3m
Cruising Speed	18 knots
Operating Code	MCA Cat 3
Accommodation	12hr



Vessel: 'Pulsar'

IMO: N/A

Owner: SEP Hydrographic

GSM: +44 (0) 7858 456 352

Email: info@sephydrographic.com

During surveying activities at each survey area the vessel will have restricted ability to manoeuvre and approaching vessels are requested to pass at a safe speed and distance. The proposed survey is an initial reconnaissance survey and therefore has a relatively small equipment list and does not require equipment such as USBL or SSS. All the



sensors used for this campaign are hull mounted and there is no need for an underwater positioning system or towed equipment.

Project Description

The West of Orkney Windfarm survey will be conducted by SEP Hydrographic on behalf of Offshore Wind Power Limited.

Nearshore Geophysical Survey Task

A reconnaissance geophysical survey will be carried out in the vicinity of 10 potential cable landfall locations which are currently under consideration for a future windfarm development (see Figure 1) and coordinates of each of the survey areas are provided in Appendix A.1

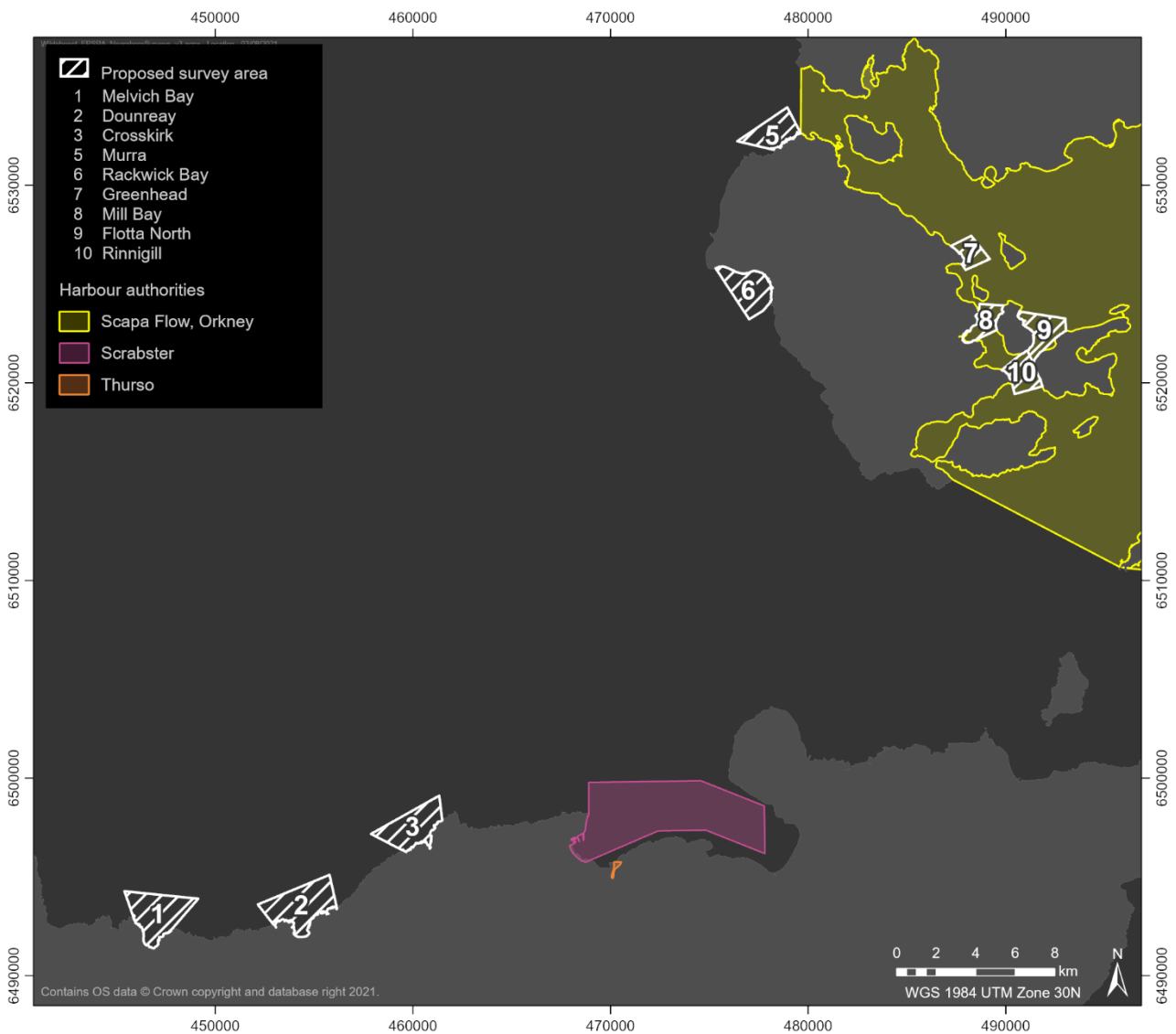


Figure 1: Proposed survey areas



Activities will include use of the following survey kit at each of the 9 cable landfalls:

- Multi Beam Echo Sounder (MBES) - used to obtain detailed 3-dimensional (3D) maps of the seafloor which show water depths. They measure water depth by recording the two-way travel time of a high frequency pulse emitted by a transducer.
- Sub Bottom Profiler (SBP) - used to identify and characterise layers of sediment under the seafloor. A transducer emits a sound pulse vertically downwards towards the seafloor, and a receiver records the return of the pulse once it has been reflected off the seafloor.
- Sound Velocity Profiler (SVP) - The SVP continuously emits high frequency pulses as it is lowered towards the seafloor in order to measure the speed of sound within the water column. This technology also makes use of sonar to determine how quickly sound attenuates in the marine environment, which can aid in calibrating geophysical survey equipment.

Mariners are advised to keep a safety clearance of the vessel of no less than 500m.

Port of Operation

SEP Hydrographic will mobilise / operate out of the port of Scrabster (Pentland), Stromness (Orkney) – Please note we intend to use smaller ports near locations in Orkney.

Survey duration

The survey window will commence on 17th August 2021 and run through to end of September. The total duration for survey activity is expected to take 22 days. The survey vessel will be present in the region for an overall period of up to 40 days allowing for time to travel between the survey sites and an indicative 70 % downtime for weather and technical constraints.

Contact Details for Fisheries Liaison

Fisheries Liaison is being carried out by Xodus Group, for all fisheries enquires please contact Xodus Group Fisheries Liaison Officer (FLO) Gareth Jones.

Telephone number: +44 (0)1224 219996

Email: OWPLFisheries@xodusgroup.com

Offshore Contact Details:

Further enquiries should be addressed to the following people in the following order:

1. Emma Lamont, emma@sephydrographic.com , +44 (0) 7858 456 352

2. Kenny Walsh, Pulsar@sephydrographic.com , +44 (0) 7879 881 739



A.1 Coordinates of survey areas

Cable landfill survey area	Coordinates for survey area (WGS 84)					
	Decimal degrees		Degrees decimal minutes		Degrees minutes seconds	
	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude
Survey area 1 - Melvich Bay	58.585441	-3.938949	58° 35.126' N	3° 56.337' W	58° 35' 7.586" N	3° 56' 20.215" W
	58.582488	-3.874704	58° 34.949' N	3° 52.482' W	58° 34' 56.956" N	3° 52' 28.936" W
	58.568131	-3.897863	58° 34.088' N	3° 53.872' W	58° 34' 5.270" N	3° 53' 52.306" W
	58.559556	-3.907654	58° 33.573' N	3° 54.459' W	58° 33' 34.401" N	3° 54' 27.556" W
	58.559867	-3.919712	58° 33.592' N	3° 55.183' W	58° 33' 35.520" N	3° 55' 10.963" W
	58.571234	-3.929222	58° 34.274' N	3° 55.753' W	58° 34' 16.441" N	3° 55' 45.198" W
	58.585441	-3.938949	58° 35.126' N	3° 56.337' W	58° 35' 7.586" N	3° 56' 20.215" W
	58.562460	-3.922758	58° 33.748' N	3° 55.365' W	58° 33' 44.857" N	3° 55' 21.927" W
	58.568076	-3.923352	58° 34.085' N	3° 55.401' W	58° 34' 5.073" N	3° 55' 24.069" W
	58.564435	-3.907362	58° 33.866' N	3° 54.442' W	58° 33' 51.967" N	3° 54' 26.505" W
Survey area 2 - Dounreay	58.580201	-3.822781	58° 34.812' N	3° 49.367' W	58° 34' 48.725" N	3° 49' 22.011" W
	58.594062	-3.760675	58° 35.644' N	3° 45.640' W	58° 35' 38.622" N	3° 45' 38.429" W
	58.579029	-3.753941	58° 34.742' N	3° 45.236' W	58° 34' 44.506" N	3° 45' 14.188" W
	58.575980	-3.766422	58° 34.559' N	3° 45.985' W	58° 34' 33.529" N	3° 45' 59.118" W
	58.572616	-3.776141	58° 34.357' N	3° 46.568' W	58° 34' 21.419" N	3° 46' 34.108" W
	58.565378	-3.777200	58° 33.923' N	3° 46.632' W	58° 33' 55.361" N	3° 46' 37.920" W
	58.565492	-3.792667	58° 33.929' N	3° 47.560' W	58° 33' 55.769" N	3° 47' 33.600" W
	58.572188	-3.794190	58° 34.331' N	3° 47.651' W	58° 34' 19.876" N	3° 47' 39.084" W
	58.572106	-3.806554	58° 34.326' N	3° 48.393' W	58° 34' 19.583" N	3° 48' 23.593" W
	58.571126	-3.808960	58° 34.268' N	3° 48.538' W	58° 34' 16.052" N	3° 48' 32.255" W
	58.580201	-3.822781	58° 34.812' N	3° 49.367' W	58° 34' 48.725" N	3° 49' 22.011" W
	58.570167	-3.807250	58° 34.210' N	3° 48.435' W	58° 34' 12.602" N	3° 48' 26.099" W
	58.573647	-3.801063	58° 34.419' N	3° 48.064' W	58° 34' 25.130" N	3° 48' 3.827" W
Survey area 3 - Crosskirk	58.630585	-3.665837	58° 37.835' N	3° 39.950' W	58° 37' 50.107" N	3° 39' 57.013" W
	58.619446	-3.663035	58° 37.167' N	3° 39.782' W	58° 37' 10.005" N	3° 39' 46.925" W
	58.606904	-3.672851	58° 36.414' N	3° 40.371' W	58° 36' 24.854" N	3° 40' 22.263" W
	58.605574	-3.693046	58° 36.334' N	3° 41.583' W	58° 36' 20.067" N	3° 41' 34.966" W
	58.605490	-3.697920	58° 36.329' N	3° 41.875' W	58° 36' 19.765" N	3° 41' 52.511" W
	58.612874	-3.724942	58° 36.772' N	3° 43.497' W	58° 36' 46.348" N	3° 43' 29.790" W
	58.630585	-3.665837	58° 37.835' N	3° 39.950' W	58° 37' 50.107" N	3° 39' 57.013" W
	58.609200	-3.679970	58° 36.552' N	3° 40.798' W	58° 36' 33.122" N	3° 40' 47.893" W
	58.613605	-3.672762	58° 36.816' N	3° 40.366' W	58° 36' 48.977" N	3° 40' 21.945" W
Survey area 5 - Murra	58.944626	-3.365869	58° 56.678' N	3° 21.952' W	58° 56' 40.652" N	3° 21' 57.128" W
	58.932701	-3.353741	58° 55.962' N	3° 21.224' W	58° 55' 57.724" N	3° 21' 13.469" W
	58.932565	-3.353596	58° 55.954' N	3° 21.216' W	58° 55' 57.233" N	3° 21' 12.947" W
	58.931701	-3.356820	58° 55.902' N	3° 21.409' W	58° 55' 54.124" N	3° 21' 24.553" W
	58.930179	-3.359447	58° 55.811' N	3° 21.567' W	58° 55' 48.644" N	3° 21' 34.010" W



	58.928553	-3.367186	58° 55.713' N	3° 22.031' W	58° 55' 42.792" N	3° 22' 1.869" W
	58.925939	-3.371720	58° 55.556' N	3° 22.303' W	58° 55' 33.380" N	3° 22' 18.191" W
	58.925233	-3.377485	58° 55.514' N	3° 22.649' W	58° 55' 30.838" N	3° 22' 38.946" W
	58.929081	-3.409686	58° 55.745' N	3° 24.581' W	58° 55' 44.691" N	3° 24' 34.868" W
	58.944626	-3.365869	58° 56.678' N	3° 21.952' W	58° 56' 40.652" N	3° 21' 57.128" W
Survey area 6 - Rackwick Bay	58.856230	-3.379296	58° 51.374' N	3° 22.758' W	58° 51' 22.427" N	3° 22' 45.467" W
	58.852177	-3.385971	58° 51.131' N	3° 23.158' W	58° 51' 7.836" N	3° 23' 9.494" W
	58.848181	-3.398266	58° 50.891' N	3° 23.896' W	58° 50' 53.451" N	3° 23' 53.757" W
	58.871329	-3.428008	58° 52.280' N	3° 25.680' W	58° 52' 16.786" N	3° 25' 40.828" W
	58.872193	-3.422337	58° 52.332' N	3° 25.340' W	58° 52' 19.896" N	3° 25' 20.412" W
	58.871013	-3.414404	58° 52.261' N	3° 24.864' W	58° 52' 15.649" N	3° 24' 51.855" W
	58.870161	-3.387638	58° 52.210' N	3° 23.258' W	58° 52' 12.578" N	3° 23' 15.496" W
	58.866337	-3.378879	58° 51.980' N	3° 22.733' W	58° 51' 58.814" N	3° 22' 43.963" W
	58.862255	-3.377274	58° 51.735' N	3° 22.636' W	58° 51' 44.117" N	3° 22' 38.188" W
	58.856230	-3.379296	58° 51.374' N	3° 22.758' W	58° 51' 22.427" N	3° 22' 45.467" W
Survey area 7 - Greenhead	58.886560	-3.203741	58° 53.194' N	3° 12.224' W	58° 53' 11.617" N	3° 12' 13.467" W
	58.876058	-3.187390	58° 52.564' N	3° 11.243' W	58° 52' 33.811" N	3° 11' 14.604" W
	58.871067	-3.208590	58° 52.264' N	3° 12.515' W	58° 52' 15.841" N	3° 12' 30.925" W
	58.873952	-3.212236	58° 52.437' N	3° 12.734' W	58° 52' 26.227" N	3° 12' 44.051" W
	58.881899	-3.221737	58° 52.914' N	3° 13.304' W	58° 52' 54.838" N	3° 13' 18.254" W
	58.886560	-3.203741	58° 53.194' N	3° 12.224' W	58° 53' 11.617" N	3° 12' 13.467" W
Survey area 8 - Mill Bay	58.851717	-3.196884	58° 51.103' N	3° 11.813' W	58° 51' 6.182" N	3° 11' 48.783" W
	58.855621	-3.196219	58° 51.337' N	3° 11.773' W	58° 51' 20.234" N	3° 11' 46.387" W
	58.854954	-3.175119	58° 51.297' N	3° 10.507' W	58° 51' 17.836" N	3° 10' 30.429" W
	58.850839	-3.177948	58° 51.050' N	3° 10.677' W	58° 51' 3.019" N	3° 10' 40.613" W
	58.847165	-3.181742	58° 50.830' N	3° 10.905' W	58° 50' 49.795" N	3° 10' 54.271" W
	58.843962	-3.180896	58° 50.638' N	3° 10.854' W	58° 50' 38.264" N	3° 10' 51.226" W
	58.839000	-3.200492	58° 50.340' N	3° 12.029' W	58° 50' 20.400" N	3° 12' 1.770" W
	58.837018	-3.208921	58° 50.221' N	3° 12.535' W	58° 50' 13.265" N	3° 12' 32.115" W
	58.840622	-3.212696	58° 50.437' N	3° 12.762' W	58° 50' 26.239" N	3° 12' 45.706" W
	58.844137	-3.206202	58° 50.648' N	3° 12.372' W	58° 50' 38.893" N	3° 12' 22.327" W
	58.846620	-3.199256	58° 50.797' N	3° 11.955' W	58° 50' 47.833" N	3° 11' 57.320" W
	58.850455	-3.200500	58° 51.027' N	3° 12.030' W	58° 51' 1.639" N	3° 12' 1.800" W
	58.851717	-3.196884	58° 51.103' N	3° 11.813' W	58° 51' 6.182" N	3° 11' 48.783" W
	58.852207	-3.174884	58° 51.132' N	3° 10.493' W	58° 51' 7.945" N	3° 10' 29.584" W
Survey area 9 - Flotta north	58.843490	-3.120417	58° 50.609' N	3° 7.225' W	58° 50' 36.565" N	3° 7' 13.500" W
	58.839832	-3.129711	58° 50.390' N	3° 7.783' W	58° 50' 23.394" N	3° 7' 46.958" W
	58.833834	-3.142379	58° 50.030' N	3° 8.543' W	58° 50' 1.801" N	3° 8' 32.565" W
	58.828667	-3.148844	58° 49.720' N	3° 8.931' W	58° 49' 43.202" N	3° 8' 55.840" W
	58.834388	-3.154112	58° 50.063' N	3° 9.247' W	58° 50' 3.797" N	3° 9' 14.804" W
	58.837746	-3.149663	58° 50.265' N	3° 8.980' W	58° 50' 15.887" N	3° 8' 58.786" W
	58.842586	-3.149410	58° 50.555' N	3° 8.965' W	58° 50' 33.309" N	3° 8' 57.877" W



	58.845862	-3.158470	58° 50.752' N	3° 9.508' W	58° 50' 45.105" N	3° 9' 30.491" W
	58.848040	-3.158760	58° 50.882' N	3° 9.526' W	58° 50' 52.945" N	3° 9' 31.535" W
	58.848660	-3.161915	58° 50.920' N	3° 9.715' W	58° 50' 55.176" N	3° 9' 42.893" W
	58.850506	-3.163656	58° 51.030' N	3° 9.819' W	58° 51' 1.821" N	3° 9' 49.163" W
	58.852248	-3.161463	58° 51.135' N	3° 9.688' W	58° 51' 8.093" N	3° 9' 41.266" W
	58.849085	-3.121019	58° 50.945' N	3° 7.261' W	58° 50' 56.705" N	3° 7' 15.668" W
	58.843490	-3.120417	58° 50.609' N	3° 7.225' W	58° 50' 36.565" N	3° 7' 13.500" W
Survey area 10 - Flotta west	58.825761	-3.177103	58° 49.546' N	3° 10.626' W	58° 49' 32.739" N	3° 10' 37.572" W
	58.832971	-3.159517	58° 49.978' N	3° 9.571' W	58° 49' 58.695" N	3° 9' 34.260" W
	58.834423	-3.155196	58° 50.065' N	3° 9.312' W	58° 50' 3.922" N	3° 9' 18.705" W
	58.834388	-3.154112	58° 50.063' N	3° 9.247' W	58° 50' 3.797" N	3° 9' 14.804" W
	58.828667	-3.148844	58° 49.720' N	3° 8.931' W	58° 49' 43.202" N	3° 8' 55.840" W
	58.822024	-3.142997	58° 49.321' N	3° 8.580' W	58° 49' 19.287" N	3° 8' 34.791" W
	58.818178	-3.140868	58° 49.091' N	3° 8.452' W	58° 49' 5.440" N	3° 8' 27.126" W
	58.814736	-3.165375	58° 48.884' N	3° 9.922' W	58° 48' 53.050" N	3° 9' 55.348" W
	58.819214	-3.167433	58° 49.153' N	3° 10.046' W	58° 49' 9.170" N	3° 10' 2.758" W
	58.825580	-3.177374	58° 49.535' N	3° 10.642' W	58° 49' 32.089" N	3° 10' 38.546" W
	58.825761	-3.177103	58° 49.546' N	3° 10.626' W	58° 49' 32.739" N	3° 10' 37.572" W
	58.822972	-3.171321	58° 49.378' N	3° 10.279' W	58° 49' 22.701" N	3° 10' 16.754" W