

Marine Scotland Science

NOTICE TO MARINERS

PrePARED Fish Tracking Array

Issue date: Monday 28th March 2022

Marine Scotland Science (MSS) intend to install 87 acoustic fish tracking moorings in the Beatrice and Moray East Offshore Windfarms areas (BOWL (38 moorings) and Moray East (49 moorings)) as part of the PrePARED programme of works (figure 1 & 2). PrePARED is a collaborative research project coordinated by Marine Scotland Science which aims to concurrently study predator (seabird and marine mammal) and prey (fish) distribution and behaviour in and around offshore wind farms. The moorings hold research equipment that support hydrophone receivers. These receivers log the presence of fish, such as Cod, Haddock and Whiting which will be tagged with acoustic ID transmitter tags (they will also record salmon and sea trout smolts migrating from Moray Firth Rivers tagged by the Atlantic Salmon Trust (AST) should they pass within range).

The proposed locations of the fish tracking moorings are shown (Figure 1); the positions of the moorings are given in WGS84 (Table 1). The moorings will be deployed from the 10th of April 2022 by a work catamaran under 25 metres in length (charter vessel to be confirmed, similar to one shown in Figure 5). The moorings will be removed by the 30th of August 2026.

Acoustic fish tracking moorings will not be surface marked and will be located on the seabed. The array moorings will extend vertically no more than 4 metres. The moorings will be serviced by boat, using the inbuilt acoustic recovery system. In the unlikely event of failure in the acoustic release system an ROV will be used from the same boat to service the mooring. Please note the acoustic fish tracking moorings are being deployed as close to the wind turbine generators as possible to minimise interference with fishing operations (50m), should these be accidentally caught only the instruments are required to be returned and the location of the discarded weight should be supplied to MSS for recovery later.

Fish capture traps and timed-release cages (4 traps and cages in total; Figures 3 and 4) will be deployed in Moray East and Beatrice sites. These traps and cages will be used in the capture and managed release of fish needed for internal electronic tagging with acoustic ID transmitter tags. Traps and cages will be present at Moray East and Beatrice for up to 10 days commencing 10th of April. Traps and cages will move at 1 to 2-day intervals. All traps and cages will be marked with creel style floats and clearly marked "Marine Scotland Science". Traps and cages will be at least 100 metres from turbine locations. Locations of traps and cages will be notified to the relevant windfarm Marine Control Centre as appropriate

Contact details

All enquiries should be made to the Marine Scotland acoustics mailbox acoustics@scotland.gsi.gov.uk marked for the attention of Robert Main. Switch Board
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Figure 1: Indicative location of PrePARED fish tracking acoustic receiver array

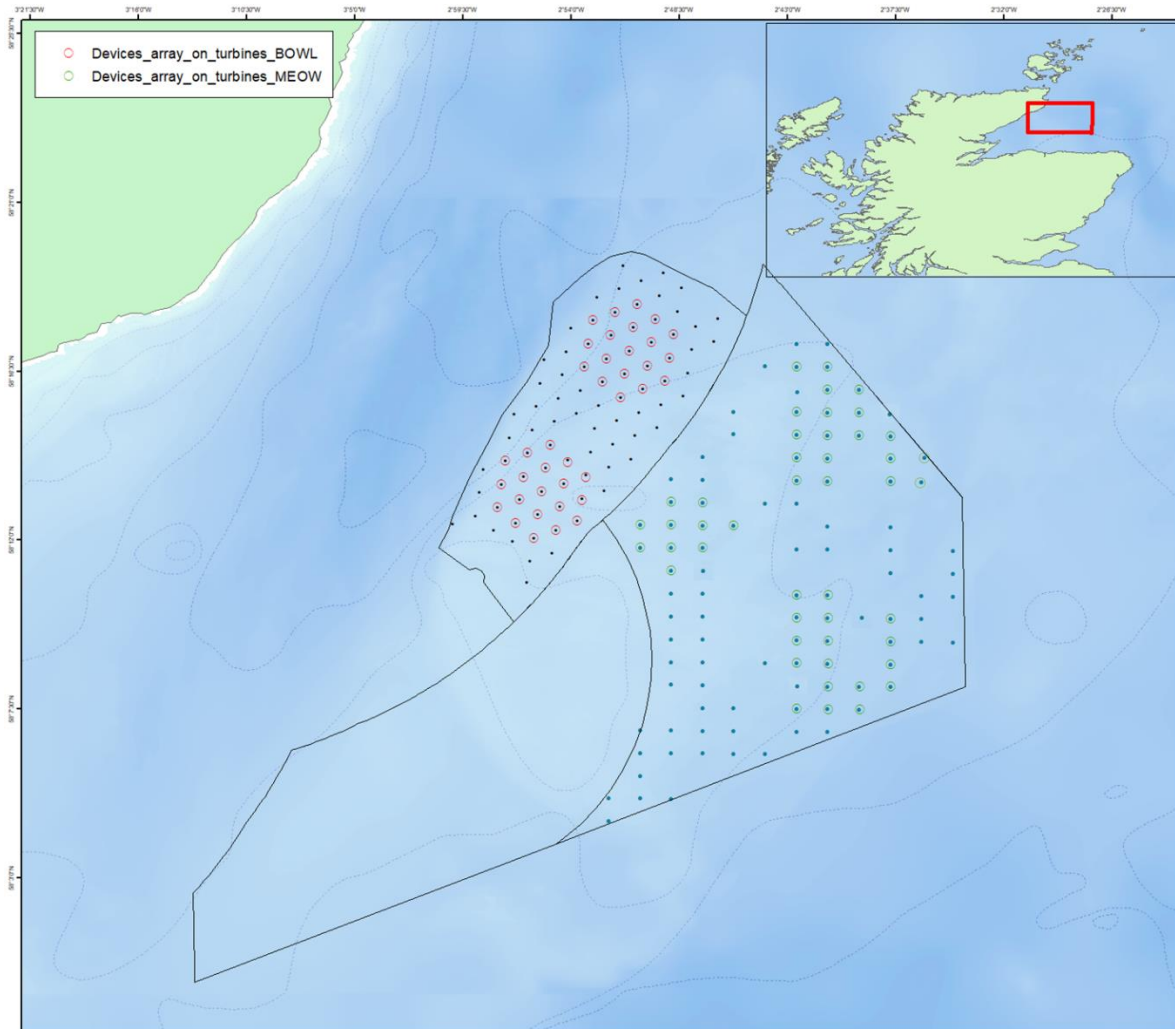


Table 1: Mooring number and position

Mooring ID	Latitude (Decimal degrees)	Longitude (Decimal degrees)	Latitude (degrees decimal minute)	Longitude (degrees decimal minute)
MEOW1	58.15546	-2.68437	58° 09.3270' N	002° 41.011' W
MEOW2	58.16559	-2.68428	58° 09.9348' N	002° 41.006' W
MEOW3	58.17573	-2.68419	58° 10.5432' N	002° 41.000' W
MEOW4	58.17594	-2.7105	58° 10.5558' N	002° 42.579' W
MEOW5	58.16581	-2.71058	58° 09.9480' N	002° 42.584' W

MEOU6	58.15567	-2.71066	58° 09.3396' N	002° 42.588' W
MEOU7	58.14553	-2.71074	58° 08.7312' N	002° 42.593' W
MEOU8	58.14532	-2.68446	58° 08.7186' N	002° 41.016' W
MEOU9	58.13483	-2.63238	58° 08.0892' N	002° 37.892' W
MEOU11	58.13518	-2.68455	58° 08.1102' N	002° 41.022' W
MEOU12	58.13496	-2.65827	58° 08.0970' N	002° 39.445' W
MEOU13	58.14488	-2.63189	58° 08.6922' N	002° 37.862' W
MEOU14	58.15501	-2.63178	58° 09.3000' N	002° 37.856' W
MEOU15	58.16515	-2.63168	58° 09.9084' N	002° 37.850' W
MEOU17	58.12526	-2.71091	58° 07.5150' N	002° 42.603' W
MEOU18	58.12505	-2.68464	58° 07.5024' N	002° 41.027' W
MEOU19	58.12483	-2.65837	58° 07.4892' N	002° 39.451' W
MEOU20	58.27718	-2.68368	58° 16.6302' N	002° 40.969' W
MEOU21	58.2774	-2.71007	58° 16.6434' N	002° 42.553' W
MEOU22	58.236483	-2.602215	58° 14.1890' N	002° 36.133' W
MEOU23	58.26705	-2.68377	58° 16.0224' N	002° 40.975' W
MEOU24	58.26683	-2.6574	58° 16.0092' N	002° 39.393' W
MEOU25	58.25713	-2.71023	58° 15.4272' N	002° 42.562' W
MEOU26	58.25692	-2.68387	58° 15.4146' N	002° 40.981' W
MEOU27	58.25668	-2.6575	58° 15.4002' N	002° 39.399' W
MEOU28	58.22582	-2.605112	58° 13.5495' N	002° 36.307' W
MEOU29	58.24698	-2.71032	58° 14.8182' N	002° 42.568' W
MEOU30	58.24677	-2.68395	58° 14.8056' N	002° 40.986' W
MEOU31	58.24655	-2.65758	58° 14.7924' N	002° 39.403' W
MEOU32	58.24633	-2.63123	58° 14.7792' N	002° 37.822' W
MEOU33	58.23685	-2.7104	58° 14.2104' N	002° 42.573' W
MEOU34	58.23663	-2.68403	58° 14.1972' N	002° 40.990' W
MEOU35	58.22672	-2.71048	58° 13.6026' N	002° 42.578' W
MEOU36	58.2265	-2.68413	58° 13.5894' N	002° 40.997' W
MEOU37	58.2362	-2.63133	58° 14.1714' N	002° 37.828' W
MEOU38	58.22605	-2.63143	58° 13.5624' N	002° 37.835' W
MEOU39	58.20743	-2.84229	58° 12.4453' N	002° 50.486' W
MEOU40	58.19729	-2.84234	58° 11.8369' N	002° 50.489' W
MEOU41	58.19711	-2.81601	58° 11.8261' N	002° 48.909' W
MEOU42	58.18697	-2.81607	58° 11.2177' N	002° 48.913' W
MEOU44	58.19691	-2.78969	58° 11.8141' N	002° 47.330' W
MEOU45	58.20705	-2.78963	58° 12.4225' N	002° 47.327' W
MEOU46	58.20685	-2.7633	58° 12.4105' N	002° 45.747' W
MEOU47	58.20724	-2.81596	58° 12.4339' N	002° 48.906' W
MEOU48	58.21738	-2.81591	58° 13.0423' N	002° 48.903' W

MEOW49	58.21719	-2.78957	58° 13.0309' N	002° 47.323' W
BOWL1	58.2847	-2.85132	58° 17.0815' N	002° 51.028' W
BOWL2	58.28827	-2.83255	58° 17.2957' N	002° 49.902' W
BOWL3	58.29505	-2.84781	58° 17.7025' N	002° 50.817' W
BOWL4	58.2915	-2.86666	58° 17.4895' N	002° 51.948' W
BOWL5	58.28115	-2.8701	58° 16.8685' N	002° 52.155' W
BOWL6	58.2744	-2.85481	58° 16.4635' N	002° 51.237' W
BOWL7	58.27793	-2.83605	58° 16.6753' N	002° 50.112' W
BOWL8	58.28149	-2.81728	58° 16.8889' N	002° 48.985' W
BOWL9	58.29185	-2.81377	58° 17.5105' N	002° 48.775' W
BOWL10	58.29862	-2.82903	58° 17.9167' N	002° 49.690' W
BOWL11	58.30539	-2.84429	58° 18.3229' N	002° 50.606' W
BOWL12	58.30182	-2.86307	58° 18.1087' N	002° 51.733' W
BOWL13	58.29825	-2.88185	58° 17.8945' N	002° 52.860' W
BOWL14	58.2879	-2.88535	58° 17.2735' N	002° 53.070' W
BOWL15	58.27754	-2.88884	58° 16.6519' N	002° 53.279' W
BOWL16	58.27078	-2.87359	58° 16.2463' N	002° 52.364' W
BOWL17	58.26401	-2.85833	58° 15.8401' N	002° 51.448' W
BOWL18	58.26758	-2.83958	58° 16.0543' N	002° 50.323' W
BOWL19	58.27114	-2.82081	58° 16.2679' N	002° 49.197' W
BOWL20	58.22222	-2.92503	58° 13.3327' N	002° 55.451' W
BOWL21	58.21544	-2.90979	58° 12.9259' N	002° 54.536' W
BOWL22	58.2258	-2.90629	58° 13.5475' N	002° 54.326' W
BOWL23	58.23256	-2.92155	58° 13.9531' N	002° 55.242' W
BOWL24	58.22855	-2.94061	58° 13.7125' N	002° 56.385' W
BOWL25	58.22539	-2.95902	58° 13.5229' N	002° 57.490' W
BOWL26	58.21862	-2.94376	58° 13.1167' N	002° 56.574' W
BOWL27	58.21186	-2.92851	58° 12.7111' N	002° 55.659' W
BOWL28	58.2051	-2.91327	58° 12.3055' N	002° 54.745' W
BOWL29	58.20907	-2.89544	58° 12.5437' N	002° 53.675' W
BOWL30	58.21815	-2.89111	58° 13.0885' N	002° 53.415' W
BOWL31	58.22852	-2.88805	58° 13.7107' N	002° 53.232' W
BOWL32	58.23524	-2.90296	58° 14.1139' N	002° 54.126' W
BOWL33	58.21504	-2.96249	58° 12.9019' N	002° 57.698' W
BOWL34	58.20828	-2.94723	58° 12.4963' N	002° 56.783' W
BOWL35	58.20151	-2.932	58° 12.0900' N	002° 55.865' W
BOWL36	58.23574	-2.95554	58° 14.1439' N	002° 57.281' W
BOWL37	58.23932	-2.93681	58° 14.3587' N	002° 56.157' W
BOWL38	58.24291	-2.91807	58° 14.5741' N	002° 55.033' W

Figure 2: Pop-Up array mooring design

Acoustic receiver with rope canister and floatation. AR type mooring.



70kg clump weight attached to bottom thimble

2 meters of Polysteel rope

Figure 3: Fish Capture Cage



Figure 4: Fish Trap/ Release cage schematic.

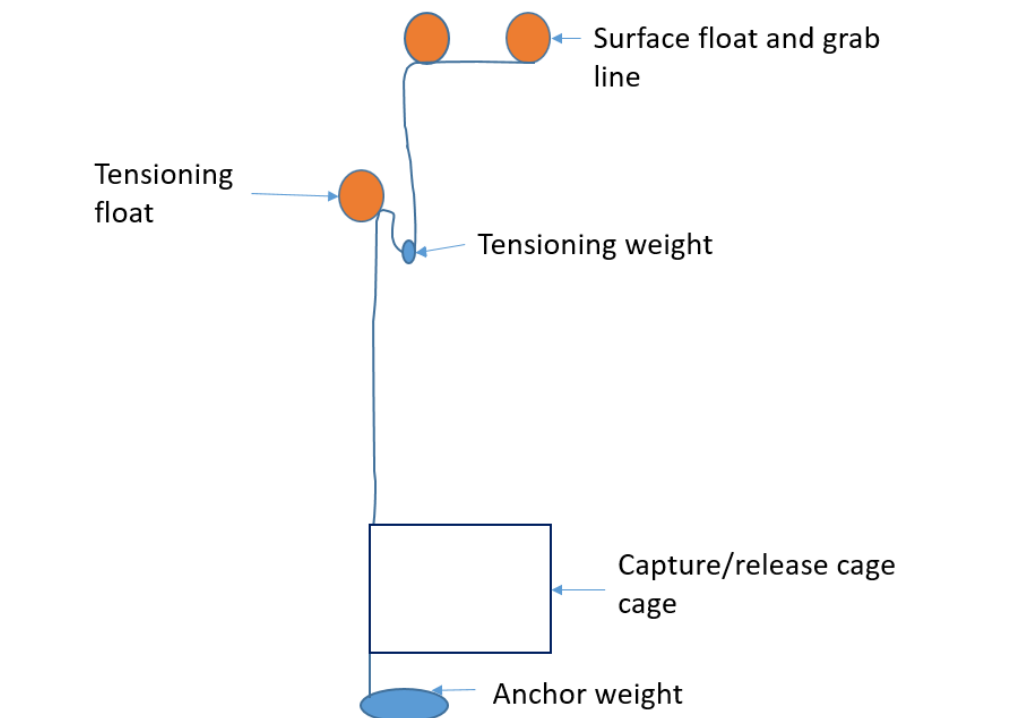


Figure 5: Vessel type to be used

