

**RESEARCH VESSEL PROGRAMME**

**RV CEFAS ENDEAVOUR**  
**Survey: C END 02 - 2022**

**STAFF: 09:00 on the 2<sup>nd</sup> Feb., 9:30 and 10:00 in the sequence 6, 5, 5 people**

Number	Name	Role	Cabin	Shift
1	E. E. Manuel Nicolaus	SIC	SIC Cabin	7-19:00
2	Dave Sivyer	2IC/Deck	B2	7-19:00
3	Axayacatl Molina-Ramirez	Deck	B1	7-19:00
4	Annie Meadows	Deck/FerryBox	C1	7-19:00
5	Tom Hull	Deck; Data Manager	C2	7-19:00
6	Bryan Goodsir-Thompson	Deck	C3	7-19:00
7	Izzy Blake	Night shift Lead - Chemical lead	C4	00:00-12:00
8	Elise Brabben	Water lead	C5	00:00-12:00
9	Paul Nelson	Water	C6	12:00-00:00
10	Rosalyn Putland	Noise/Deck	C7	7-19:00
11	Mollie Allerton	Water	C8	12:00-00:00
12	Charlotte Reeve	Manta/Water	D2	00:00-12:00
13	Danja Hoehn	Manta/Water	D3	12:00-00:00
14	Matt Brown	ESMx	D4	7-19:00
15	Matt Eagle	ESMx	D5	7-19:00
16	Emanuele Reggiani	ESMx	D6	7-19:00

**DURATION: 4<sup>th</sup> to 12<sup>th</sup> February for 9 days: 12<sup>th</sup> 17:49**

**LOCATION: North Sea and Eastern Channel (all coordinates N, E)**

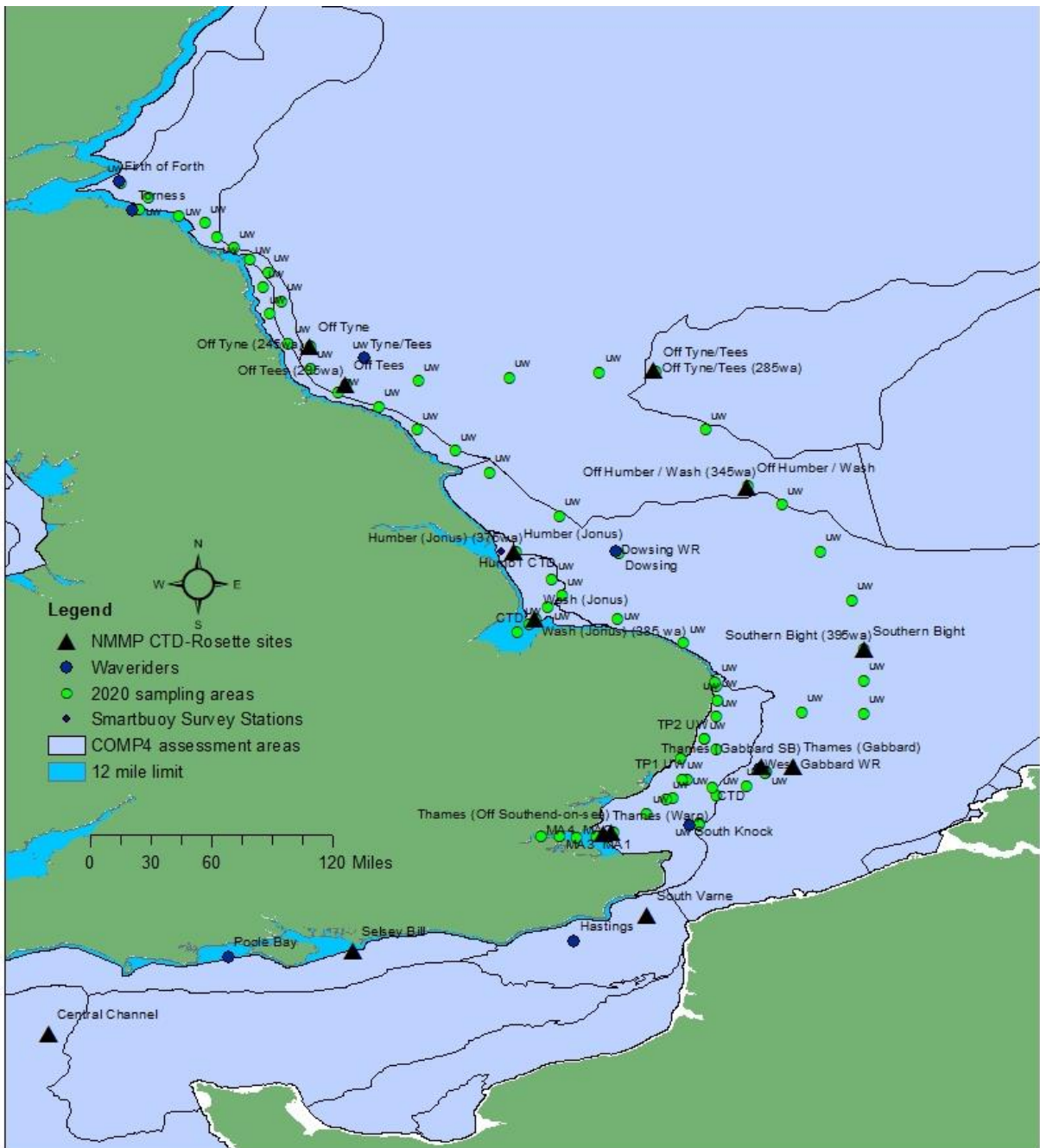
Stations	Latitude	Longitude	site name
1	52.4695	1.780583	uw
2	52.12193	1.776517	uw
3	51.79072	1.774333	uw
4	51.59425	1.64955	uw
5	51.58597	1.65035	uw
6	51.95608	2.12405	uw
7	51.95557	2.129267	WESTGAB2 CTD
8	51.95278	2.121783	WESTGAB2 Zoo
9	51.85773	1.98885	uw
10	51.84527	1.742967	CTD
11	51.77062	1.458817	CTD
12	51.6617	1.274067	uw
13	51.52753	1.040283	WARP (TH1)
14	51.76217	1.416083	uw
15	51.90717	1.562583	uw
16	52.04982	1.5203	uw
17	52.19267	1.684583	uw



18	52.35537	1.7681	uw
19	52.57358	1.76895	uw
20	52.60147	1.766367	uw
21	52.88108	1.53915	uw
22	53.05617	1.067333	uw
23	53.22333	0.666783	uw
24	53.05857	0.482433	Wash (Jonus) (385 wa)
25	53.01568	0.428417	uw
26	52.9574	0.351467	CTD
27	53.14145	0.5677	uw
28	53.3345	0.596667	uw
29	53.53253	0.333517	Humber (Jonus) (375wa)
30	53.52652	1.071917	Dowsing
31	53.79445	0.644767	uw
32	54.10487	0.150733	uw
33	54.25893	-0.095	uw
34	54.41207	-0.37203	uw
35	54.57348	-0.64528	uw
36	54.6745	-0.93457	uw
37	54.85067	-1.13137	uw
38	55.02665	-1.29015	uw
39	55.24248	-1.42345	uw
40	55.43107	-1.4719	uw
41	55.63383	-1.5667	uw
42	55.78952	-1.80258	uw
43	55.9427	-2.07352	uw
44	56.0695	-2.29228	uw
45	56.1787	-2.4935	uw
46	55.99107	-2.35783	uw
47	55.8894	-1.88762	uw
48	55.71085	-1.68215	uw
49	55.53903	-1.43633	uw
50	55.33183	-1.3404	uw
51	55.00357	-1.13592	Off Tyne (245wa)
52	54.92107	-0.74983	uw
53	54.73238	-0.88195	Off Tees (295wa)
54	54.75783	-0.35862	uw
55	54.78242	0.287067	uw
56	54.81917	0.935533	uw
57	54.83097	1.336467	Off Tyne/Tees (285wa)
58	54.41045	1.693117	uw
59	54.0027	1.998267	Off Humber / Wash (345wa)
60	53.87152	2.244683	uw
61	53.53937	2.514	uw
62	53.19033	2.7393	uw



63	52.83392	2.832317	Southern Bight (395wa)
64	52.61532	2.830033	uw
65	52.3753	2.826267	uw
66	52.38702	2.385083	uw
67	51.50142	0.918126	MA1 Thames
68	51.48957	0.776822	MA2 Thames
69	51.50143	0.650281	MA3 Thames
70	51.5014	0.513703	MA4 Thames
71	51.907	1.523	TP1 UW
72	52.193	1.685	TP2 UW
73	53.531	1.053333	Dowsing WR
74	56.1875	-2.50383	Firth of Forth WR
75	50.74683	0.754167	Hastings WR
76	50.6335	-1.71883	Poole Bay WR
77	51.57	1.579	South Knock WR
78	54.919	-0.74885	Tyne/Tees WR
79	51.98083	2.079	West Gabbard WR
80	55.97977	-2.4094	Terness WR
81	50.9333	1.28	South Varne CTD
82	50.6783	-0.8267	Selsey Bill CTD
83	50.0833	-3	Central Channel CTD
84	51.525	1.03	Thames (Off Southend-on-sea) CTD
85	52.8333	2.8333	Southern Bight CTD
86	52	2.3333	Thames (Gabbard) CTD
87	51.994	2.099	Thames (Gabbard SB) CTD
88	51.5133	0.9667	Thames (Warp) CTD
89	53.5333	0.3333	Humber (Jonus) CTD
90	53.0583	0.475	Wash (Jonus) CTD
91	54.8333	1.3333	Off Tyne/Tees CTD
92	54	2	Off Humber / Wash CTD
93	55.0083	-1.1333	Off Tyne CTD
94	54.7333	-0.8833	Off Tees CTD
<b>Only for route planning purposes</b>			
<b>NMMP CTD stations</b>			
<b>Waverider stations</b>			



**AIMS:**

1. Service Noise Landers at Dowsing and Warp (GIA6H)
2. Service SmartBuoys at West Gabbard and Warp (GIA03D)
3. Continuous flow and CTD Rosette water sampling as required on various transects
4. Collection of zooplankton sample at West Gabbard
5. Service of 7 Waveriders (C6029A) at Dowsing WR, Firth of Forth WR, Hastings WR, Poole Bay WR, South Knock WR, Tyne/Tees WR, West Gabbard WR, Forness WR
6. Manta-trawling (C8374P) on transects depending on weather at 4-6knots
7. Supporting PhD study

**PLAN:**

**Joining the vessel on the 2<sup>nd</sup> February**

**Leaving Lowestoft port at 10:00 on the 4<sup>th</sup> February (depending on test results)**

**Day 1. 4<sup>th</sup>**

RV Cefas Endeavour will initially steam south to the Warp site and carry out the following activities:

Warp1	Pre-recovery CTD,
Warp2	Recover and deploy SmartBuoy (51° 31.983-001°02.919)
Warp3	Recover and deploy Noise Lander (51.532311 1.0467395)
Warp4	Recover and deploy NL clump (51.5335432 1.0468029)
Warp5	Post-deployment CTD.

Transit will be through two waypoints in the Thames plume:

TP1	Underway sample-steam through (51.907 1.523)
TP2	Underway sample-steam through (52.193 1.685)

During transit hourly underway water samples will be taken.

Samples will also be collected up the Thames MA1-MA4.

**Day 2. 5<sup>th</sup>**

Endeavour will then transit to South Knock WR and recover and deploy. Transit to Hastings WR and recovery/deployment. On transit collection of CTD rosette sample at South Verne.

**Day 3. 6<sup>th</sup>**

Transit to Poole Bay overnight and collecting microplastic samples with Manta trawl. Also collecting CTD Rosette sample at Selsey Bill.

**Day 4. 7<sup>th</sup>**

Recover and deploy Poole WR in the morning. Hourly water samples on transit to West Gabbard 2 overnight collecting microplastic samples with Manta trawl.

**Day 5. 8<sup>th</sup>**

Endeavour will then transit to the West Gabbard 2 site and carry out the following activities:

WGab1	Pre-recovery CTD,
WGab2	Recover and deploy SmartBuoy (51° 57.242N-002°06.661E)
WGab3	Post-deployment CTD
WGab4	Zooplankton net haul sample (in area of 51° 57'.2N, 002° 07'.2E).
WGab5	Recover and deploy Waverider (51° 57.178N-002°06.543E)

During transit underway water samples will be taken.

Endeavour will then transit east to the Southern Bight water station (18:00) for a CTD rosette dip.

**Day 6. 9<sup>th</sup>**

Sample Off Humber CTD station at 02:00 and Off Tyne Tees at 06:00. Tyne Tees WR at 13:00. Steam to Firth of Forth WR position and collect Manta trawl samples on transit.

**Day 7. 10<sup>th</sup>**

Swap over Firth of Forth WR in the morning and Torness in the afternoon. Steam south and collect CTDs at Off Tyne, Off Tees. Manta trawling on route.

**Day 8. 11<sup>th</sup>**

Keep on collecting Humber and Humb 1 CTDs. Transit east to Dowsing WR and Noiselander service. Endeavour will then continue to the Dowsing site and carry out the following activities:

Dow1	Recover Lost Noise Lander (53.5301399 1.0564649)
Dow2	Recover and deploy Noise Lander (53.5299545 1.0519908)
Dow3	Recover NL clump (53.5293788 1.050179)
Dow4	CTD
Dow5	Recover and deploy Waverider (53° 31.911N-001°03.233E)

Manta trawling on route. Moving SW to Wash and complete the underway water samples. Depending on available time, carry out more underway and manta trawl samples.

Upon entry to the Humber and Wash plume areas underway sampling will increase to hourly.

Humb1	CTD (53° 32'.0N, 000° 20'.0E)
Wash1	CTD (53° 3'.50N, 000° 28'.5E)

**Day 9. 12<sup>th</sup>** return to Lowestoft and dock during the PM tide.

**Day 10. 13<sup>th</sup>** disembark vessel and de-mob

Exact order of operations to be determined in consultation with the Master. If the weather is poor, the route may be revised.

**Gear:**

See Gear List

Scientist in Charge:	Manuel Nicolaus
Second Scientist in Charge:	Dave Sivyer
Date:	25/01/2022

**DISTRIBUTION:**

BODC  
MIST  
AWSM  
Staff