

## NOTICE TO MARINERS: UNMANNED SURFACE VESSEL (USV)

**Activity:** Operations of remotely piloted Uncrewed Surface Vessels (USVs) are planned out of Carlingford Lough and Rhyl / Beaumaris harbour. There will be up to 3 USV's operational at any one time. Vessel details are listed in Table 3 below.

**Dates:** Operations will take place subject to weather during June and July.

A support vessel will escort the USV from the active ports to the port limits.

Although the vessel is uncrewed, it is managed throughout the 24 hour operation, piloted remotely using 360 degree cameras and other navigational aids.

Figure 1 and 2 below indicate the operational area. The operational boundary is indicated in Tables 1 and 2 below also. In addition to the survey areas, the USVs will transit from Carlingford Lough (Ireland) or Whitehaven or Rhyl harbour.

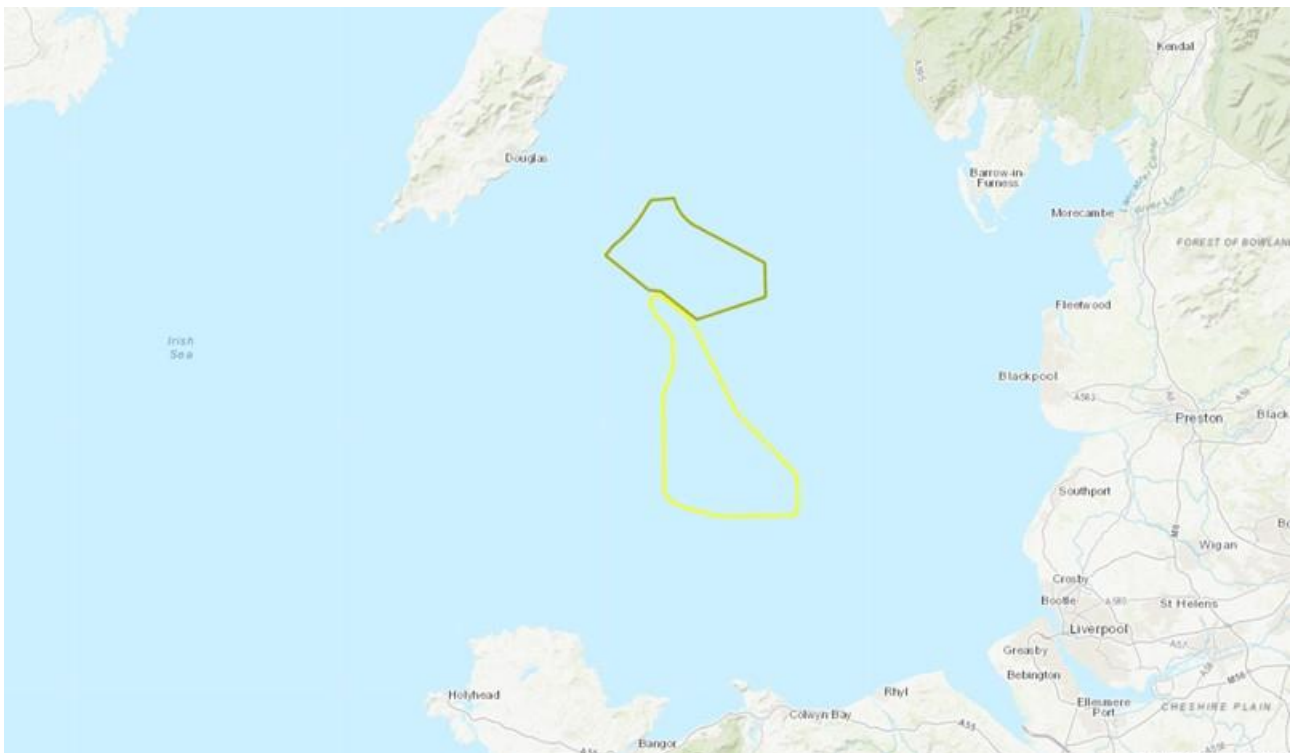


Figure 1: Operational Areas

Figure 2 below show the simplified site boundary coordinates around the exact survey area. Simplified site boundary coordinates provided in Tables 1 and 2 below.

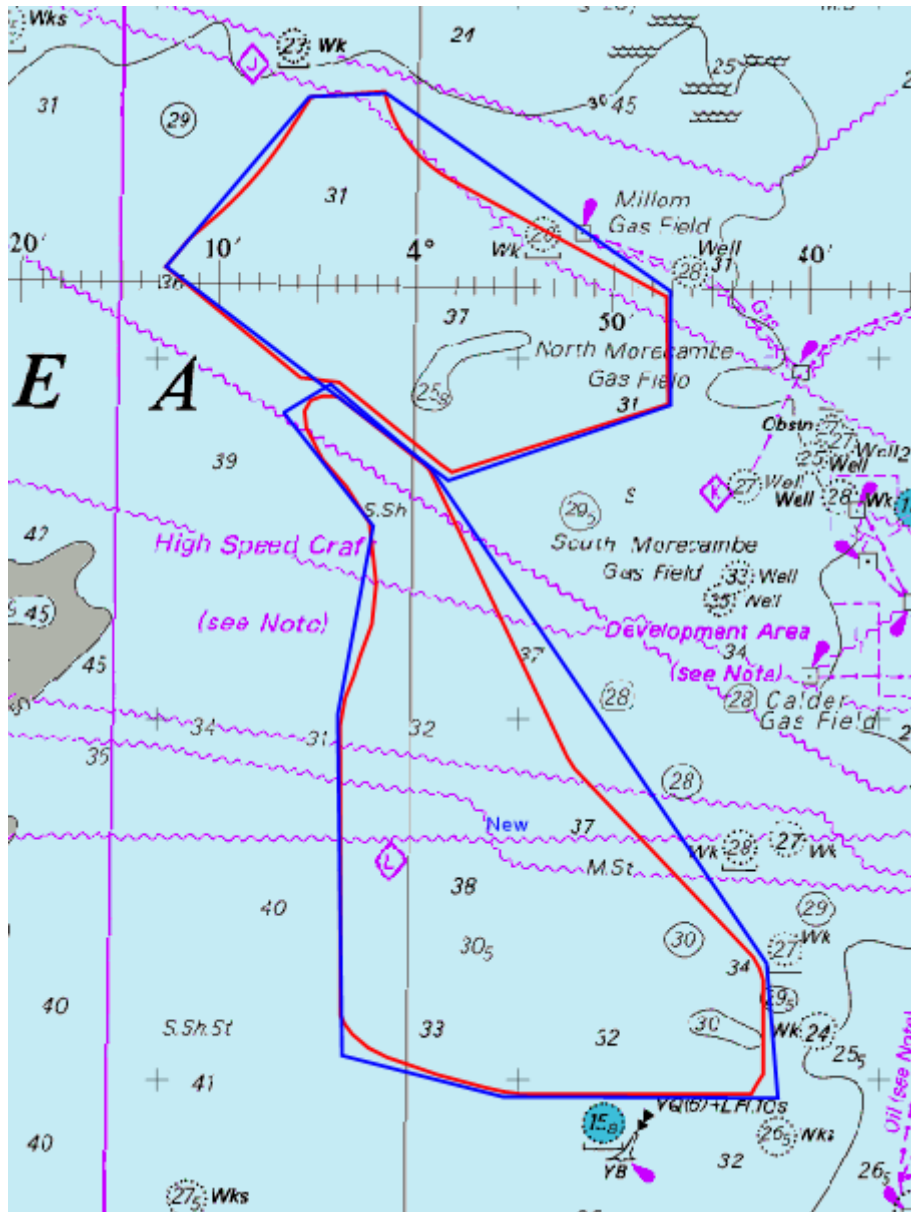


Figure 2: Operational Areas

In Figure 2 above the red line indicates actual site boundary, the blue line indicates the coordinates of the simplified site boundary supplied in the following tables for ease of chart plotting.

Please note that the following Longitudes are provided in degrees WEST and should be converted to negative values if your system requires degrees EAST to be inputted.

Table 1: Area Boundary Northern Area

Point	Latitude (degrees North)	Longitude (degrees West)
1	54.00799	4.21305
2	53.90352	3.97205
3	53.94243	3.78530
4	53.99918	3.78637
5	54.09602	4.02885
6	54.09370	4.09415

Table 2: Area Boundary Southern Area

Point	Latitude (degrees North)	Longitude (degrees West)
1	53.93617	4.11173
2	53.88028	4.03483
3	53.78597	4.06236
4	53.61628	4.05453
5	53.59688	3.91969
6	53.59773	3.68903
7	53.66486	3.69966
8	53.90898	3.98642
9	53.95068	4.07254

Table 3: Vessel Details

	X-03 UNCREWED	X-05 UNCREWED	X-06 UNCREWED	X-04 UNCREWED
Name:	X-03 UNCREWED	X-05 UNCREWED	X-06 UNCREWED	X-04 UNCREWED
MMSI:	232019976	232024575	232025477	232023832
Length:	4.5m	4.5m	4.5m	4.5m
Beam:	2.2m	2.2m	2.2m	2.2m
Speed:	3.5kts	3.5kts	3.5kts	3.5kts
Draught:	1.5m	1.5m	1.5m	1.5m
Tonnage:	750kg	750kg	750kg	750kg



Figure 3: XO-450 USV

The USV sends real time images and situational awareness data over satellite to a team of operators keeping watch and controlling the vessel remotely 24/7.

**Safety Precautions:** The USV is equipped with the following to make it conspicuous to other marine traffic:

- AIS
- Navigation Lights & Sound Signal
- Active Radar Reflector
- Superstructure Painted Yellow

Seafarers are asked to avoid contact with the vessel and be aware of the operational area during this period.

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