



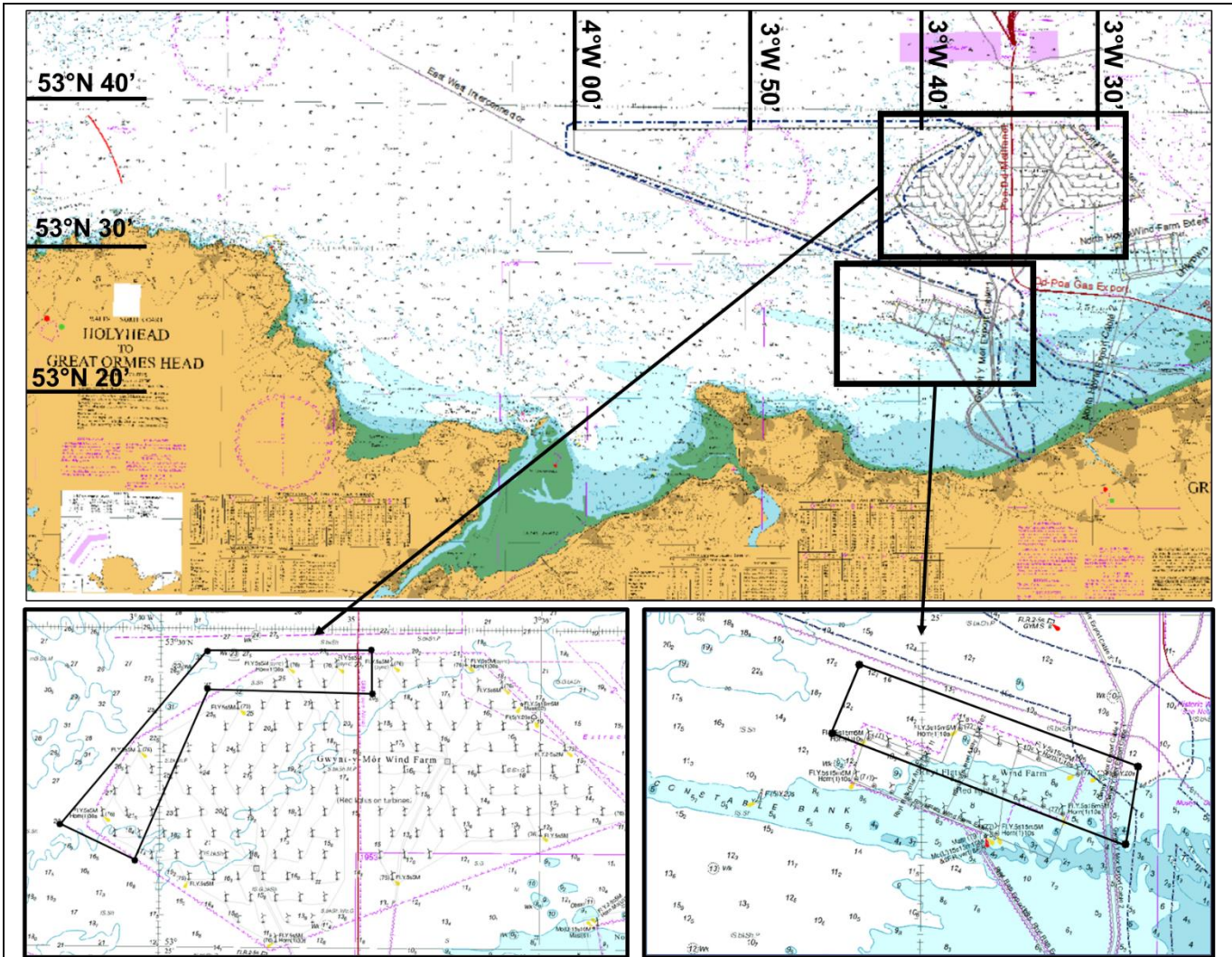
Notice to Mariners

1. Type of Activity: Please be advised that Bangor University will be surveying with an autonomous underwater vehicle (AUV) Gavia in the Irish Sea, offshore the northern coastline of Wales, in the outer Colwyn Bay: in Rhyl Flat (RF) offshore windfarm and Gwynt-y-Môr (GyM) offshore windfarm. The deployment and recovery of the AUV will happen with the RV Prince Madog, whilst the monitoring of the AUV position will happen with the Sarah Jane Too.

2. Duration of Activity: Dates: 15th June 2023 -> 30th June 2023 (which includes a time buffer around the main survey planned for 17-25th June 2023)

3. Location: Coordinates of the bounding boxes where the AUV will be deployed (Degrees, decimal minutes, WGS84):

Latitude		Longitude	
Deg	Min	Deg	Min
RF:			
53°N	24.304	3°W	41.390
53°N	23.004	3°W	35.281
53°N	21.989	3°W	35.550
53°N	23.408	3°W	41.954
GyM:			
53°N	29.633	3°W	38.775
53°N	29.676	3°W	34.464
53°N	28.985	3°W	34.431
53°N	29.047	3°W	38.768
53°N	26.341	3°W	40.637
53°N	26.900	3°W	42.606



4. Vessels and underwater vehicles involved:

4.1 Vessel used to deploy and retrieve the AUV Gavia:

The R/V Prince Madog: a 34 m research vessel, with a blue hull and white superstructure.

Contact details for the vessel are:

Call Sign: ZNLJ5
 IMO number: 9229611
 MMSI: 235234000
 Master: Gareth Ellis
 Phone: 01248382903 / +44 7862363770
 E-mail madog@os-energy.eu



4.2 Vessel used to stay close to, and monitor the position of, the AUV Gavia:

The Sarah Jane Too, an 11m multi-purpose workboat. Certified to UK MCA Small Commercial Vessel & Pilot Boat Code of Practice for up to 60 miles from safe haven (area category 2) carrying up to 12 passengers or 1000kg cargo, plus 2 crew.

Contact details for the vessel are:

Call Sign: MFPR8
 MMSI: 235019791
 Phone: +44 (0) 1248 810907
 E-mail gareth@starida.com
 (Gareth Williams, Office Manager)



4.3 The Gavia autonomous underwater vehicle (AUV): this is a self-contained, low logistics, modular survey platform capable of delivering high quality data while operating from vessels of opportunity or from the shore. During the mission, the Gavia AUV travels typically between 2 and 7 meters above the seabed. Launch and recovery will be from the RV Prince Madog (see 4.1 above), and acoustic communication during the mission will be from the Sarah Jane Too (see 4.2 above).

Length: 4.2m

Weight: 130kg

Diameter: 200mm

Maximum speed: 5.5 knots

Battery module: 1.5 kW lithium ion rechargeable cells per module. Three modules will be used.

Endurance: Typically 5-6 hours at 3 knots per rechargeable battery module with all sensors.

Communication:

- Wireless LAN: IEEE 802.11g compliant
- Satellite communications: Full global coverage via Iridium link
- Acoustic modem (ACOMMS Pinger): For tracking and status updates.
- Navigation: High accuracy DGPS ready receiver; High-precision DVL-aided Kearfott T-24 Inertial Navigation System (INS) with Teledyne RDI Doppler Velocity Log (DVL) and direct sound velocity meter.



Further details are available from Bangor University via Katrien Van Landeghem – k.v.landeghem@bangor.ac.uk