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Collaborating company: **Minesto UK Ltd.**

UNDEB EWROPEAIDD EUROPEAN UNION
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European Regional Development Fund

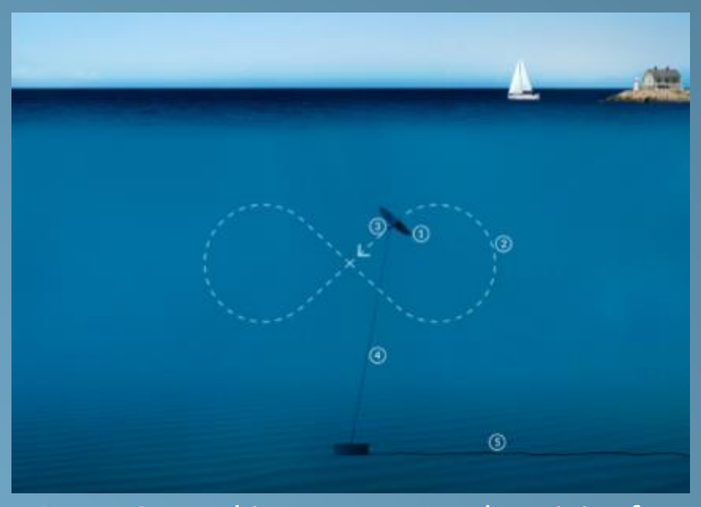
SEACAMS2

The effect of deep (50 - 150 m) marine renewable subsea installations on pelagic ecology: Using ship wrecks and test marine renewable energy devices to gain insights.

Research question: Will fish and other fauna be attracted to marine renewable energy structures?

Aim: Understand how fish and other fauna (micronekton) distribute around structures (if at all) placed on the seabed at similar depths and current regimes to those suitable for the Deep Green device and other MREDs (Marine Renewable Energy Devices).

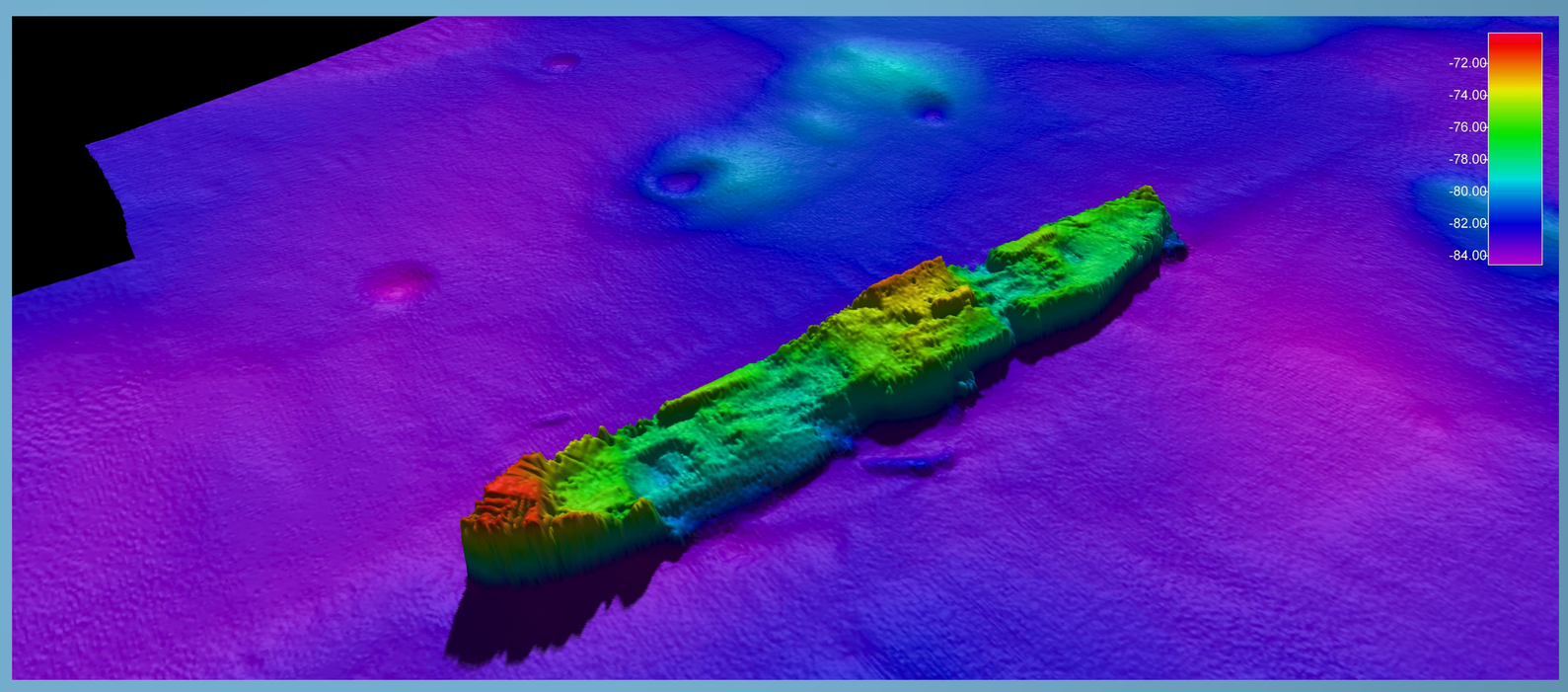
Collaboration context: '*Holyhead Deep has been identified as a perfect location for a commercial Deep Green installation. The area matches all the site requirements by providing low-flow tidal velocities (1.5–2 m/s mean peak flow) at a depth of 80–100 meter, only approx. 8 km from Holyhead, where Minesto UK head offices are located*' minesto.com



Deep Green kites generate electricity from the tidal currents

Sampling approach

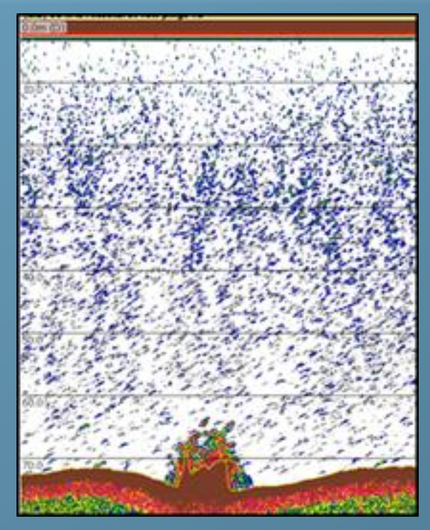
Hull mounted singlebeam-splitbeam and multibeam echosounders on the RV Prince Madog were used to study subsea structures off the Welsh coast during two cruises.



The abundance of shipwrecks offer a useful opportunity to investigate our research question, in addition to currently rare marine renewable subsea structures. The water column around these structures were sampled to investigate possible attraction of fauna towards them.

Project status

- Significant amounts of data have been collected during two sampling cruises in 2017.
- Detailed analysis of acoustic targets above and close to structures, and comparisons with control areas await to be analysed.
- Minesto UK Ltd. and SEACAMS2 plan to study possible aggregation effects on future installations in the Holyhead Deep through SEACAMS2.



Collected acoustic data near a subsea structure on the seabed.

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