

## Joint Nature Conservation Committee

The JNCC has a responsibility to identify marine protected areas in the offshore environment around the UK, and we have a number of Areas of Search (AoS) that we are investigating as part of this work. One of these AoS, an area of 'Submarine structures made by leaking gases', was surveyed in the mid-Irish Sea. 'Submarine structures made by leaking gases' are an Annex I habitat under the EC Habitats Directive.



## Submarine structures in the mid-Irish Sea

The survey commissioned by the JNCC in May 2008 took advantage of previous work undertaken by the SEA6 surveys, and gathered additional high resolution acoustic data. High quality underwater images were also obtained, along with seabed samples, to help interpret the acoustic data. After the reporting phase of this project is complete, the data will be assessed against established Special Area of Conservation (SAC) site selection criteria to determine whether this Area of Search could contribute to the UK Marine Natura network.

The JNCC is the statutory adviser to Government on UK and international nature conservation

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### Further Reading:

Whormesley P. *et al.*, 2009. Understanding the marine environment – seabed habitat investigations of Submarine Structures in the mid-Irish Sea and Solan Bank Area of Search (AoS). JNCC report 430

### Project contractors:

Centre for Environment, Fisheries & Aquaculture Science - [www.cefas.co.uk/](http://www.cefas.co.uk/)  
British Geological Survey - [www.bgs.ac.uk/](http://www.bgs.ac.uk/)  
University of Ulster - [www.ulster.ac.uk/](http://www.ulster.ac.uk/)  
Envision Mapping Ltd - [www.envision.uk.com/](http://www.envision.uk.com/)

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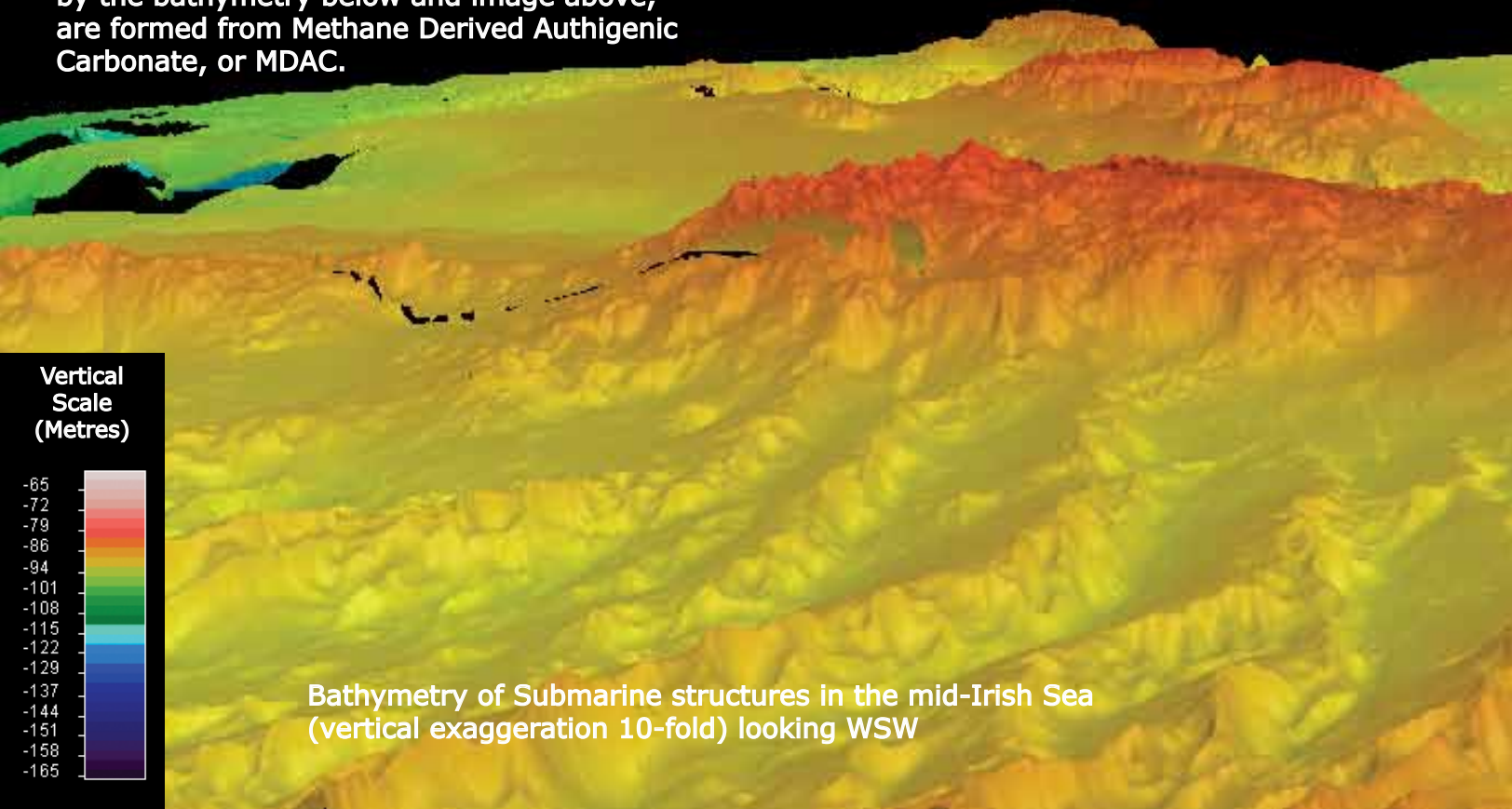
# SUBMARINE STRUCTURES IN THE MID-IRISH SEA



Submarine structures, such as the ones shown by the bathymetry below and image above, are formed from Methane Derived Authigenic Carbonate, or MDAC.

MDAC is created when seabed sediments become bound together by carbonate cement – a bi-product of the microbial oxidation of methane rising up through the seabed, forming reef-like structures that provide a unique habitat for a wide range of marine life. The images to the right show dead man's fingers *Alcyonium digitatum* and hydroids such as *Tubularia* sp. colonising the MDAC structures.

The known occurrence of these MDAC structures are limited within UK waters; the findings from this work makes a valuable contribution to our knowledge of its distribution in UK waters.



Bathymetry of Submarine structures in the mid-Irish Sea (vertical exaggeration 10-fold) looking WSW

Vertical Scale (Metres)

