APPLICATION FOR THE CONSENT TO CONDUCT MARINE SCIENTIFIC RESEARCH IN AREAS UNDER NATIONAL JURISDICTION OF THE UNITED KINGDOM

Date: 30th November 2012

1. General information

1.1 Cruise name and/or number: CE13001: Standard Ocean Climate sections

1.2 **Sponsoring institution:**

Name: Marine Institute

Address: Rinville
Oranmore
Co. Galway
Ireland

Name of Chief Executive: Dr. Peter Heffernan

1.3 **Scientist in charge of the project:**

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1.4 **Scientist(s) from UNITED KINGDOM involved in the planning of the project**

Name(s): Prof. Mark Inall FInstP
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Name(s): Prof. Karen J. Heywood
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1.5 Submitting officer:

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2. Description of project (Attach additional pages as necessary)

2.1 Nature of objectives of the project:

Conduct the standard oceanographic stations across the Porcupine Bank, the Porcupine Abyssal Plain (PAP), the Rockall Trough to Rockall Bank. This work includes 24 hr CTD operations. Some shelf nutrient station sampling will also take place on this cruise subject to weather conditions but will not be outside the standard section (24 hr)

Rock Dredging/ Box coring and day grabs will be acquired during the survey as conditions and progress allow (24 hr - weather dependent) and only in Irish waters.

Gliders will be deployed in the Goban Spur region on behalf of the Scottish Association for Marine Science (SAMS) and National Oceanography Centre (12 hr) in UK waters. CTDs will be used to calibrate the Gliders prior to recovery.

Sensors may also be swapped out on the Porcupine Abyssal Plain (PAP) met buoy (international waters)

Service M6 weather buoy and mooring at Porcupine Bank (in Irish waters)

2.2 Relevant previous or future research cruises:

2.3 Previously published research data relating to the project:

Oceanographic section data reported to ICES Report on Ocean climate and ICES database on an annual basis.

3. Methods and means to be used

3.1 Particulars of vessel

Name: Celtic Explorer
Nationality: Irish

Owner: Marine Institute

Overall length: 65.5m
Maximum draught: 5.7m
Net tonnage: 727
Propulsion: 2 x 1530 KW, 1000Rpm, 1 x 1020 KW, 1000 Rpm

Cruising speed: 10 Kts
Call sign: EI GB
Method and capability of communication –
Vsat Satellite Broadband
Imarsat –c
HF
VHF
Mini –M

Name of master: Antony Hobin/Denis Rowan
Number of crew: 14
Number of scientists on board: 15

3.2 Aircraft or other craft to be used in the project: N

3.3 Particulars of methods and scientific instruments

Types of samples and data	**Methods to be used**	**Instruments to be used**
Temperature and salinity profiles	CTD Rosette	Seabird 911
Temperature and salinity profiles	Autonomous glider	Seaglider

3.4 Indicate whether harmful substances will be used: No

3.5 Indicate whether drilling will be carried out: No

3.6 Indicate whether explosives will be used: No

4. Installations and equipment

Details of installations and equipment (dates of laying, servicing, recovery, exact locations and depth):

The cruise activity is due to take place between January 5th and 19th 2013. The precise timing of glider and CTD activities will be known once the weather forecast for that time period is better understood. The initial plan is to conduct CTD, glider recovery and sensor swap out activities in the south of the map region before proceeding into Irish waters to complete the standard oceanographic sections. Indicative dates for the activity in UK waters are January 6th to 12th.

5. Geographical areas

5.1 Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude):

Glider recoveries and deployments will take place in an area centred on 48 30' N, 11 W. The PAP mooring is located in international waters at (49N,16.5W). All other activities are bounded by 53 to 56 N and 9 to 18W in Irish waters.

5.2 Attach chart(s) at an appropriate scale showing the geographical areas of the intended work and, as far as practicable, the positions of intended stations, the tracks of survey lines, and the locations of installations and equipment.

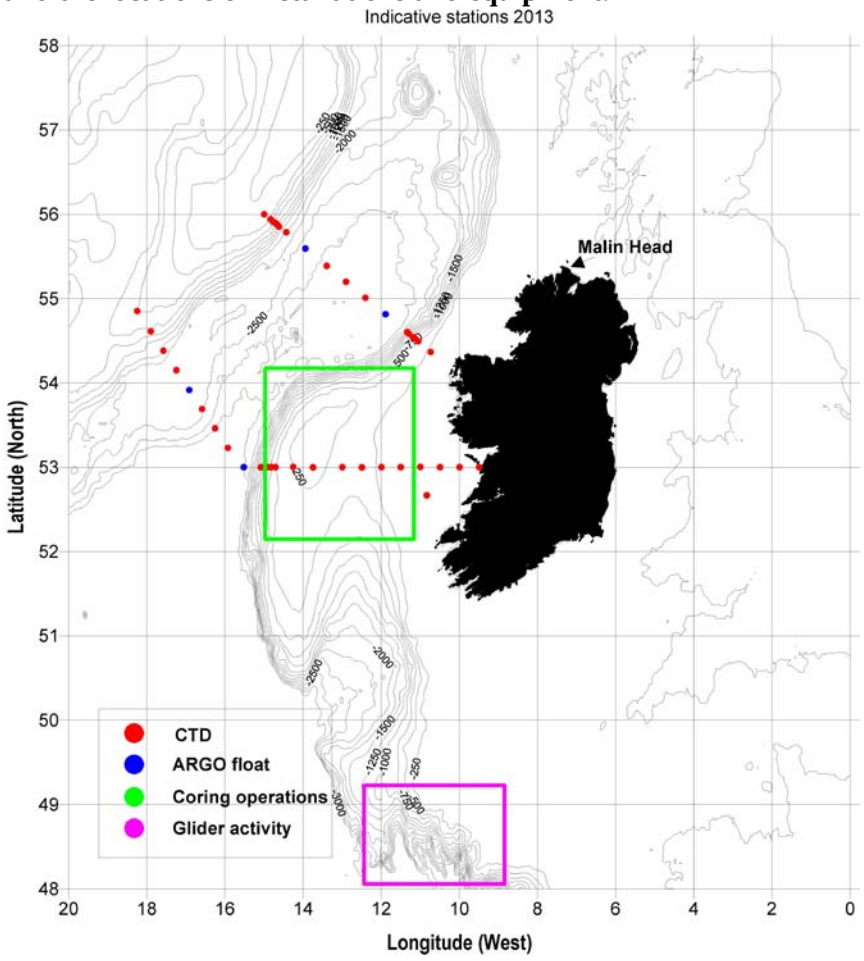

Figure 1. Indicative locations of glider activity (pink box), standard CTD operations (red and blue dots) and potential coring locations (green box) in Irish waters.

6. Dates

6.1 Expected dates of first entry into final departure from research area of the research vessel:

Entry on January 6th, departure no later than January 19th 2013

6.2 Indicate if multiple entry is expected:

Possible depending on prevailing weather conditions at the time but within timeframe outlined above.

7. Port calls

7.1 Dates and names of intended ports of calls in UNITED KINGDOM:
None

7.2 Any special logistical at ports of call:
None

7.3 Names/ Address / Telephone of shipping agent (if available)

8. Participation

8.1 Extent to which UNITED KINGDOM will be enable to participate to be represented in research project:
Five scientists and engineers from University of East Anglia and National Oceanography Centre will participate on the cruise. They will oversee the glider work and activity at the PAP mooring. This work is part of the NERC funded OSMOSIS and FastNet programmes.

8.2 Proposed dates and ports for embarkation / disembarkation:

Embark Galway, Ireland on January 5th, disembark Killybegs, Ireland on January 19th

9. Access to data, samples and research results

9.1 Expected dates of submission to UNITED KINGDOM preliminary reports which should include the expected dates of submission of the final results:

Mid 2013

9.2 Proposed means for access by UNITED KINGDOM to data and samples:

Directly from the ship at the time of research (pre-calibration) and through data request to Irish Marine Institute for fully calibrated data in mid 2013.

9.3 Proposed means to provide UNITED KINGDOM with assessment of data, samples and research results or provide assistance in their assessment or interpretation:

This will be provided by the UK scientists involved in the OSMOSIS and FastNet Programmes. For an assessment of the Irish data, users are referred to the ICES Report on Ocean Climate (http://ices.dk/pubs/crr/crr314/ICRR%20314-web.pdf).

9.4 Proposed means of making research results internationally available:

The data are published in the ICES Report on Ocean Climate (http://ices.dk/pubs/crr/crr314/ICRR%20314-web.pdf).

10. Scientific Equipment

COMPLETE THE FOLLOWING TABLE-
SEPARATE PAGE FOR EACH COSTAL STATE:

INDICATE YES OR NO

LIST SCIENTIFIC WORK BY FUNCTION Eg: MAGNETOMETRY: GRAVITY DIVING SEISMICS BATHYMETRY SEABED SAMPLING TRAWLING ECHO SOUNDING WATER SAMPLING U/W TV MOORED INSTRUMENTS TRAWLING ECHO SOUNDING WATER SAMPLING	Water column including sediment sampling of the Seabed	Fisheries research within fishing limits	Research concerning the natural resources of the continental shelf or its physical character i-stics	DISTANCE FROM COAST		
				Within 12nms	Between 12-200nms	(Continental shelf work only) Beyond 200nm but within the continental margin
WATER SAMPLING	Yes	No	No	No	Yes	Yes
PROFILING INSTRUMENTS	Yes	No	No	No	Yes	Yes
ABOVE WATER OPTICS AND PHOTOGRAPHY	Yes	No	No	No	Yes	Yes

Glenn Nolan

(On behalf of the Principle Scientist)

Dated: 30th November 2012