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

Date: 25/11/13

1. General information

1.1 Cruise name and/or number: CV14001
1.2 **Sponsoring institution:** Marine Institute

Name: Marine Institute

Address: Rinville
Oranmore
Co. Galway
Ireland

Name of Chief Executive: Dr. Peter Heffernan

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

Name: Dr. Evin McGovern

Address: Marine Institute
Rinville
Oranmore
Co. Galway
Ireland

Telephone: +353 (0) 91-387200
Telefax: +353 (0) 91-387201

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

Name(s):
Address:

1.4 Submitting officer: Paul Rush

Name and address:
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Rinville
Oranmore
Co. Galway
Ireland

Country: Ireland

Telephone: +353 (0) 91-387200

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

2.1 Nature of objectives of the project:

The survey aims to fulfill Ireland's requirements under the Joint Assessment and Monitoring Programme (JAMP) of the 1992 'Oslo Paris Convention for the Protection of the North East Atlantic' (OSPAR). This requires the answering of 3 key questions:

1. What is the spatial distribution of nutrients?
2. Are nutrient concentrations changing over time (trends)?
3. Are nutrient concentrations significantly elevated (>50%) above salinity related and/or regionally specific background levels?

Winter surveys alternate to south about and northabout. For the Irish Sea this helps us characterise nutrient concentrations throughout the Irish Sea including entering and exiting through St. George's and North channels.

2.2 Relevant previous or future research cruises:

The proposed work in UK waters is a repeat of what was done in the 2012. The Marine Institute has been carrying out a winter nutrients survey in the Irish Sea since 1990 and plans to continue the annual surveys for the foreseeable future.

2.3 Previously published research data relating to the project:

McGovern, E.; Monaghan, E.; Bloxham, M.; Rowe, A.; Duffy, C.; Quinn, A.; McHugh, B.; McMahon, T.; Smyth, M.; Naughton, M.; McManus, M. and Nixon, E. *Winter Nutrient Monitoring of the Western Irish Sea – 1990 to 2000.* Marine Institute Marine Environment and Health Series, No. 4, 2002.

Nardello, I., **McGovern, E.**, Kivimae, C., **McGrath, T.** 2010 Biogeochemicals Cycles in the Irish Marine System in *Irish Ocean Climate and Ecosystem Status Report 2009*. eds Nolan, G., Gillooly, M., Whelan, K. Marine Institute, Galway

3. Methods and means to be used

3.1 Particulars of vessel

Name: Celtic Voyager
Nationality: Irish

Owner: Marine Institute

Overall length: 31.4 m
Maximum draught: 3.8 m
Net tonnage: 340
Propulsion: Wartsilla UD25m5 (626Kw)
Cruising speed: 9.5 Knots
Call sign: EIQN

Method and capability of communication –

Name of master: Denis Rowan/Philip Baugh
Number of crew: 7
Number of scientists on board: maximum of 7 at any one time

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

3.3 Particulars of methods and scientific instruments

Types of samples and data	Methods to be used	Instruments to be used
Water samples for nutrients and inorganic carbon/total alkalinity	Water Samples by niskin preserved for analysis in the lab	CTD rosette for water collection
Water samples for phytoplankton speciation	Samples preserved with Lugols for analysis in the lab	CTD rosette for water collection

3.4 Indicate whether harmful substances will be used:
none to be used

3.5 Indicate whether drilling will be carried out:
no

3.6 Indicate whether explosives will be used
no

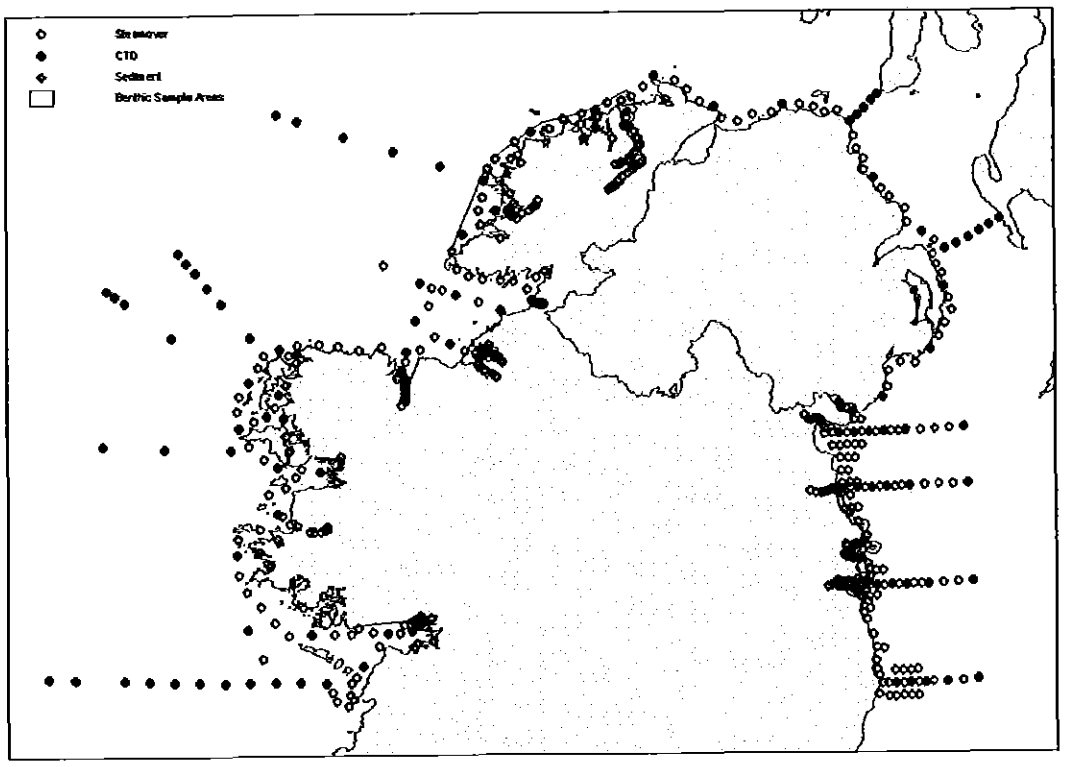
4. Installations and equipment

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

5. Geographical areas

5.1 Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude):
52.88°N 5.22°W, 55.33°N 11.53°W
55.38°N 5.22°W, 52.88°N 11.53°W

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.



*station locations still to be finalized.

6. **Dates :** 20-Jan-14 to 1-Feb-14

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

20-Jan-14 to 1-Feb-14

6.2 Indicate if multiple entry is expected: yes

7. **Port calls** none

7.1 Dates and names of intended ports of calls in UNITED KINGDOM: N/A

7.2 Any special logistical at ports of call: N/A

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:

8.2 Proposed dates and ports for embarkation / disembarkation:
Embarkation port: Dublin Jan 20th
Disembarkation: Galway Feb 1st

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:

A cruise report will be available upon request to the chief scientist from March 1st. Final results will be submitted to ICES at the end of 2013.

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

All data will be submitted to ICES and can be accessed through the ICES database. Access to samples (if available) can be attained by contacting Evin McGovern at the Marine Institute (evin.mcgovern@marine.ie).

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

Data will be used -in joint assessments e.g. via ICES working groups. Further requirements for assistance can be accommodated through contact with Evin McGovern at the Marine Institute (evin.mcgovern@marine.ie).

9.4 Proposed means of making research results internationally available:

Data will be submitted to ICES and CDIAC international data centres.

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 characteristics	DISTANCE FROM COAST		
				Within 12nms	Between 12-200nms	(Continental shelf work only) Beyond 200nm but within the continental margin
WATER SAMPLING	Y	N	Y	Y	Y	N
PROFILING INSTRUMENTS	Y	N	Y	Y	Y	N
ABOVE WATER OPTICS AND PHOTOGRAPHY	N	N	N	N	N	N

(On behalf of ~~the~~ Principle Scientist)

Dated 26/11/2013