

Application for Consent to conduct  
Marine Scientific Research

Date: 28/11/18

1. General Information

1.1 Cruise name and/or number:
Celtic Voyager Winter Environmental Survey CV19001

1.2 Sponsoring Institution(s):	
Name:	Marine Institute
Address:	Rinville, Oranmore, Galway, Ireland
Name of Director:	Dr. Peter Heffernan

1.3 Scientist in charge of the Project:	
Name:	Dr Garvan O Donnell (for chemistry)
Country:	Ireland
Affiliation:	Marine Institute
Address:	Rinville, Oranmore, Galway, Ireland
Telephone:	+353 91 387 253
Fax:	
Email:	garvan.odonnell @marine.ie
Website (for CV and photo):	www.marine.ie

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:	
Name:	
Affiliation:	
Address:	
Telephone:	
Fax:	
Email:	
Website (for CV and photo):	

2. Description of Project

2.1 Nature and 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: <ol style="list-style-type: none"><li>1. What is the spatial distribution of nutrients?</li><li>2. Are nutrient concentrations changing over time (trends)?</li><li>3. Are nutrient concentrations significantly elevated (&gt;50%) above salinity related and/or regionally specific background levels?</li></ol> Question number 3 requires that we know what the 'background levels' are. This is why we would like to extend the scope of our sampling to include more samples in the North Channel. There are two planned transects across the North Channel. This will allow us to make an assessment of the nutrient inputs to the Irish Sea

2.2 If designated as part of a larger scale project, then provide the name of the project and the Organisation responsible for coordinating the project:
Results contribute to OSPAR assessments of Eutrophication status in Irish waters and WFD coastal waters assessments. In addition, sampling will be carried out in the INTERREG area and will contribute to INTERREG COMPASS project

2.3 Relevant previous or future research projects:
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The Marine Institute has been carrying out a winter nutrients survey in the Irish Sea since 1990. The surveys run north or south around the island on alternative years. The proposed survey lines in UK waters in 2019 were last surveyed in 2016 and contribute to this long-running time series. MI plans to continue the annual surveys for the foreseeable future.

#### 2.4 Previous publications 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.

### 3. Geographical Areas

3.1 Indicate geographical areas in which the project is to be conducted (with reference in Latitude and longitude in decimal degrees, including coordinates of cruise/track/way points/sampling stations). Please provide coordinates in a separate excel spreadsheet.

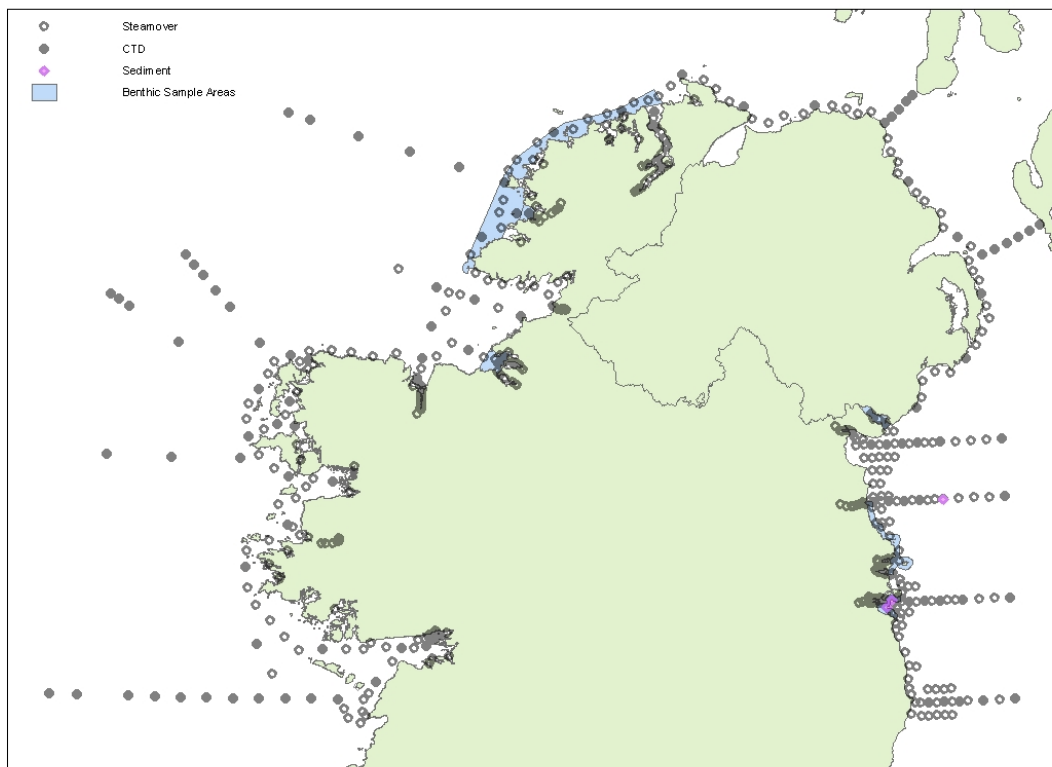
52.88°N 5.22°W, 55.33°N 11.53°W

55.38°N 5.22°W, 52.88°N 11.53°W

Coordinates of sampling stations are provided in separate Excel spreadsheet

3.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical Areas of the intended work and, as far as practicable, the location and depth of sampling Stations, the tracks of survey lines, and the locations of installations and equipment.

CV19001



#### 4. Methods and means to be used

4.1 Particulars of vessel:	
Name:	R.V. Celtic Voyager
Type/Class:	100 A1 Research Vessel, LMC
Nationality (Flag State):	Irish
Identification Number (IMO/Lloyds No.):	
Owner:	Marine Institute
Operator:	P&O Maritime Services
Overall length (meters):	31.4
Maximum draught:	4m
Displacement/Gross Tonnage:	340
Propulsion:	Wärtsilä UD25M5 (626 kW),
Cruising & maximum speed:	<= 10 knots
Call sign:	EIQN
INMARSAT number and method and capability of communication (including emergency frequencies):	GMDSS A class, E-mail. Mini M SAT C and GSM  00 353 91 423396 / 00870 763066755 00870-764687325 / 764687326
Name of Master:	Philip Baugh/Colin McBrearty
Number of Crew:	7
Number of Scientists on board:	8 max

4.2 Particulars of Aircraft:	
Name:	
Make/Model:	
Nationality (flag State):	
Website for diagram & Specifications:	
Owner:	
Operator:	
Overall Length (meters):	
Propulsion:	
Cruising & Maximum speed:	
Registration No.:	
Call Sign:	
Method and capability of communication (including emergency frequencies):	
Name of Pilot:	
Number of crew:	
Number of scientists on board:	
Details of sensor packages:	
Other relevant information:	

4.3 Particulars of Autonomous Underwater Vehicle (AUV):	
Name:	
Manufacturer and make/model:	
Nationality (Flag State):	
Website for diagram & Specifications:	
Owner:	
Operator:	
Overall length (meters):	
Displacement/Gross tonnage:	
Cruising & Maximum speed:	
Range/Endurance:	
Method and capability of communication	

(including emergency frequencies):	
Details of sensor packages:	
Other relevant information:	

4.4 other craft in the project, including its use:

4.5 Particulars of methods full description of scientific instruments to be used (for fishing gear specify type and dimension) and location			
Types of samples and Measurements:	Methods to be used:	Instruments to be used:	To be carried out within 12nm (yes or no):
Water samples	Discrete and underway water samples will be taken, filtered and frozen for nutrient and carbonate system analysis ashore at a later date.	Niskin bottles on deployed CTD rosette	Yes
Water samples total inorganic carbon (TIC) and total alkalinity (TA)	Samples preserved with 0.2 ml of 50% solution of mercuric chloride for analysis in the lab	CTD rosette for water collection	Yes

4.6 Indicate nature and quantity of substances to be released into the marine environment:  
None

4.7 Indicate whether drilling will be carried out. If yes, please specify:  
none

4.8 Indicate whether explosives will be used. If yes, please specify type and trade name, Chemical content, depth of trade class and stowage, size, depth of detonation, frequency of Detonation, and position in latitude and longitude:  
none

## 5. Installations and Equipment

Details of installations and equipment (including dates of laying, servicing, method and Anticipated timeframe for recover, as far as possible exact locations and depth, and Measurements):  
N/A

## 6. Dates

6.1 Expected dates of first entry into and final departure from the research area by the research vessel and/or other platforms:  
10-22 January 2019

6.2 Indicate if multiple entries are expected:  
Yes. Will enter UK Waters at Carlingford Lough

Survey will continue around Northern Ireland coast, complete 2 transects one south across North Channel to mainland Scotland and one north transect across North Channel to mainland Scotland and will exit UK waters at Lough Foyle

7. Port Calls

7.1 Dates and Names of intended ports of call:

None, except in case of emergency.

7.2 Any special logistical requirements at ports of call:

No

7.3 Name/Address/Telephone of shipping agent (if available):

8. Participation of the representative of the coastal State

8.1 Modalities of the participation of the representative of the coastal State in the research Project:

N/A

8.2 Proposed dates and ports for embarkation/disembarkation:

N/A

9. Access to Data, Samples and Research Results

9.1 Expected dates of submission to coastal State of preliminary report, which should include

The expected dates of submission of the data and research results:

A cruise report will be available upon request to the chief scientist from May 1<sup>st</sup>. Final results will be submitted to ICES at the end of 2019.

9.2 Anticipated dates of submission to the coastal State of the final report:

Before end 2020.

9.3 Proposed means for access by coastal State to data (including format) 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).

9.4 Proposed means to provide coastal State with assessment of data, samples and Research results:

The Marine Institute plan to submit 'National Comments' to OSPAR once every year to two years. This will include an assessment of the data. Further requirements for assistance can be accommodated through contact with Evin McGovern at the Marine Institute (evin.mcgovern@marine.ie).

9.5 Proposed means to provide assistance in assessment or interpretation of data, samples

And research results:

The Marine Institute plan to submit 'National Comments' to OSPAR once every year to two years. This will include an assessment of the data. Further requirements for assistance can be accommodated through contact with Evin McGovern at the Marine Institute (evin.mcgovern@marine.ie)
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9.6 Proposed means of making results internationally available:
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Data will be submitted to ICES
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10. Other permits Submitted

10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending):
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N/A
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11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.:
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None
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Signature: Garvan O Donnell

Contact information of the focal point:

Name: Garvan O Donnell

Country: Ireland

Affiliation:

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