

Application for Consent to conduct
Marine Scientific Research

Date: 02.02.2016

1. General Information

1.1 Cruise name and/or number: CE16011a
BSH North Sea Summer Survey

1.2 Sponsoring Institution(s):	
Name:	Federal Maritime and Hydrographic Agency (BSH)
Address:	20305 Hamburg, P.O. Box 301220, Germany
Name of Director:	Monika Breuch-Moritz

1.3 Scientist in charge of the Project:	
Name:	Holger Klein
Country:	Germany
Affiliation:	BSH
Address:	20305 Hamburg P.O.Box 301220, GERMANY
Telephone:	+49 (0) 40 3190 3220
Fax:	+49 (0) 40 3190 5000
Email:	Holger.klein@bsh.de
Website (for CV and photo):	-

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:
Annual BSH North Sea Summer Survey The surveys were realised since 1998 at a time when thermal stratification is expected to be at its maximum and phytoplankton production has passed its maximum. The surveys include seven coast to coast East-West sections between 54° and 60° N, additional stations between 54° N and the entrance of the English Channel, and Stations in the English Channel (~every 3 years). With the exception of the first survey in 1998 all surveys served a fixed station grid for vertical CTD profiles and water samples. Objective of the cruise is the determination of the oceanographic and chemical status of the North Sea during summer.

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:

2.3 Relevant previous or future research projects:
Annual BSH North Sea Summer Surveys: Cruise 307 of R/V Gauss, July 2001 Cruise 385 of R/V Gauss, July 2002 Cruise 405 of R/V Gauss, August 2003 Cruise 425 of R/V Gauss, August 2004

Cruise 446 of R/V Gauss, August 2005
 Cruise 463 of R/V Gauss, August 2006
 Cruise 273 of R/V Pelagia, August 2007
 Cruise 293 of R/V Pelagia, July/August 2008
 Cruise 311 of R/V Pelagia, August/September 2009
 Cruise 323 of R/V Pelagia, August/September 2010
 Cruise 11010 of R/V Celtic Explorer, August 2011
 Cruise 12011 of R/V Celtic Explorer, August 2012
 Cruise 13012 of R/V Celtic Explorer, August/September 2013
 Cruise 14012 of R/V Celtic Explorer, August 2014
 Cruise 15013a of R/V Celtic Explorer, August 2015

2.4 Previous publications relating to the project:

Cruise summary reports of above mentioned cruises, ICES Reports on Ocean Climate

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.

49.0°N – 60.0°N; 008.0°W – 008.0°E

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.

Please see below!

4. Methods and means to be used

4.1 Particulars of vessel:

Name:	Celtic Explorer
Type/Class:	Multipurpose Research Vessel
Nationality (Flag State):	Irish
Identification Number (IMO/Lloyds No.):	D100 A1 ICE CLASS ID + UMS +SCM DP (CM)
Owner:	Marine Institute
Operator:	P&O Maritime Services
Overall length (meters):	65.5
Maximum draught:	5.7m
Displacement/Gross Tonnage:	2425T
Propulsion:	2 x 1530 KW, 1000Rpm, 1 x 1020 KW, 1000 Rpm
Cruising & maximum speed:	10 & 16 knots
Call sign:	EI GB
INMARSAT number and method and capability of communication (including emergency frequencies):	00353 91 423397 / 00353 91 423433 00870 763066743 00 353 87 9678520 / 00 353 86 1735500
Name of Master:	Antony Hobin/Denis Rowan
Number of Crew:	13-15
Number of Scientists on board:	12-14 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):
T, S, nutrients, organic contaminants, oxygen, pH, radionuclides.	water sampling	CTD with rosette sampler, O ₂ - and transmission sensor. Different water samplers 1 – 270 l.	Yes
Currents	In-situ	vessel mounted ADCP	Yes
T & S		Thermosalinograph	Yes
T, S, chlorophyll	In-situ and water samples	CTD-System	Yes
Transparency	In-situ	Secchi-Disk	Yes
Air pollutants	air samplings and optics	Air sampler	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:
No drilling or sediment samples.

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):
None

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:
Between August 4 th and 26 th , 2016
6.2 Indicate if multiple entries are expected:
Yes, please see attached map below.

7. Port Calls

7.1 Dates and Names of intended ports of call:
Aberdeen, August 24-26, 2016
7.2 Any special logistical requirements at ports of call:
Mobile crane
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:
Unfortunately not possible due to limited space on board.
8.2 Proposed dates and ports for embarkation/disembarkation:

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:
November 2016
9.2 Anticipated dates of submission to the coastal State of the final report:
November 2016
9.3 Proposed means for access by coastal State to data (including format) and samples:
Data access via DOD (German Oceanographic Data Centre): http://www.bsh.de/en/Marine_data/Observations/DOD_Data_Centre/index.jsp
9.4 Proposed means to provide coastal State with assessment of data, samples and research results:
Within one year.

9.5 Proposed means to provide assistance in assessment or interpretation of data, samples And research results:
-

9.6 Proposed means of making results internationally available:
Via the ICES Working Group on Oceanic Hydrography (WGOH), ICES Working Group on Operational Oceanographic Products for Fisheries and Environment (WGOOFE), and Oceanic ICES Report on Ocean Climate (IROC).

10. Other permits Submitted

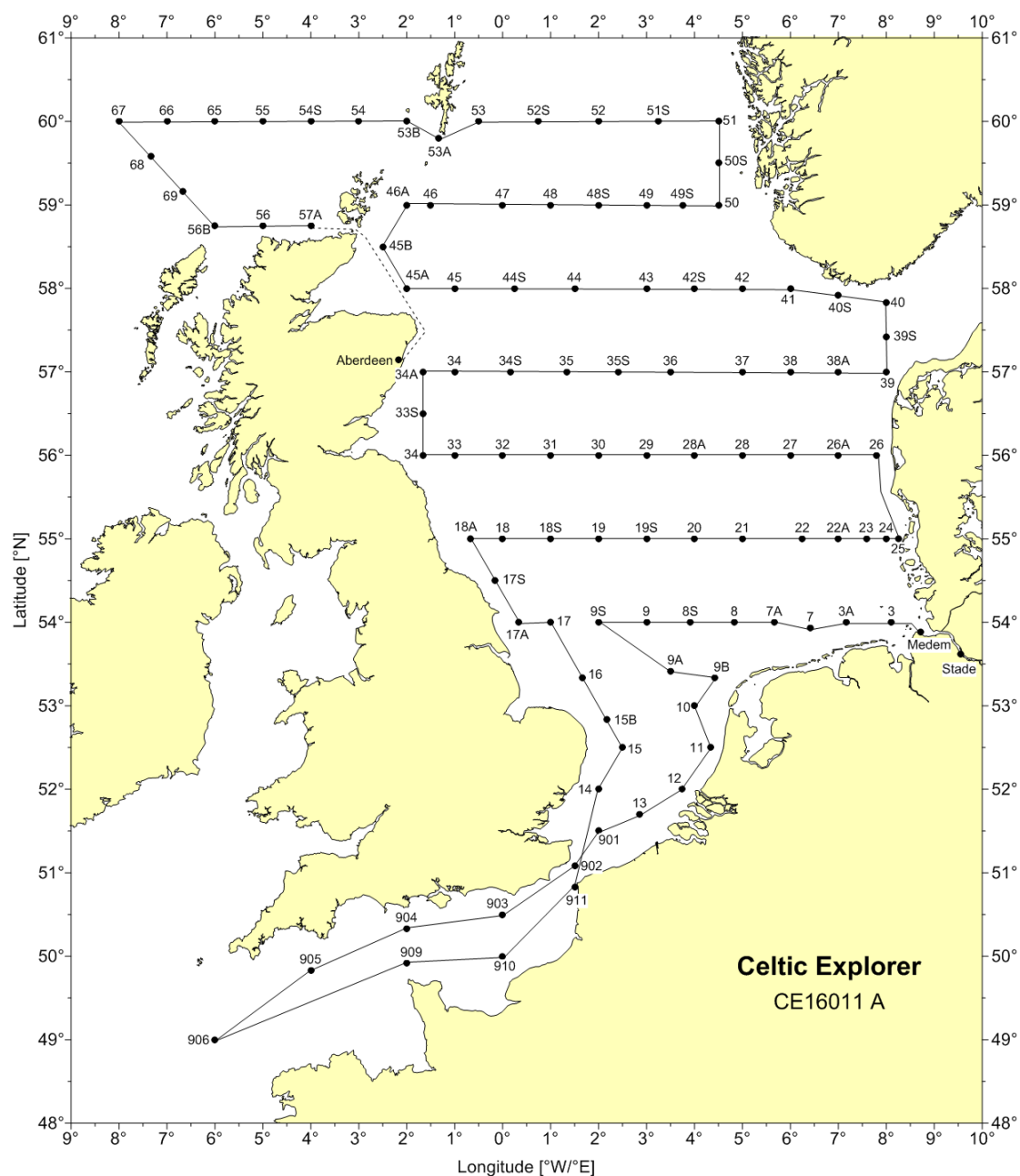
10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending): Netherlands, France, Denmark, Norway, Germany

11. List of Supporting Documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.:
List of stations, list of hazardous substances and track plot

Signature:

Contact information of the focal point:
 Name: Aodhán Fitzgerald
 Country: Ireland
 Affiliation: Marine Institute
 Address: Rinville, Oranmore, Co. Galway
 Telephone: 00 353 91 387200
 Fax: 00 353 91 387201
 Email: Aodhan.fitzgerald@marine.ie



Station List

Station	Lat [°]	Lat [']	N/S	Lon [°]	Lon [']	E/W	Phi [°]	Lam [°]
Stade	53	37.1	N	009	32.8	E	53.62	009.55
Medem	53	52.8	N	008	43.0	E	53.88	008.72
GN003	54	00.0	N	008	06.5	E	54.00	008.11
GN003A	54	00.0	N	007	10.0	E	54.00	007.17
GN007	53	56.0	N	006	25.0	E	53.93	006.42
GN007A	54	00.0	N	005	40.0	E	54.00	005.67
GN008	54	00.0	N	004	50.0	E	54.00	004.83
GN008S	54	00.0	N	003	55.0	E	54.00	003.92
GN009	54	00.0	N	003	00.0	E	54.00	003.00
GN009S	54	00.0	N	002	00.0	E	54.00	002.00
GN009A	53	25.0	N	003	30.0	E	53.42	003.50
GN009B	53	20.0	N	004	25.0	E	53.33	004.42
GN010	53	00.0	N	004	00.0	E	53.00	004.00

GN011	52	30.0	N	004	20.0	E	52.50	004.33
GN012	52	00.0	N	003	44.0	E	52.00	003.73
GN013	51	42.2	N	002	51.4	E	51.70	002.86
GN901	51	30.0	N	002	0.00	E	51.50	002.00
GN902	51	05.0	N	001	30.00	E	51.08	001.50
GN903	50	30.0	N	000	0.00	E	50.50	000.00
GN904	50	20.0	N	002	0.00	W	50.33	-002.00
GN905	49	50.0	N	004	0.00	W	49.83	-004.00
GN906	49	00.0	N	006	0.00	W	49.00	-006.00
GN909	49	55.0	N	002	0.00	W	49.92	-002.00
GN910	50	00.0	N	000	0.00	E	50.00	000.00
GN911	50	50.0	N	001	30.00	E	50.83	001.50
GN014	52	00.0	N	002	00.0	E	52.00	002.00
GN015	52	30.0	N	002	30.0	E	52.50	002.50
GN015B	52	50.0	N	002	10.0	E	52.83	002.17
GN016	53	20.0	N	001	40.0	E	53.33	001.67
GN017	54	00.0	N	001	00.0	E	54.00	001.00
GN017A	54	00.0	N	000	20.0	E	54.00	000.33
GN017S	54	30.0	N	000	10.0	W	54.50	-000.17
GN018A	55	00.0	N	000	40.0	W	55.00	-000.67
GN018	55	00.0	N	000	00.0	E	55.00	000.00
GN018S	55	00.0	N	001	00.0	E	55.00	001.00
GN019	55	00.0	N	002	00.0	E	55.00	002.00
GN019S	55	00.0	N	003	00.0	E	55.00	003.00
GN020	55	00.0	N	004	00.0	E	55.00	004.00
GN021	55	00.0	N	005	00.0	E	55.00	005.00
GN022	55	00.0	N	006	15.0	E	55.00	006.25
GN022A	55	00.0	N	007	00.0	E	55.00	007.00
GN023	55	00.0	N	007	35.0	E	55.00	007.58
GN024	55	00.0	N	008	00.0	E	55.00	008.00
GN025	55	00.0	N	008	15.0	E	55.00	008.25
GN026	56	00.0	N	007	48.0	E	56.00	007.80
GN026A	56	00.0	N	007	00.0	E	56.00	007.00
GN027	56	00.0	N	006	00.0	E	56.00	006.00
GN028	56	00.0	N	005	00.0	E	56.00	005.00
GN028S	56	00.0	N	004	00.0	E	56.00	004.00
GN029	56	00.0	N	003	00.0	E	56.00	003.00
GN030	56	00.0	N	002	00.0	E	56.00	002.00
GN031	56	00.0	N	001	00.0	E	56.00	001.00
GN032	56	00.0	N	000	00.0	E	56.00	000.00
GN033	56	00.0	N	001	00.0	W	56.00	-001.00
GN033A	56	00.0	N	001	40.0	W	56.00	-001.67
GN033S	56	30.0	N	001	40.0	W	56.50	-001.67
GN034A	57	00.0	N	001	40.0	W	57.00	-001.67
GN034	57	00.0	N	001	00.0	W	57.00	-001.00
GN034S	57	00.0	N	000	10.0	E	57.00	000.17
GN035	57	00.0	N	001	20.0	E	57.00	001.33
GN035S	57	00.0	N	002	25.0	E	57.00	002.42
GN036	57	00.0	N	003	30.0	E	57.00	003.50
GN037	57	00.0	N	005	00.0	E	57.00	005.00
GN038	57	00.0	N	006	00.0	E	57.00	006.00
GN038A	57	00.0	N	007	00.0	E	57.00	007.00
GN039	57	00.0	N	008	00.0	E	57.00	008.00
GN039S	57	25.0	N	008	00.0	E	57.42	008.00
GN040	57	50.0	N	008	00.0	E	57.83	008.00
GN040S	57	55.0	N	007	00.0	E	57.92	007.00
GN041	58	00.0	N	006	00.0	E	58.00	006.00
GN042	58	00.0	N	005	00.0	E	58.00	005.00

GN042S	58	00.0	N	004	00.0	E	58.00	004.00
GN043	58	00.0	N	003	00.0	E	58.00	003.00
GN044	58	00.0	N	001	30.0	E	58.00	001.50
GN044S	58	00.0	N	000	15.0	E	58.00	000.25
GN045	58	00.0	N	001	00.0	W	58.00	-001.00
GN045A	58	00.0	N	002	00.0	W	58.00	-002.00
GN045B	58	30.0	N	002	30.0	W	58.50	-002.50
GN046A	59	00.0	N	002	00.0	W	59.00	-002.00
GN046	59	00.0	N	001	30.0	W	59.00	-001.50
GN047	59	00.0	N	000	00.0	E	59.00	000.00
GN048	59	00.0	N	001	00.0	E	59.00	001.00
GN048S	59	00.0	N	002	00.0	E	59.00	002.00
GN049	59	00.0	N	003	00.0	E	59.00	003.00
GN049S	59	00.0	N	003	45.0	E	59.00	003.75
GN050	59	00.0	N	004	30.0	E	59.00	004.50
GN050S	59	30.0	N	004	30.0	E	59.50	004.50
GN051	60	00.0	N	004	30.0	E	60.00	004.50
GN051S	60	00.0	N	003	15.0	E	60.00	003.25
GN052	60	00.0	N	002	00.0	E	60.00	002.00
GN052S	60	00.0	N	000	45.0	E	60.00	000.75
GN053	60	00.0	N	000	30.0	W	60.00	-000.50
GN053A	59	48.0	N	001	20.0	W	59.80	-001.33
GN053B	60	00.0	N	002	00.0	W	60.00	-002.00
GN054	60	00.0	N	003	00.0	W	60.00	-003.00
GN054S	60	00.0	N	004	00.0	W	60.00	-004.00
GN055	60	00.0	N	005	00.0	W	60.00	-005.00
GN065	60	00.0	N	006	00.0	W	60.00	-006.00
GN066	60	00.0	N	007	00.0	W	60.00	-007.00
GN067	60	00.0	N	008	00.0	W	60.00	-008.00
GN068	59	35.0	N	007	20.0	W	59.58	-007.33
GN069	59	10.0	N	006	40.0	W	59.17	-006.67
GN056B	58	45.0	N	006	00.0	W	58.75	-006.00
GN056	58	45.0	N	005	00.0	W	58.75	-005.00
GN057A	58	45.0	N	004	00.0	W	58.75	-004.00

List of Hazardous Substances

List of Hazardous Substances Celtic Explorer CE16011															
SUBSTANCE (English/German)	percentage / concentration	CAS-No.	UN- No.	Extremely flammable F+	Highly flammable F	Oxidizing O	Extremely Toxic T+	Toxic T	Harmful Xn	Irritant Xi	Corrosive Dangerous for the environment C	N	packing	quantity	total quantity
Inflameble liquids				F+	F	O	T+	T	Xn	Xi	C	N			
Acetone/Aceton	-	67-64-1	1090		F					Xi			11 barrels 1 bottle	10 L 2.5 L	120 L
Hexane/Hexan	-	110-54-3	1208		F				Xn			N	4 barrels	10 L	40 L
Pentane/Pentan	-	109-66-0	1265	F+					Xn			N	10 barrels	10 L	100 L
Toxic substance															
Methanol/Methanol	-	67-56-1	1230		F			T					16 bottles	2.5 L	40 L
Corrosives															
Hydrochloric acid Salzsäure	37%	7647-01-0	1789								C		10 bottles	2.5 L	25 L
Ammonia solution Ammoniak-Lösung	25%	1336-21-6	2672								C	N	5 bottles	2.5 L	12.5 L
All substances are stored in an extra 10"-Container on deck.															