Application for Consent to conduct
Marine Scientific Research

Date: 22.01.2015

1. General Information

1.1 Cruise name and/or number: CE15013a
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 and additional stations between 54° N and the entrance of the English Channel. With the exception of the first survey in 1998 all surveys served a fixed station grid for vertical CTD profiles and water samples. Since 2010 the survey was extended to the north in order to record the transition area between the northern North Sea and the eastern North Atlantic. 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 13412 of R/V Celtic Explorer, August 2014

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.
51.5°N – 62.5°N; 005°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 8th and 29th, 2015
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:
No port of call in the UK!

7.2 Any special logistical requirements at ports of call:

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. Data will be available via the German Oceanographic Data Center (DOD, see below).

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 2015

9.2 Anticipated dates of submission to the coastal State of the final report:
November 2015

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

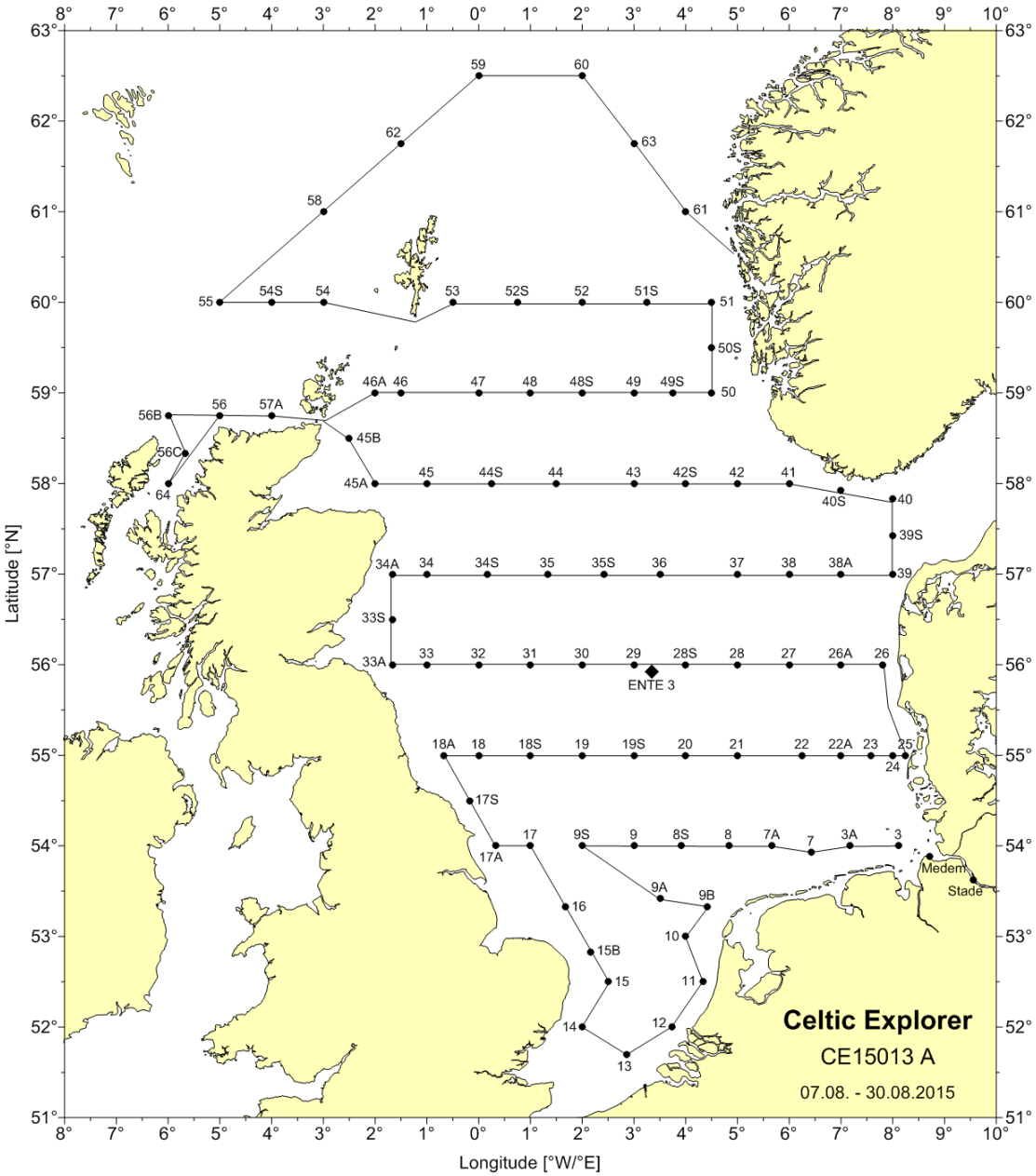
10.1 Indicate other types of coastal state permits anticipated for this research (received or Pending):

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:
Country:
Affiliation:
Address:
Telephone:
Fax:
Email:



Station List

Station	Lat°	Lat'	N/S	Lon°	Lon'	E/W
Stade	53	37.1	N	9	32.8	E
Medem	53	52.8	N	8	43.0	E
GN003	54	0.0	N	8	6.5	E
GN003A	54	0.0	N	7	10.0	E
GN007	54	0.0	N	6	25.0	E
GN007A	54	0.0	N	5	40.0	E
GN008	54	0.0	N	4	50.0	E
GN008S	54	0.0	N	3	55.0	E
GN009	54	0.0	N	3	0.0	E
GN009S	54	0.0	N	2	0.0	E
GN009A	53	25.0	N	3	30.0	E
GN009B	53	20.0	N	4	25.0	E
GN010	53	0.0	N	4	0.0	E
GN011	52	30.0	N	4	20.0	E

GN012	52	0.0	N	3	44.0	E
GN013	51	42.2	N	2	51.4	E
GN014	52	0.0	N	2	0.0	E
GN015	52	30.0	N	2	30.0	E
GN015B	52	50.0	N	2	10.0	E
GN016	53	20.0	N	1	40.0	E
GN017	54	0.0	N	1	0.0	E
GN017A	54	0.0	N	0	20.0	E
GN017S	54	30.0	N	0	10.0	W
GN018A	55	0.0	N	0	40.0	W
GN018	55	0.0	N	0	0.0	E
GN018S	55	0.0	N	1	0.0	E
GN019	55	0.0	N	2	0.0	E
GN019S	55	0.0	N	3	0.0	E
GN020	55	0.0	N	4	0.0	E
GN021	55	0.0	N	5	0.0	E
GN022	55	0.0	N	6	15.0	E
GN022A	55	0.0	N	7	0.0	E
GN023	55	0.0	N	7	35.0	E
GN024	55	0.0	N	8	0.0	E
GN025	55	0.0	N	8	15.0	E
GN026	56	0.0	N	7	48.0	E
GN026A	56	0.0	N	7	0.0	E
GN027	56	0.0	N	6	0.0	E
GN028	56	0.0	N	5	0.0	E
GN028S	56	0.0	N	4	0.0	E
GN029	56	0.0	N	3	0.0	E
GN030	56	0.0	N	2	0.0	E
GN031	56	0.0	N	1	0.0	E
GN032	56	0.0	N	0	0.0	E
GN033	56	0.0	N	1	0.0	W
GN033A	56	0.0	N	1	40.0	W
GN033S	56	30.0	N	1	40.0	W
GN034A	57	0.0	N	1	40.0	W
GN034	57	0.0	N	1	0.0	W
GN034S	57	0.0	N	0	10.0	E
GN035	57	0.0	N	1	20.0	E
GN035S	57	0.0	N	2	25.0	E
GN036	57	0.0	N	3	30.0	E
GN037	57	0.0	N	5	0.0	E
GN038	57	0.0	N	6	0.0	E
GN038A	57	0.0	N	7	0.0	E
GN039	57	0.0	N	8	0.0	E
GN039S	57	25.0	N	8	0.0	E
GN040	57	50.0	N	8	0.0	E
GN040S	57	55.0	N	7	0.0	E
GN041	58	0.0	N	6	0.0	E
GN042	58	0.0	N	5	0.0	E
GN042S	58	0.0	N	4	0.0	E
GN043	58	0.0	N	3	0.0	E
GN044	58	0.0	N	1	30.0	E
GN044S	58	0.0	N	0	15.0	E
GN045	58	0.0	N	1	0.0	W
GN045A	58	0.0	N	2	0.0	W
GN045B	58	30.0	N	2	30.0	W
GN046A	59	0.0	N	2	0.0	W
GN046	59	0.0	N	1	30.0	W
GN047	59	0.0	N	0	0.0	E

GN048	59	0.0	N	1	0.0	E
GN048S	59	0.0	N	2	0.0	E
GN049	59	0.0	N	3	0.0	E
GN049S	59	0.0	N	3	45.0	E
GN050	59	0.0	N	4	30.0	E
GN050S	59	30.0	N	4	30.0	E
GN051	60	0.0	N	4	30.0	E
GN051S	60	0.0	N	3	15.0	E
GN052	60	0.0	N	2	0.0	E
GN052S	60	0.0	N	0	45.0	E
GN053	60	0.0	N	0	30.0	W
GN054	60	0.0	N	3	0.0	W
GN055	60	0.0	N	5	0.0	W
GN058	61	0.0	N	3	0.0	W
GN062	61	45.0	N	1	30.0	W
GN059	62	30.0	N	0	0.0	E
GN060	62	30.0	N	2	0.0	E
GN063	61	45.0	N	3	0.0	E
GN061	61	0.0	N	4	0.0	E
GN057A	58	45.0	N	4	0.0	W
GN056	58	45.0	N	5	0.0	W
GN056B	58	45.0	N	6	0.0	W
GN056C	58	20.0	N	5	40.0	W
GN064	58	0.0	N	6	0.0	W

List of Hazardous Substances

List of Hazardous Substances Celtic Explorer CE14012 SUBSTANCE (English/German)	percentage / concentration	CAS-No.	UN-No.	Extremly flammable	Highly flammable	Oxidizing	Extremly Toxic	Toxic	Harmful	Irritant	Corrosive	Dangerous for the enviroment	packing	quantity	total quantity
				F+	F	O	T+	T	Xn	Xi	C	N			
Inflameble liquids															
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.															