NATURAL ENVIRONMENT RESEARCH COUNCIL
(BRITISH ANTARCTIC SURVEY)

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

Iceland

1. *General information*

Application Date 9th Jan 2012

1.1	**Cruise name and/or number**	JR271
1.2	**Sponsoring institution.** Name Address Name of Director	 British Antarctic Survey, High Cross, Madingley Road, Cambridge CB3 OET , UK Professor Nick Owens
1.3	**Scientist in charge of the project.** Name: Address Telephone Fax/Email/Telex	 Dr Raymond Leakey Scottish Association for Marine Science, Scottish Marine Institute, Oban, Argyll, PA371QA, UK Tel: +44 (0) 1631 559230 Fax: +44 (0) 1631 559000 E-mail: rjl@sams.ac.uk
1.4	**Scientist(s) from,** (name coastal state), **involved in the planning of the project.** Name(s) Address	 None
1.5	**Submitting officer** Name Address Telephone Fax/Email/Telex	Mr Chris Hindley (Ship Operations and Programme Manager) British Antarctic Survey, High Cross, Madingley Road, Cambridge CB3 OET , UK + 44 1223 221497 +44 1223 362616 cjhh@bas.ac.uk No Telex

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

2.1 Nature of objectives of the project

Investigation of the effects of ocean acidification on sea-surface biology. Aim of project is to investigate links between changes in ocean carbonate system (acidification) and plankton biodiversity and community structure, organism physiology and morphology, biogeochemical rates, food webs and climate-relevant processes. Science involves physical, chemical and biological measurements of water column to be undertaken in North, Norwegian, Barents, Greenland and Icelandic Seas, including water and plankton collections for on-deck manipulation experiments investigating of in situ plankton community to elevated carbon dioxide.

2.2 Relevant previous or future research cruises

RRV James Clark Ross: June-July 2002, August-Sept 2005, July–August 2008, June-July 2010

2.3 Previously published research data relating to the project

Smyth, T.J. et al. (2004) Time series of coccolithophore activity in the Barents Sea, from twenty years of satellite imagery. Geophysical Research Letters, 31: L11302.

Merico, A. (2006) is there a relationship between phytoplankton seasonal dynamics and the carbonate system? Journal of Marine Sciences, 59:120-142.

Tyrell, T., et al. (2008) Coccolithophores and calcite saturation state in the Baltic and Black Seas. Biogeosciences, 5:485-494.

Charalampopoulou, A., et al. (2011) Irradiance and pH affect coccolithophore community composition on a transect between the North Sea and the Arctic Ocean. Marine ecology Progress Series, 431:25-43.

3. *Methods and means to be used*

3.1 Particulars of vessel

Name	RRS James Clark Ross
Nationality/Registry	British (Falkland Island Registration)
Owner	Natural Environment Research Council (NERC)
Operator	British Antarctic Survey
Length Overall	99.04m
Max. Draft	6.4m
Net /Gross Tonnage	Net: 1719 Tonnes Gross: 5732 Tonnes
Propulsion	Diesel Electric, Single Fixed Prop 8500 SHP
Cruising Speed	11.5 Kts Maximum speed: 16 kts
Call Sign	ZDLP
Method and capability of communication	Inmarsat: Voice 00870 374 033920 / Fax 374 033924 VOIP Telephone: +44 1223 221 725/6/8 Email: jrmaster@bas.ac.uk
Name of Master	Captain
Number of crew	28
Number of Scientists and Technicians	35 (includes 3 NMF and BAS technicians)

3.2 Aircraft or other craft to be used in the project

None

3.3 Particulars of methods and scientific instruments (increase table size if needed)

Types of samples and data	Methods to be used	Instruments to be used
Water column samples and measurements	Lowered packages	CTD rosette (conductivity, temperature, depth sensors and Niskin water sampling bottles), SAPS (stand alone

		pumps), Snow catcher (~100 litre water sampling bottle), Zooplankton nets (<500 micron size).
Underway atmospheric and water column sampling and measurements	Towed packages and underway pumped-water sampling.	Metrological instruments, thermistor, salinometer, fluorometers, flowcytometer, continuous plankton recorder.
Physical oceanographic measurements	Floating robotic instruments	ARGO floats to measure conductivity and temperature

3.4 Indicate whether harmful substances will be used

Used on board ship only - 3H, 14C & 35S radioisotopes (trace quantities)
Assorted chemicals for analytical instruments and sample preservation.

3.5 Indicate whether drilling will be carried out

None

3.6 Indicate whether explosives will be used

None

4. *Installations and equipment*

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

None

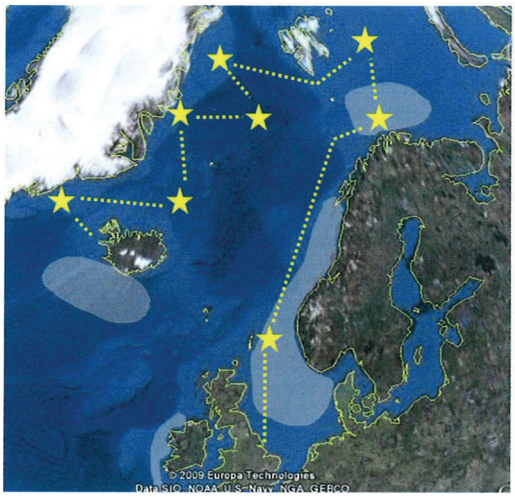
5. *Geographical areas*

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

UK to North, Norwegian, Barents, Greenland and Icelandic Seas, including Svalbard.

50°N to ~83°N, 45°W to 038°E

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.



6. *Dates*

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

2nd June 2012 (this is departure date from UK)	5th July 2012

6.2 Indicate if multiple entry is expected Yes/No

No

Dates if known

7. *Port Calls*

7.1 Dates and names of intended ports of call in (Name of coastal state)

Iceland = Reykjavik

7.2 Any special logistical requirements at ports of call

none

7.3 Name(s) and Address/Contact details of shipping agent (if known)

Agents	Nesskip HF, Austurstrond 1, 170 Saltjarnarnes, Reykjavik,
Contact name	Ship agency dept or G B Sigurgeirsson
Phones/fax	+354 522 5055 fax +354 561 2052 mob. +354 8920396
Email/Web	operations@nesskip.is www.nesskip.is

8. *Participation*

8.1 Extent to which (name of coastal state), Iceland

will be enabled to participate or to be represented in the research project.

One berth for an observer from each coastal state is offered in accordance with UNCLOS Art 249 (1a).

8.2 Proposed dates and ports for embarkation/disembarkation

1/6/2012 Immingham UK	5/7/2012 Reykjavik

9. *Access to data, samples and research results*

For (name of coastal state) Iceland

9.1 Expected dates of submission of preliminary reports which should include the expected dates of submission of the final results.

Preliminary Data (in form of a cruise report) should be available by December 2012
Full data should be available (via British Oceanographic Data Centre) by December 2013

9.2 Proposed means for access to data and samples

Via Chief Scientist and British Oceanography Data Centre

9.3 Proposed means to provide the assessment of data, samples and research results or provide assistance in their assessment or interpretation

Via Chief Scientist

9.4 Proposed means of making research results internationally available

Via Chief Scientist, British Oceanography Data Centre, Scientific Journal Publications

10. COMPLETE THE FOLLOWING TABLE - SEPARATE PAGE FOR EACH COASTAL STATE:

Name of Coastal State: Iceland

Port Calls/Dates: Reykjavik 5/7/2012

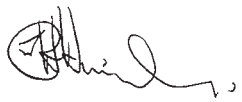
SCIENTIFIC EQUIPMENT

Indicate "YES" or "NO" and Distance from Coastal Baseline

List Scientific Work by Function eg: Magnetometry Gravity, Diving, Seismic, Bathy-metry, Seabed Sampling, Trawling, Echo Sounding, Water Sampling U/W T.V.: Moored and Towed instrument	Water Column Incl. Sediment Sampling on the Seabed	Fisheries Research within Fishing Limits	Research Concerning the Natural Resources of the Continental Shelf or its Physical Characteristics	Distance from Coast: Within 12 NM (indicate between 0 & 3 NM or 3 & 12 NM)	Distance from Coast: Between 12 - 200 NM
Bathymetry	No	No	No	No	No

CTD	Yes	No	No	Yes	Yes
Water samples	Yes	No	No	Yes	Yes
Acoustic profiling	No	No	No	No	No
Atmospheric profiling	No	No	No	No	No
List other Equipment					
Towed Instrument	Yes	No	No	Yes	Yes
Plankton Sampling	Yes	No	No	Yes	Yes

Signed on behalf of the Principal Scientist (See Section 1.3 above)



CJ H Hindley – Ship Operations and Programme Manager, British Antarctic Survey (See Section 1.5 above)
For Principal Scientist

Halldora Halldorsdottir (Restricted)

From: Steve Hunt (Maritime Policy Unit) (Restricted)
Sent: 18 January 2012 09:41
To: Halldora Halldorsdottir (Restricted)
Subject: FW: JR271 dipclear application for JCR - Iceland
Attachments: JR271 Iceland dipclear form.doc

Security Label: UNCLASSIFIED

Hi Halldora

Happy Newish Year to you. Hope all is well.

I attach an application from the James Clark Ross for carrying out MSR in Icelandic waters. Grateful if you could do the necessaries.

Many thanks

Steve

Steve Hunt | Marine Scientific Research Officer | Maritime Policy Unit | Legal Advisers | K.1.176 | Foreign and Commonwealth Office | London SW1A 2AH | Tel: 02070082625 | Fax: 02070083189

-----Original Message-----
From: Hindley, Chris [mailto:cjhh@bas.ac.uk]
Sent: 16 January 2012 16:13
To: Steve Hunt (Maritime Policy Unit) (Restricted)
Subject: JR271 dipclear application for JCR - Iceland

Hi Steve

No. 2 for JR271 - Iceland

Thanks
Chris

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