

ANNEX A

Application for Consent to conduct Marine Scientific Research

Date: 02 December, 2015

1. General Information

1.1 Cruise name and/or number:
Jan Mayen 2016 Body Condition Cruise

1.2 Sponsoring Institution(s):	
Name:	University of St Andrews
Address:	College Gate, St Andrews, Fife KY16 9AJ, Scotland, United Kingdom
Name of Director:	Prof. Louise Richardson

1.3 Scientist in charge of the Project:	
Name:	Dr. Patrick Miller
Country:	United Kingdom
Affiliation:	University of St Andrews
Address:	School of Biology, Bute Building, room B6, St Andrews, Fife KY16 9QQ
Telephone:	44-1334463554
Fax:	44-1334462595
Email:	pm29@st-andrews.ac.uk
Website (for CV and photo):	https://risweb.st-andrews.ac.uk/portal/en/persons/patrick-miller%28612f5f49-0a3b-449c-9a7a-aba619ff5062%29.html

1.4 Entity(ies)/Participant(s) from coastal State involved in the planning of the project:	
Name:	Gísli Arnór Víkingsson
Affiliation:	Marine Research Institute (MRI)

Address:	Skulagata 4 121 Reykjavik, Iceland
Telephone:	+354 575 2000
Fax:	+354 575 2001
Email:	gisli@hafro.is
Website (for CV and photo):	N/A

2. Description of Project

2.1 Nature and objectives of the project:

The objective of the research is to record data on the natural behavior of cetacean species (Northern bottlenose whale, minke whale, killer whale, humpback whale, blue whale, sperm whale, fin whale) in the waters ranging from Northern Iceland to and around Jan Mayen. Whales will be found at sea, and then approached for research data collection, including: photo-identification, biopsy sample collection, attachment of tags (ranging from 1-60 day durations) recording of underwater sounds. In addition, we will measure the behavioural response of those cetaceans to playback of simulated sonar sounds, and natural animal sounds played back with an underwater speaker. We will employ look-out mitigation measures to assure that no animal comes close enough to the vessel to be exposed to a received level greater than 170 dB re μ Pa.

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:

Similar whale-research trials have been conducted by the 3S collaboration in the waters off Spitsbergen (2011, 2012), in waters off Jan Mayen (2013), and in waters off Jan Mayen plus between Iceland and Jan Mayen (2014, 2015).

2.4 Previous publications relating to the project:

Cruise reports are available for all of the cruises conducted to date, by emailing Patrick Miller (pm29@st-andrews.ac.uk)

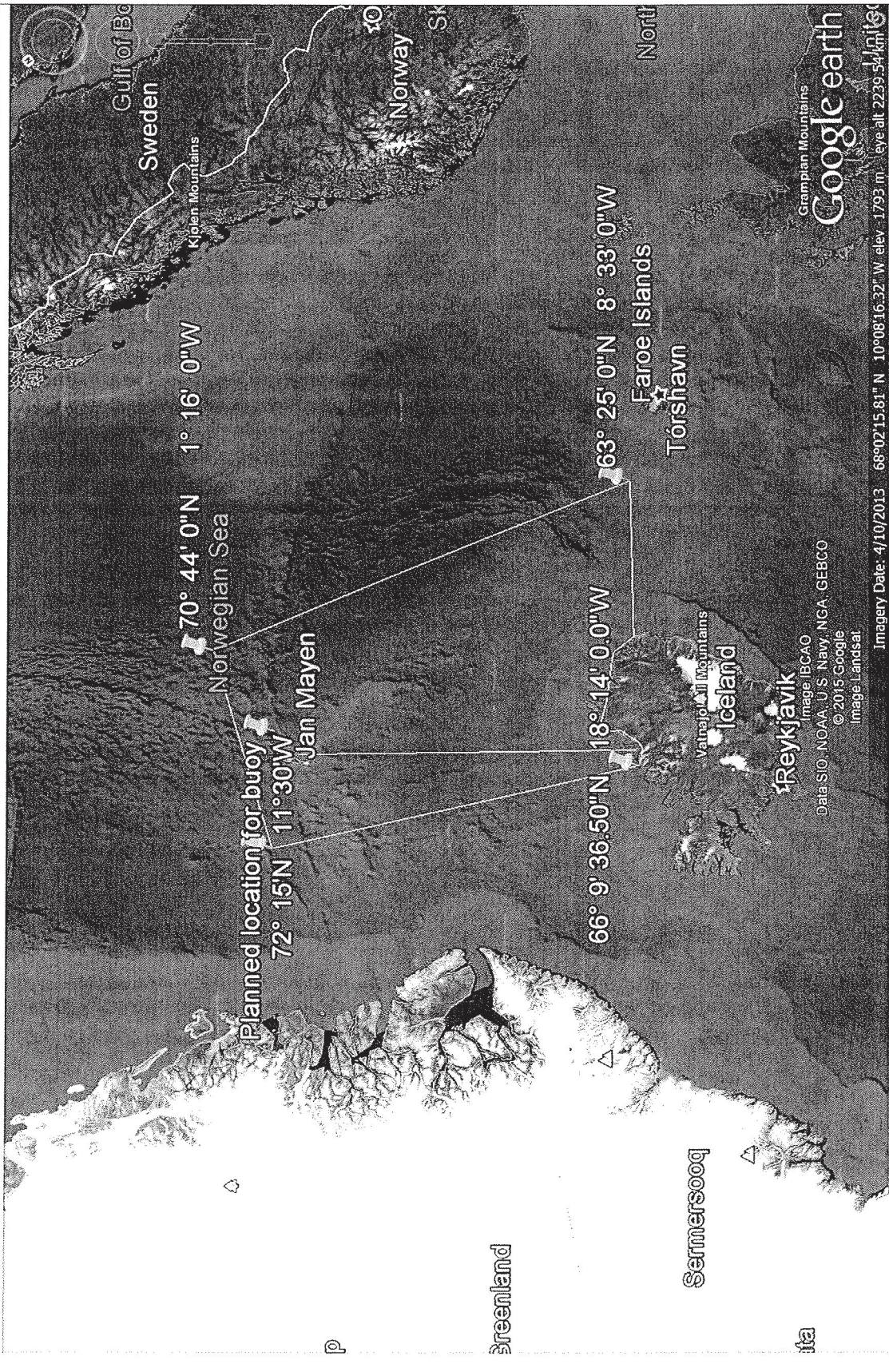
Miller P. J. O., Kvadsheim, P. H., Lam, F. P. A., Tyack, P.L., Curé, C., DeRuiter, S. L., Kleivane, L., Sivle, D. L., van IJsselmuide, S. P., Visser, F., Wensveen, P. J., von Benda-Beckmann, A. M., Martín López, L. M., Narazaki, T., Hooker, S. K. (2015). First indications that northern bottlenose whales are sensitive to behavioural disturbance from anthropogenic noise. *R. Soc. open sci.* 2: 140484. <http://dx.doi.org/10.1098/rsos.140484>

3. Geographical Areas

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

Icelandic coastal waters of northern Iceland and Icelandic / Norwegian waters toward and around Jan Mayen, and Icelandic waters to the East of Northern Iceland. Transit to Jan Mayen planned to be fairly direct from Husavik, but we will work with animals encountered between Iceland and Jan Mayen, and in waters east of Northern Iceland. Total work area is bound by four corners: 70°44'0"N 1°16'0" W; 72°15'0"N 11°30'0"W; 66°9'36.5"N 18°14'0"W; 63°25'0"N 8°33'0"W . There are no fixed transits, we will follow whales and good weather in the study area.

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.



4. Methods and means to be used

4.1 Particulars of vessel:	
Name:	M/V Donna Wood
Type/Class:	26m motor-sailing vessel
Nationality (Flag State):	Denmark
Identification Number (IMO/Lloyds No.):	n/a for this wooden sailing vessel
Owner:	Norðursigling/North Sailing
Operator:	Norðursigling/North Sailing
Overall length (meters):	26
Maximum draft:	2.34m
Displacement/Gross Tonnage: 35	
Propulsion:	Sailing vessel, diesel motor
Cruising & maximum speed:	6 knots, 7.5 knots
Call sign:	TFTN
INMARSAT number and method and capability of communication (including emergency frequencies):	Naviroom: +8816 7773 7885 Bridge: +8816 7773 7886
Name of Master:	Christian Harboe-Hansen
Number of Crew:	3
Number of Scientists on board:	10

4.2 Particulars of Aircraft:	
Name:	NOT APPLICABLE
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:	NOT APPLICABLE
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:
None

4.5 Particulars of methods, full description of scientific instruments to be used (for fishing gear specify type and dimension and for geophysical survey the type of equipment, source levels, frequency and duty cycle to be used) and location:			
Types of samples and measurements:	Methods to be used:	Instruments to be used:	To be carried out within 12nm (yes or no):
Photo-identification images	Photography	Canon and Nikon cameras	YES
Biopsy sample	Remote collection of skin and 60mm blubber samples	Finn-Larsen biopsy tips, ARTS launching system, LK Darts	YES
Behavior logger recordings	Remote attachment of tags using suction cups	Dtags, Little Leonardo 3M loggers and camera logger	YES
Movement and dive telemetry tag data	Remote attachment of tags using minimally-invasive barb tags	Wildlife computers SPLASH tags	YES
Observational data	Visual observation from vessel	Data-logging computer	YES
Playback of underwater sonar	Sound of 3.5 kHz simulated sonar signals	Custom source 'SOCAL' source	YES
Playback of sounds	Sounds will be played back at normal sound levels during observation periods	Lubell underwater speaker.	YES
Underwater sound recordings	Deployment of bottom mounted recording buoy with acoustic release	DSG-ST Ocean Acoustic Logger, with aluminium housing	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

5.1 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):

Two acoustic buoys currently deployed in waters close to Jan Mayen will be recovered in early June 2016 and three will be deployed. All three buoys will be recovered late June 2016. One-two buoys will be redeployed for winter recordings for recovery in June 2017. Buoy will be deployed to the seafloor (ideally 2000m depth) near 70°53'43.20"N 7° 1'13.50"W.

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:

02 June entry, 29 June departure

6.2 Indicate if multiple entries are expected:

None, re-fuelling is schedule for Jan Mayen 10 June

7. Port calls

7.1 Dates and Names of intended ports of call:

None intended, re-fuelling is schedule for Jan Mayen 10 June

7.2 Any special logistical requirements at ports of call:

none

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

none

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:

Cruise plan documents will be sent to: Gísli Arnór Víkingsson of MRI for input. Cruise reports will be sent to Gísli Arnór Víkingsson.

8.2 Proposed dates and ports for embarkation/disembarkation:

29 May Husavik, Iceland // 29 June Husavik Iceland

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:

20 December, 2016

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

20 December, 2016

9.3 Proposed means for access by coastal State to data (including format) and samples:

Direct email request to Patrick Miller at the University of St Andrews

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

Cruise reports will be available and one copy will be sent to Gísli Arnór Víkingsson.

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

Direct email request to Patrick Miller at the University of St Andrews

9.6 Proposed means of making results internationally available:

Publications will be made in peer-review journals.

10. Other permits submitted

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

No others for Icelandic waters

11. List of supporting documentation

11.1 List of attachments, such as additional forms required by the coastal State, etc.:

N/A



Signature:

Contact information of the focal point:

Name: Patrick Miller

Country: UK

Affiliation: U of St Andrews

Address: School of Biology, Bute Building B6, St Andrews, Fife KY16 9QQ UK

Telephone: 44 (0)1334-463554

Fax: 44 (0) 1334-462595

Email: pm29@st-andrews.ac.uk