

**APPLICATION FOR THE CONSENT TO CONDUCT MARINE SCIENTIFIC RESEARCH IN AREAS UNDER NATIONAL JURISDICTION OF THE UNITED KINGDOM**

Date: 24.08.2007

**1. General information**

**1.1 Cruise name and/or number:** Northwest Herring Acoustic Survey

**1.2 Sponsoring institution:**

**Name:** Marine Institute

**Address:** Rinville  
Oranmore  
Galway  
Ireland

**Name of Chief Executive:** Dr. Peter Heffernan

**1.3 Scientist in charge of the project:**

**Name:** Ciaran O'Donnell

**Address:** Rinville  
Oranmore  
Galway  
Ireland

**Telephone:** +353 091 730 494

**Telefax:** +353 091 730 470

**1.4 Scientist(s) from UNITED KINGDOM involved in the planning of the project**

**Name(s):** NA

**Address:**

**1.5 Submitting officer:**

**Name and address:** Bernadette Ni Chonghaile  
Marine Institute  
Rinville  
Oranmore  
Galway

**Country:** Ireland

**Telephone:** +353 091 730 494

**Telefax:** +353 091 730 470

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

### 2.1 Nature of objectives of the project:

To assess the size of the summer feeding aggregations of Herring (*Clupea harengus*) in ICES divisions VIaS and VIIb-c, using acoustic methods as a means of estimating the abundance. As part of our commitment to the EU data collection regulation and also as a means of monitoring the stock for stock assessment and management purposes, independent of commercial fishery data (ICES).

To work along a predetermined survey track and carry out single midwater pelagic trawling operations where necessary to determine the make up of insonified fish traces.

To collect biological data from fish samples.

Salinity, temperature and depth profiling along pre-determined points over course of the cruise track.

### 2.2 Relevant previous or future research cruises:

This survey has been carried out annually since 1994 in ICES areas VIaS and VIIb-c (with a break in time series between 1997-1999) on Autumn/Winter spawning and pre-spawning aggregations. Prior to this a larval survey programme was carried out between 1981-1986. This years survey is to re-visit summer spawning aggregations first surveyed in 1994 (-1996).

### 2.3 Previously published research data relating to the project:

Marine Institute Survey Cruise Reports (internal publications): Available on request

Fernandes 1994-1996

Breslin 1999- 2000

Breslin & Griffin 2001c- 2002

O'Donnell et al. 2003-2007

The survey data is also submitted to the annual ICES, Herring Assessment Working Group (HAWG) where it is used to form management advice for the coming year through ACFM.

## 3. Methods and means to be used

### 3.1 Particulars of vessel

**Name:** Celtic Explorer

**Nationality:** Irish

**Owner:** Marine Institute

**Overall length:** 65.5m

**Maximum draught:** 5.7m

**Net tonnage:** 727

**Propulsion:** 2 x 1530 KW, 1000Rpm, 1 x 1020 KW, 1000 Rpm

**Cruising speed:** 10 Kts

**Call sign:** EI

**Method and capability of communication –**

**Name of master:** Ciaran Flanigan/ Phillip Baugh

**Number of crew:** 12

**Number of scientists on board:** 8-10

**3.2 Aircraft or other craft to be used in the project:** N/A

### 3.3 Particulars of methods and scientific instruments

Types of samples and data	Methods to be used	Instruments to be used
Acoustic	Pre-determined cruise track, 24 hr data collection and processing	Keel mounted Simrad EK 60 Scientific echosounder
Hydrography	Set stations along cruise track	SeaBird CTD rosette water sampler
Biological samples	Sampling fish traces to determine composition	Single midwater pelagic trawl

**3.4 Indicate whether harmful substances will be used:** N/A

**3.5 Indicate whether drilling will be carried out:** N/A

**3.6 Indicate whether explosives will be used:** N/A

## 4. Installations and equipment

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

## 5. Geographical areas

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

Only area where we are applying for permission to enter into UK territorial waters is in the area around the Stanton Bank to the north of the 56° N (Approx outline positions of Stanton Bank: 56° 20N/ 08°20W; 56° 20N/ 07°30W; 56° 0.4N/ 08°20W; 56° 0.4N/ 07°30W) and with a possibility of work into the northern limits of the Irish Sea (TBC) to the east of 07°25W.

Stanton Bank area is a known area for herring distribution and as a result to try to contain the stock within the survey boundary we need access to this area.

**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.**



Figure 1. Proposed cruise track for summer 2008 survey. Exact coverage yet to be determined.

## 6. Dates

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

Provisional dates:

Start 1<sup>st</sup> July

Finish 21<sup>st</sup> July

21 days in total.

### 6.2 Indicate if multiple entry is expected:

The survey consists of transects which run perpendicular to the Irish coastline. Entry into UK waters will consist of a period of no more than 72 hrs and would be expected to be around the 9<sup>th</sup> of July as current plans suggest, this of course being related to the provisional dates listed above.

## 7. Port calls

7.1 Dates and names of intended ports of calls in UNITED KINGDOM: N/A

7.2 Any special logistical at ports of call: N/A

7.3 Names/ Address / Telephone of shipping agent (if available)

P&O Maritime

## 8. Participation

8.1 Extent to which UNITED KINGDOM will be able to participate to be represented in research project: The MI are open to participation from the UK, the survey will be

8.1 Extent to which UNITED KINGDOM will be able to participate to be represented in research project: UK scientists currently participate in this survey in the International forum.

**8.2 Proposed dates and ports for embarkation / disembarkation:**

Irish coastal ports only.

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

**9.1 Expected dates of submission to UNITED KINGDOM preliminary reports which should include the expected dates of submission of the final results:**

AUGUST 2008

**9.2 Proposed means for access by UNITED KINGDOM to data and samples:**

Through ICES PGNAPES forum or through direct contact with the Cruise Leader (contact details provided)

**9.3 Proposed means to provide UNITED KINGDOM with assessment of data, samples and research results or provide assistance in their assessment or interpretation:**

Through ICES PGNAPES forum or through direct contact with the Cruise Leader (contact details provided)

**9.4 Proposed means of making research results internationally available:**

Through ICES PGNAPES forum

10. Scientific Equipment

COMPLETE THE FOLLOWING TABLE:  
SEPARATE PAGE FOR EACH COSTAL STATE:

INDICATE YES OR NO

LIST SCIENTIFIC WORK BY FUNCTION E.g. MAGNETOMETRY GRAVITY DIVING SEISMIC BATHYMETRY TIDAL SAMPLING TRAWLING ECHO SOUNDING WATER SAMPLING TV MOORED INSTRUMENTS TRAWLING ECHO SOUNDING WATER SAMPLING (UV) FISHING RESEARCH WITHIN FISHERIES CAPABILITY) ECHOSOUNDER FISHERIES PHYSICAL OCEANOGRAPHY COAST (50m) 200m Based on self and to shelf DISTANCE FROM COAST						
	WATER SAMPLING	PROFILING INSTRUMENTS	ABOVE WATER OPTICS AND PHOTOGRAPHY			
	No	No	No			

(On behalf of the Principle Scientist)

Dated -----