

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

1. GENERAL INFORMATION

1.1 CRUISE NAME AND/OR NUMBER:

1.2 SPONSORING INSTITUTION:

Name: Marine Institute

Address: Galway Technology Park
Parkmore Business Park West
Galway
Ireland

Telephone:
Telefax:
Name of Director: Dr. Peter Heffernan

1.3 SCIENTIST IN CHARGE OF THE PROJECT:

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Zoology Dept.
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Telephone: +353 1 608 1640
Name of Director:
Email:

1.4 SCIENTIST FROM IRELAND WITH KNOWLEDGE OF THE PROJECT:

Name: Dr Ivor Rees

Address: School of Ocean Sciences
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Telephone: 44 1248 382875
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Name: Dr K. Ramsay

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Name: Dr Andrew Y. Mackie
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1.5 SUBMITTING OFFICER:

Name: Carol Maloney
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2. DESCRIPTION OF PROJECT

2.1 NATURE AND OBJECTIVES OF THE PROJECT:

The project will produce working habitat maps of the seabed of the southern Irish Sea

The seabed of the Southern Irish Sea contains a diverse range of habitats and species, from algae dominated rocky reefs to deep muddy areas inhabited by burrowing animals. To varying degrees all of these habitats can be utilised by mankind, through activities such as fishing, aggregate extraction and development of renewable energy resources offshore. In addition, some are priority habitats or contain listed species under EC and international legislation.

Attempts to manage the seabed are currently hampered by our relative lack of knowledge and lack of spatial data in the form of seabed maps, and the Irish Sea has been recognised as a priority in this regard. The need for habitat mapping has been identified by several organisations throughout Wales, Ireland and England (e.g. OSPAR, ICES, European Environment Agency) and habitat maps will be crucial in implementing a variety of different pieces of marine legislation including the Water Framework Directive, Habitats Directive and Common Fisheries Policy

This three-year project would synthesise existing information relating to seabed habitats for the southern Irish Sea. Relationships between the physical data and the biological data would then be analysed to develop a model to interpolate biological data to produce biotope maps. The final phases of the project would involve validating this model. An interactive CD and website would be produced which would provide maps of the most up-to-date information for physical factors such as seabed sediment type, bathymetry, currents etc and for biological data (dependent on receiving necessary permissions to use data).

2.2 RELEVANT PREVIOUS OR FUTURE RESEARCH CRUISES:

Cruises for BIOMORM and SWISS projects using RVs *Prince Madog* and *Celtic Voyager*. Most recently:
Prince Madog, 1-14 July, 1997
Celtic Voyager, 18-25 August, 1997

Prince Madog, 28 May-10 June
Celtic Voyager, 17-24 July, 1998
Prince Madog, 21-24 September, 1988

2.3 PREVIOUSLY PUBLISHED RESEARCH DATA RELATING TO THE PROJECT:

Wilson J.G., A.Y. Mackie, E.I.S. Rees, B. O'Conner and T. Darbyshire 2001. *Benthic Biodiversity in the Southern Irish Sea. 2. The South West Irish Sea Survey*. National Museum of Wales, Cardiff. 1-143.

3. METHODS AND MEANS TO BE USED

3.1 PARTICULARS OF VESSEL:

Name: Celtic Voyager

Nationality: Irish

Owner: Marine Institute

Operator:

Overall Length: 31.4m

Maximum draught: 3.8m

Gross tonnage: 340 tonnes

Propulsion: Wartsila UD25M5

Maximum speed: 9.5 knots

Call sign: EIQN

Method/capability of communication (including telex, frequencies):

Tel and Fax: +353 87 9186786/ 383 87 6516546

Name of master: Captain Philip Baugh/ Ciaran Flannagan

Number of crew: 8

Number of scientists on board: 8

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: Benthic samples, Benthic imaging and Bedforms profiles
Method to be used: Grab; dredge, Video SPI and Sonar
Instruments to be used: Van veen; Hamon grab, Video sledge SPI and Sidescan, multibeam.

3.4 *INDICATE WHETHER HARMFUL SUBSTANCES WILL BE USED:*

No

3.5 *INDICATE WHETHER DRILLING WILL BE CARRIED OUT:*

No

3.6 *INDICATE WHETHER EXPLOSIVES WILL BE USED:*

No

4. **INSTALLATIONS AND EQUIPMENT**

DETAILS OF INSTALLATIONS AND EQUIPMENT (DATES OF LAYING, SERVICING, RECOVERY, EXACT LOCATIONS AND DEPTH):

Details of installations and equipment (dates of laying, servicing, recovery, exact locations and depth):
Tows and spot samples only throughout sampling area

5. **GEOGRAPHICAL AREAS**

5.1 *INDICATE GEOGRAPHICAL AREAS IN WHICH THE PROJECT IS TO BE CONDUCTED (WITH REFERENCE IN LATITUDE AND LONGITUDE):*

Southern Irish Sea between 51°N to 54°N

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:*

See attached figure

6. **DATES**

6.1 *EXPECTED DATES OF FIRST ENTRY INTO FINAL DEPARTURE FROM RESEARCH AREA OF THE RESEARCH VESSEL:*

1 July 2005-21 July 2005

6.2 *INDICATE IF MULTIPLE ENTRY IS EXPECTED:*

Yes

7. PORT CALLS

7.1 DATES AND NAMES OF INTENDED PORTS OF CALL IN IRELAND:

Menai Bridge
1st /2nd July or 13th/14th July

7.2 ANY SPECIAL LOGISTICAL REQUIREMENTS AT PORTS OF CALL:

None

7.3 NAMES/ADDRESS/TELEPHONE OF SHIPPING AGENT (IF AVAILABLE):

N/A

8. PARTICIPATION

8.1 EXTENT TO WHICH IRELAND WILL BE ENABLED (NAME OF COASTAL STATE) TO PARTICIPATE OR TO BE REPRESENTED IN RESEARCH PROJECT:

See 1.4. above

8.2 PROPOSED DATES AND PORTS FOR EMBARKATION/DISEMBARKATION:

1 July 2005 Dublin
21 July 2005 Dublin

9. ACCESS TO DATA, SAMPLES AND RESEARCH RESULTS:

9.1 EXPECTED DATES OF SUBMISSION TO IRELAND OF PRELIMINARY REPORTS WHICH SHOULD INCLUDE THE EXPECTED DATES OF SUBMISSION OF THE FINAL RESULTS:

Contact chief scientist

9.2 PROPOSED MEANS FOR ACCESS BY IRELAND TO DATA AND SAMPLES:

Contact chief scientist

9.3 PROPOSED MEANS OF MAKING RESEARCH RESULTS INTERNATIONALLY AVAILABLE:

Contact chief scientist

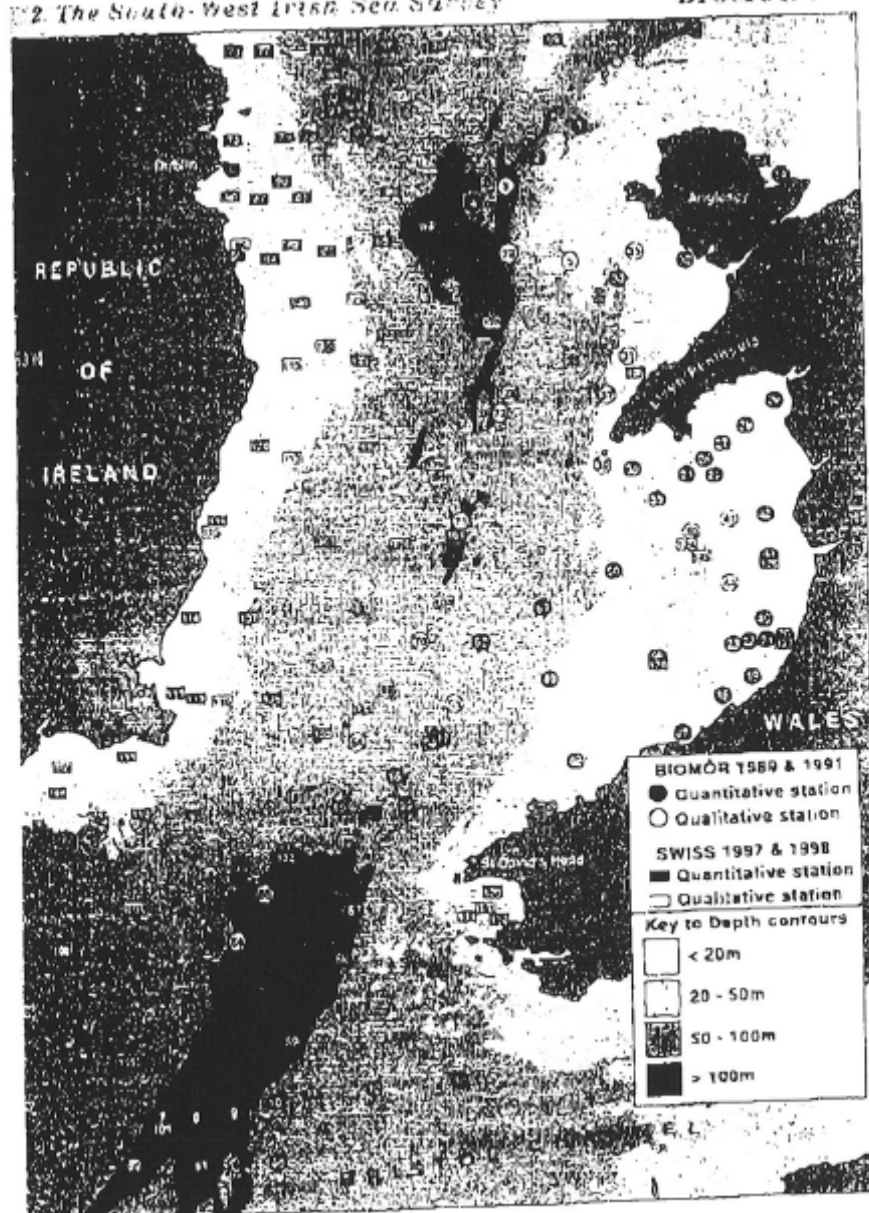


Fig 3.1: BIOMÖR 1 (Stns 1-73) and SWISS (Stns 74-198) benthic invertebrate sampling stations. For clarity only duplicated stations shown are the worm .6, 7, 11, 14, 20, 43, 46) (common to both studies, see Table 3.2 & SWISS sampling details and other duplicated stations).