

Marine Mammal Observer Report, August 2007
Broadhaven Bay, Co. Mayo. IRELAND

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1. SUMMARY

A seismic survey of Rossport Bay, Sruwaddacon Bay and its neighbouring northern estuary in County Mayo was carried out during the months of June, July and August 2007 on behalf of RSK Environment Ltd (UK). All three bays are part of and connected to Broadhaven Bay (Fig 1).

Two vessels were used in the survey. The main survey vessel carried out the geophysics, and its accompanying vessel, a rigid inflatable carried the MMO.

The majority of the survey focused on Sruwaddacon Bay and occurred during the hours leading up to High Water, due to the very shallow depths inside the bay. A total of 20 days of surveying were carried out and 16 sightings of seal species were recorded. No cetaceans were recorded in the survey area throughout the period of survey.



Fig 1. Ordnance Survey map of Rossport Bay - main area between Rinroe Point (to the north), Dooncarton (to the south) and sand dune systems to the east. Sruwaddacon bay and the northern estuary, lie further to the east.

2. INTRODUCTION

Broadhaven Bay is situated on the northwest coast of County Mayo. It is approximately 8.6km wide at its most northern end, stretching from Erris Head to the west and Kid Island to the east. Previous scientific studies have highlighted Broadhaven Bay and its nearby coastal waters as an area of importance for marine mammals (Ó Cadhla *et al.*, 2004, Englund *et al.*, 2005). It is designated as a Special Area of Conservation (SAC) for four key marine coastal habitat types, by the National Parks & Wildlife service of the Department of the Environment, Heritage and Local Government. In addition, the inner bay area of Broadhaven bordering Rossport Bay and Sruwaddacon Bay is designated as a Special Protection Area (SPA) for wintering wildfowl species.

A number of tidal inlets feed into Broadhaven Bay north and south of Rossport village, two of which were the main focus of this study. Both are situated to the east of the larger bay of Broadhaven itself and merge before funnelling through a narrow channel, separated by sandbars, leading out into Rossport Bay (Fig 1). Sruwaddacon Bay is one of these inlets and is where most of the surveying was carried out in 2007. The other inlet lies north of Sruwaddacon Bay, adjacent to Curranboy.

Both inlets are among several proposed routes for the construction of a subsea gas pipeline, originally planned by Enterprise Energy Ireland Ltd (EEL) and now undertaken by Shell E&P Ireland. The proposed pipeline is to extend from the Corrib gas field, which lies approximately 65 kilometres off the west coast of Ireland, to the inshore waters of Broadhaven Bay, coming ashore at a receiving coastal terminal.

Following authorisation for the required foreshore licence, a group of independent seismic surveyors began work in the areas mentioned above. Work commenced on June 16th 2007 and began with the testing of equipment and calibrations close to the mouth of Ballyglass Harbour.

Two vessels were used to carry out the seismic study and marine mammal observations respectively. The ‘*Eagle*’, a 24-foot jet propelled half-decker with shallow draft (Plate 1) has a maximum capacity for five crew. These included a skipper, a surveyor, a geophysicist, a representative from Shell E&P Ireland Ltd. and a fisheries representative to assist with local knowledge of the area. The accompanying vessel, the ‘*Cougar*’ is a 6m RIB (rigid inflatable boat) with less than a metre draft. It carried a skipper, the marine mammal observer (MMO) and an assisting fisheries representative.

Four sound sources were used throughout the survey, all deployed from the half-decker *Eagle*. They were as follows:

- 1 Side-scan sonar
- 2 Multi-beam echo-sounder
- 3 Boomer
- 4 Magnetometer

The only navigation chart available for the study area – Rossport Bay and two eastern

inlets - dates back to the 19th century. As a result both vessels used a standard echo sounder on entering the unchartered waters.



Plate 1. The main survey vessel the *Eagle* underway. Three sound sources can be seen aboard: (i) side-scan sonar sitting on the bow, (ii) multi-beam echo-sounder positioned horizontally on the port side, and (iii) the boomer resting on the stern in the white fender float.

3. METHODS USED TO DETECT MARINE MAMMALS

Sea watches in accordance with draft National Parks & Wildlife Service regulations (“**Code of Practice for the Protection of Marine Mammals during Acoustic Seafloor Surveys in Irish Waters**”) were carried out from the RIB vessel *Cougar* during daylight hours from the period of June to August 2007. A pair of 10x50 binoculars was used to search for marine mammals.

Details of watches, marine mammals sighted and seismic activity were recorded on standard JNCC recording forms. A total of 20 individual marine mammals were seen, 13 of which were Common or Harbour seals *Phoca vitulina vitulina*, two of which were Grey seals *Halichoerus grypus* and five of which were unidentified seals (Table 1). No cetaceans were recorded throughout the period of the survey. However, incidental sightings of Bottlenose dolphins *Tursiops truncatus* travelling inside the Ballyglass

harbour area were later reported to the field observer on a number of occasions.

4. MARINE MAMMAL OBSERVATIONS & MITIGATION MEASURES

All survey work was conducted during and around High Tide because of the shallow depths in all three areas of the survey – Rosspport Bay, Sruwaddacon Bay and the northern bay. The vessels launched each time from Ballyglass Pier taking an average of 20 minutes to travel across to the survey area; thus time was a major limiting factor and for this reason the *Cougar* was launched ahead of the *Eagle* and commenced the pre-shoot marine mammal search whilst the slower *Eagle* was underway from Ballyglass.

Sightings made in that 30-minute pre-shoot period were recorded and the *Eagle* was advised to move to an area more than 1 km away from the sighting on arrival. Sruwaddacon Bay is 3km long, Rosspport Bay is roughly 2km, and the northern bay is roughly 1.5km. No further mitigation measures were necessary during the course of the survey since any animals that were seen were outside the 1km exclusion zone.

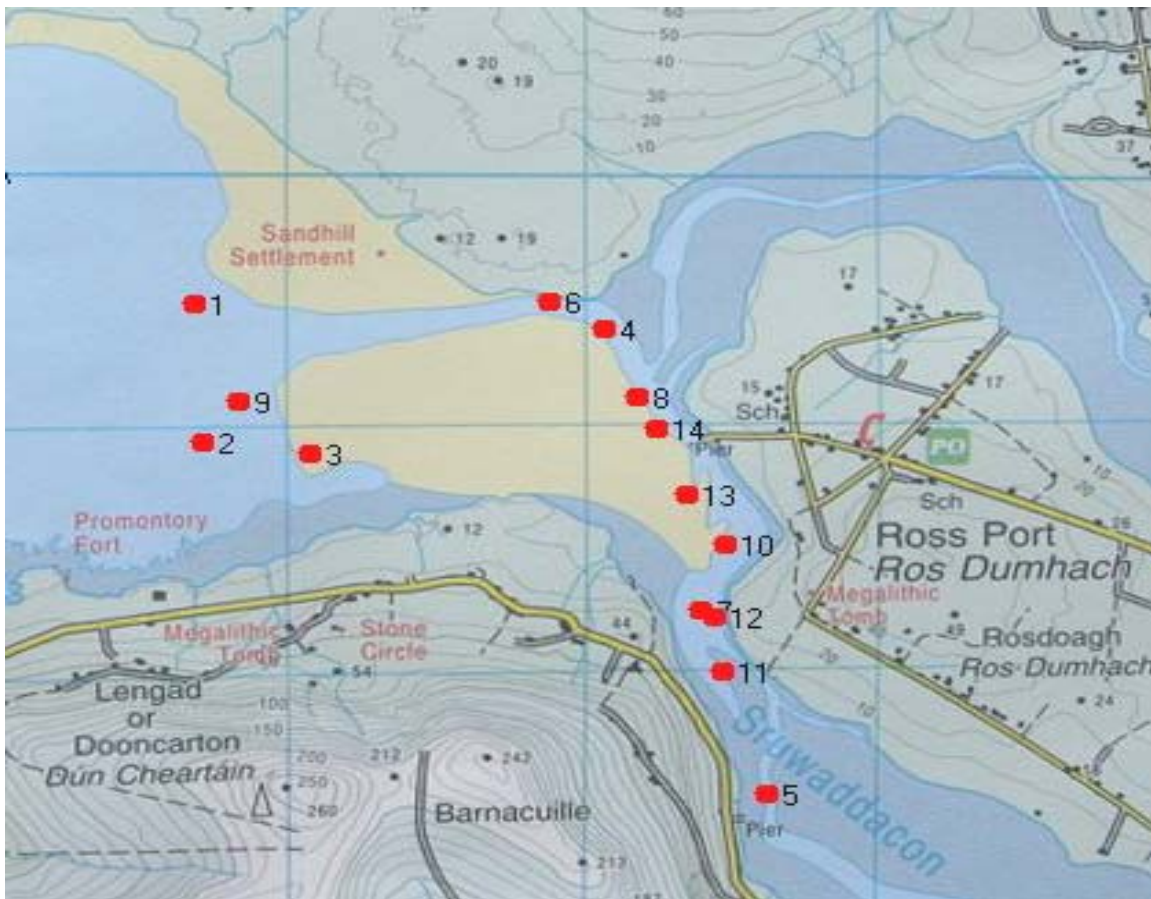


Fig 2. Positions of seal sightings taken from GPS readings aboard the *Cougar* in 2007.

Table 1. Number of seal sightings from the accompanying RIB survey vessel *Cougar* in Sruwaddacon Bay and Rossport Bay in 2007.

Sighting No.	Date	Time	Species	No. of individuals
1	19/06/2007	14:47	COMMON	1
2	19/06/2007	15:00	COMMON	1
3	20/06/2007	10:00	COMMON	2
4	20/06/2007	11:50	COMMON	1
5	22/06/2007	09:13	COMMON	2
6	22/06/2007	10:40	COMMON	1
7	22/06/2007	11:55	UNIDENTIFIED SEAL	2
8	29/06/2007	14:31	COMMON	1
9	29/06/2007	18:23	COMMON	1
10	29/06/2007	18:51	COMMON	1
11	02/07/2007	05:54	UNIDENTIFIED SEAL	1
12	10/07/2007	12:33	UNIDENTIFIED SEAL	1
13	11/07/2007	13:51	GREY	1
14	11/07/2007	16:15	COMMON	2
15	12/07/2007	17:56	GREY	1
16	17/07/2007	07:32	UNIDENTIFIED SEAL	1
TOTAL	16			20

Table 2. Number of sightings of identifiable seal species, unidentified seals and cetaceans made during the 2007 survey.

Species	No. of sightings
Common	10
Grey	2
Unidentified	4
Cetacean	0

5. CONCLUSION

No cetaceans were sighted at any time during the pre-shoot sea watches, the soft start or the active survey operations. Whilst sea conditions may occasionally not have been favourable for the detection of small cetaceans in Rossport Bay, they were much more suitable inside Sruwaddacon Bay due to its sheltered location. However, to date there have not been any sighting reports of cetaceans inside the shallow waters of

Sruwaddacon Bay. Recent reports have been made by local people of a live stranding of four dolphins (unidentified species) on the west facing beach north of Rinroe Pier. This stranding occurred two weeks prior to the survey. A second stranding was reported of a dead pilot whale in the same general area, roughly one to two days after the survey had been completed. Other occasional strandings are known to have occurred historically in the greater Broadhaven Bay area (sources: Irish Whale & Dolphin Group and University College Cork).

6. REFERENCES

- Englund, A., Coleman, M. and Collins, C. (2005). Marine mammal monitoring in Broadhaven Bay: June – September 2005.
- Ó Cadhla, O., Englund, A., Philpott, E., Mackey, M. and Ingram, S. (2003). Marine mammal monitoring in the waters of Broadhaven Bay and northwest Mayo: 2001-2003.