



Gas  
Networks  
Ireland

# **Strategic Gas Emergency Reserve – Moored Devices Survey Activity**

## Risk Assessment for Annex IV Species

## RSK General Notes

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# 1 Introduction

Cetaceans, marine turtles, and otters are afforded protections under Annex IV of the Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna). The EC (Birds and Natural Habitats) Regulations 2011-2021 (hereafter referred to as “the Regulations”) transpose the Habitats Directive (92/43/EEC) into Irish law.

Regulation 51 of the Regulations sets out the system of strict protection for animals; under this regulation it is an offence to:

- deliberately capture or kill any specimen of these species in the wild
- deliberately disturb these species particularly during the period of breeding, rearing, hibernation and migration
- deliberately take or destroy eggs of these species in the wild
- damage or destroy a breeding or resting place of such animal, or
- keep, transport, sell, exchange, offer for sale or offer for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive.

It is therefore an offence to capture, kill or disturb deliberately a single cetacean, marine turtle or otter in Irish waters, or to damage/destroy an otter or marine turtle’s breeding or resting place in Ireland, without a derogation licence first obtained from the Minister in accordance with Regulation 54 of the Regulations.

## 2 The Project

During 2022 and 2023, the Department for the Environment, Climate and Communications (DECC) reviewed a range of Ireland's energy security policies and subsequently published 'Energy Security in Ireland to 2030 – Energy Security Package' in November 2023.

Analysis showed that Ireland must enhance its resilience in the event of a disruption to the country's national gas supplies. Policy makers decided that a disruption to Ireland's supplies of gas is an unlikely, but high impact event, and a disruption would lead to unacceptably high economic and social costs.

Action 17 of the Energy Security Package seeks to address the risk to the security of Ireland's gas supply through the implementation of a state-led Strategic Gas Emergency Reserve.

In line with the Government decision to develop a Strategic Gas Emergency Reserve, and as a final part of the review of Ireland's energy security, the Department of Environment, Climate and Communications, in consultation with the gas transmission system operator (GNI), is completing further studies to support this review.

The implementation of a Strategic Gas Emergency Reserve is on a transitional and temporary basis for use in the event of a disruption to natural gas supplies. GNI is undertaking a rigorous assessment, and a number of solutions are currently under consideration, some of which may include the potential for onshore and offshore facilities. The information collated and gathered from this assessment will be returned to Government to help inform the decision-making process.

To finalise the proposal for the Strategic Gas Emergency Reserve, the Department for the Environment, Climate and Communications has instructed GNI to acquire additional information and data which it cannot obtain through publicly available sources.

### 2.1 Overview

The results of these surveys may be used as part of the site selection process, as well as providing baseline data for any subsequent Environmental Impact Assessment Report (EIAR) and Appropriate Assessment Natura Impact Statement (NIS) should the development be taken forward to the planning/consenting stage. As such, deployment and retrieval of both static acoustic monitoring (SAM) devices and ADCPs within the study area is considered necessary. The proposed programme of works is presented in Table 2.1.

It should be noted that location shown is indicative and may be subject to change on-site.

The following drawings have been prepared in support of the Maritime Usage Licence application to the Maritime Area Regulatory Authority (MARA):

- Maritime Usage License application area (Figure A1.1)
- indicative device deployment map (Figure A1.2).

These figures are included in Appendix 1 of this report.

Each moored device is likely to consist of:

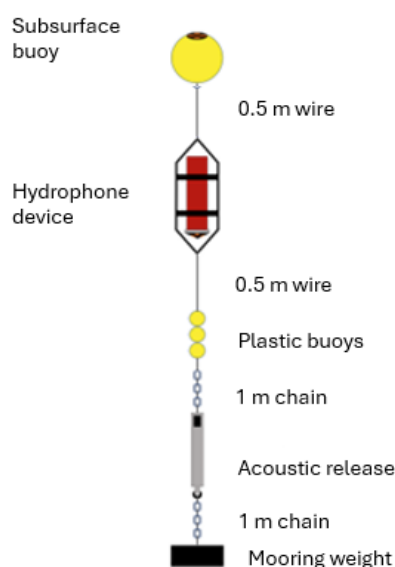
- two mooring weights (circa 20 kg each)
- an acoustic release system

- one or two hydrophones (SAM devices) / one ADCP
- multiple subsurface buoys.

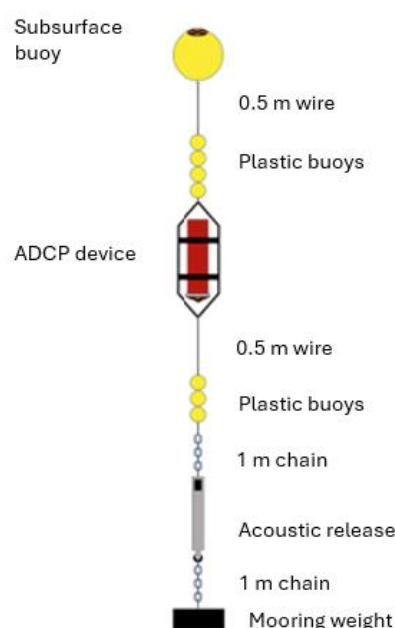
An indicative example moored device setup is shown in Figure 2.1. The exact technical specification of the equipment to be used will not be confirmed until the survey contract has been awarded. The vessel for operational activities or company contracted is subject to budget, weather, and vessel availability. The start date for the works would preferably be autumn 2024. Descriptions of typical equipment and survey parameters have been used within this report. Predicted time and footprint for the activities are presented in Table 2.2. Moored devices would be recovered every three to four months for maintenance and redeployments for at least one year, up to two years.

It is noted that the requirement for additional and more refined works may arise as the project site selection and site investigation works progress. This may include moving devices to areas of particular interest.

### Acoustic recorder



### ADCP



**Figure 2.1**

*Indicative schematics of moored devices*

**Table 2.1***Proposed programme of works per study area*

Survey	Method	Method detail	Purpose	Sampling Effort
<b>Metocean</b>	Acoustic Doppler Current Profiler (ADCP)	An ADCP is a hydroacoustic current meter used to measure water current velocities over a depth range using the doppler effect of sound waves scattered back from particles within the water column. In the present case ADCPs operating in the range of 600 KHz or 1 Mhz will be used. The instrument emits low amplitude “pings” of sound at a sampling rate of 1-minute average every 10 minutes. These pings will be emitted in a narrow sound beam (typically a few degrees in width) with a typical echo intensity profile of 80 dB (+/- 1.5 dB).	ADCPs may be used to examine wave and current conditions in each study area. This equipment is installed on the seabed and anchored with a suitable mooring structure.	A maximum of 1 ADCP may be used to examine wave and current conditions per study area.
<b>Marine Environmental/ Ecological</b>	Marine mammal acoustic monitoring (i.e., SAM)	SAM devices (CPODS or FPODs) are non-invasive underwater sound recorders used to detect the presence/absence of cetacean species (dolphins, whales, and porpoises). The acoustic signature of dolphins can be distinguished from that of harbour porpoise, the two species most likely to be recorded in the study area. An optional SoundTrap device may be deployed to measure overall background noise levels within the study area.	Marine mammal acoustic monitoring using SAM devices (CPODs or FPODs) deployed on the seabed. SoundTrap hydrophones may be deployed alongside the SAM devices for periods throughout the monitoring campaign. Either 2 permanent locations will be selected, or the 2 devices will be relocated during battery changes. The device locations are subject to consultation with an experienced marine mammal ecologist.	A maximum of 2 SAM devices may be used to study cetacean presence per study area.

**Table 2.2***Predicted time and footprint of each survey activity per study area*

Survey Activity	Typical time period required	Total number of devices per study area	Total time for activity	Footprint affected per activity (m <sup>2</sup> )	Total footprint per activity (km <sup>2</sup> )
<b>ADCP</b>	1 – 12 months in any one location	1	1 – 12 months. Deployment will include 1 day to deploy and 1 day to retrieve.	1m <sup>2</sup>	0.000001
<b>SAM</b>	3 months – 2 years in any one location)	2	12 – 24 months. Deployment will include 1 day to deploy and 1 day to retrieve.	2m <sup>2</sup>	0.000002



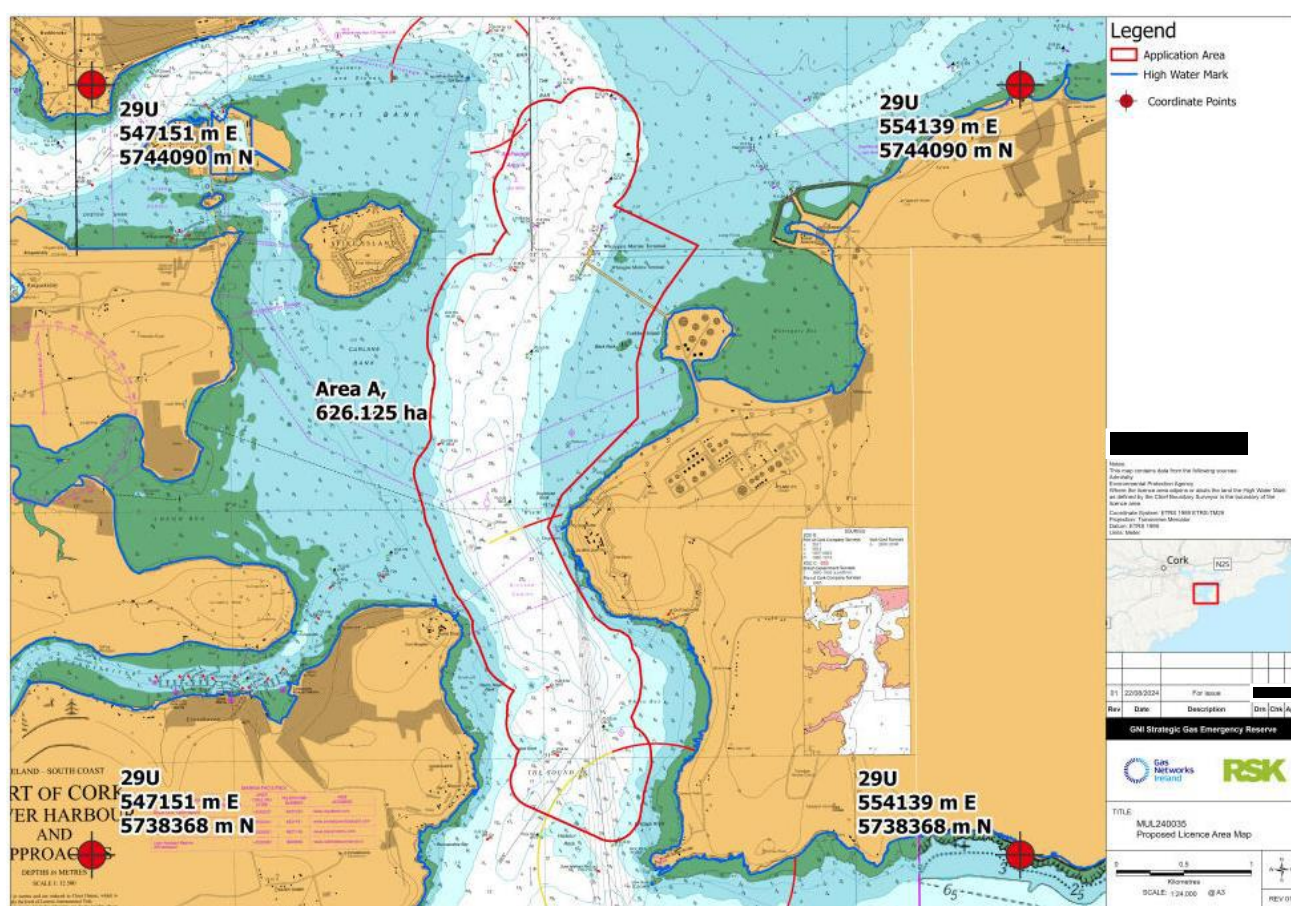
## 3 Receiving Environment

### 3.1 Cork Harbour

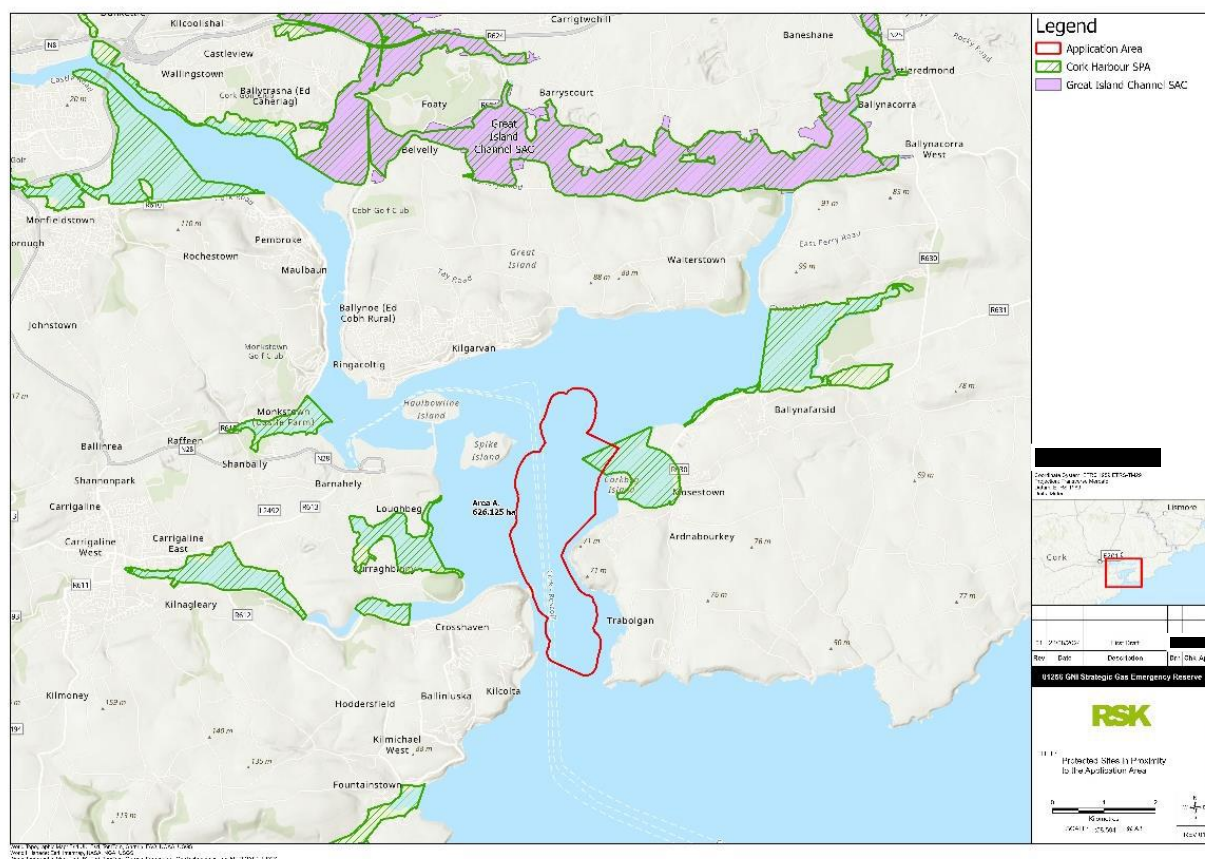
Cork Harbour is a large, sheltered bay system, with several river estuaries - namely those of the Rivers Lee, Douglas, Owenboy and Owennacurra. The sediment in the area is largely coarse sediments (<https://www.emodnetseabedhabitats.eu/>) as well as intertidal flats that are often muddy in character and support a range of macro-invertebrates. The harbour has sheltered conditions and water depths that range from the intertidal to around 30m below chart datum.

There is a lot of existing infrastructure within Cork Harbour, including a jetty off Corkbeg Island. To inform baseline for this potential development site, the marine study area extends from Corkbeg island, including the deep-water channel down to the harbour entrance with a buffer area of 200 m for a total area of 626.125 ha (Figure 3.1).

The Cork Harbour site is not within any Special Areas of Conservation (SAC) but overlaps with the Cork Harbour Special Protection Area (SPA) (Figure 3.2).



**Figure 3.1**  
Cork Harbour study area



**Figure 3.2**  
Protected areas in proximity to the Cork Harbour study area.

## 3.2 Annex IV species

### 3.2.1 Cetaceans

Bottlenose dolphins (*Tursiops truncatus*) are considered infrequent visitors to Cork Harbour. The individuals seen within Cork Harbour are transient and not resident or permanent in the area. The individuals seen in Cork Harbour are, therefore, unlikely to be associated with any coastal SACs. Common dolphin (*Delphinus delphis*) are likewise infrequently reported within Cork Harbour (Irish Whale and Dolphin Group [IWDG], 2024).

In a survey of harbour porpoise (*Phocoena phocoena*) around Ireland in 2008, densities were lowest along the Cork coast, with a higher density within Roaringwater Bay and Islands SAC (Berrow et al., 2008). Less than ten sightings of harbour porpoise were recorded within Cork Harbour during the last 12 months (IWDG, 2024). This suggests that species usage of the area is low. However, due to large foraging distances of the species, it is possible that harbour porpoises seen within Cork harbour could be associated with the Roaringwater Bay and Islands SAC.

### 3.2.2 Seals

Telemetry data indicates that harbour seal (*Phoca vitulina*) foraging trips in the south-west of Ireland generally extend no further than 20km from haul-out sites (Cronin et al., 2008). Harbour seals are rarely seen within Cork Harbour; no sightings of harbour seals have been recorded in Cork Harbour within the last 12 months (IWDG, 2024). The closest European site designated for harbour seal is the Kenmare River SAC, located approximately 160km from the proposed study area. It is therefore highly unlikely

that harbour seals from this SAC will be present within Cork Harbour and therefore harbour seals are highly unlikely to be present during survey works.

Grey seals (*Halichoerus grypus*) have been recorded undertaking foraging trips over hundreds of kilometres, although the mean distance travelled in a telemetry study carried out in 2011 for NPWS was 50.85km (Cronin et al., 2011). Grey seals are rarely sighted within Cork Harbour; no sightings of grey seals have been recorded in Cork Harbour within the last 12 months (IWDG, 2024). The closest European site designated for grey seals is the Roaringwater Bay and Islands SAC, approximately 85km distance from the study area by sea. While it is possible that individuals from the Roaringwater Bay and Islands population may be present in Cork Harbour, it is considered unlikely that the proposed study area represents an important foraging ground and therefore grey seals are highly unlikely to be present during survey works.

### 3.2.3 Otter

Otter (*Lutra lutra*) inhabit coastal sites where there is suitable habitat, food availability, and shelter for resting and breeding. A recent survey for evidence of otter within Cork Harbour found evidence of otters and identified six potential coastal nesting sites (Dalton et al., 2022). The closest of these sites to the study area is Curraghbinny Woodland, approximately 2.4km from the western boundary of the study area.

### 3.2.4 Basking Shark and Reptiles

Basking shark (*Cetorhinus maximus*) sightings are very rarely recorded within Cork Harbour, while no turtle species sightings have been reported for Cork Harbour within the past 12 months (IWDG, 2024). As such, these species are considered unlikely to be present in the study area during the proposed surveys.

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## 4 Article 12 Assessment

All species of cetaceans are protected in Ireland along with sea turtles and otters under Annex IV of the Habitats Directive. The potential for impact on protected species from the proposed maritime usage related to the vessel operations during deployment, maintenance, and retrieval of the moorings includes collision risk, and visual and acoustic disturbance.

Considering the current vessel activity levels in Cork Harbour, the addition of a single vessel is assessed as not having a significant effect. Therefore, potential impacts on protected species as a result of vessel operations for the deployment, maintenance, and retrieval of moorings is considered very low.

While in place, the moorings will be non-invasive. SAM devices will not generate any sound or vibrations. The ADCP devices do produce some lower frequency sounds that are within the hearing range of high-frequency marine mammal species, such as harbour porpoise. The proposed ADCP device installation will be temporary in nature and will emit a narrow sound beam (typically a few degrees in width) with a typical echo intensity profile of 80 dB (+/- 1.5 dB). Therefore, the potential impact on protected species is considered to be very low. As such, the possibility for impacts on protected species from underwater noise associated with survey equipment can be excluded from further consideration. As such, there is no potential for impacts on marine mammals or other protected species from the devices while deployed.

The moorings will be sub-surface, with an acoustic release, resulting in no surface buoy or rising line, which will minimise risk of entanglement within the water column for any protected species.

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## 5 Conclusions

Due to the small scale and temporary nature of the proposed maritime usage, it is concluded that the project will not result in any disturbance, injury, or mortality of Annex IV species, nor will it cause deterioration or destruction of any breeding or resting sites.

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## 6 References

Berrow, S., Hickey, R., O'Brien, J., O'Connor, I., and McGrath, D. (2008) Harbour Porpoise Survey 2008: Report to the National Parks and Wildlife Service.

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European Marine Observation and Data Network (EMODnet) (2024) 'Seabed Habitats'.

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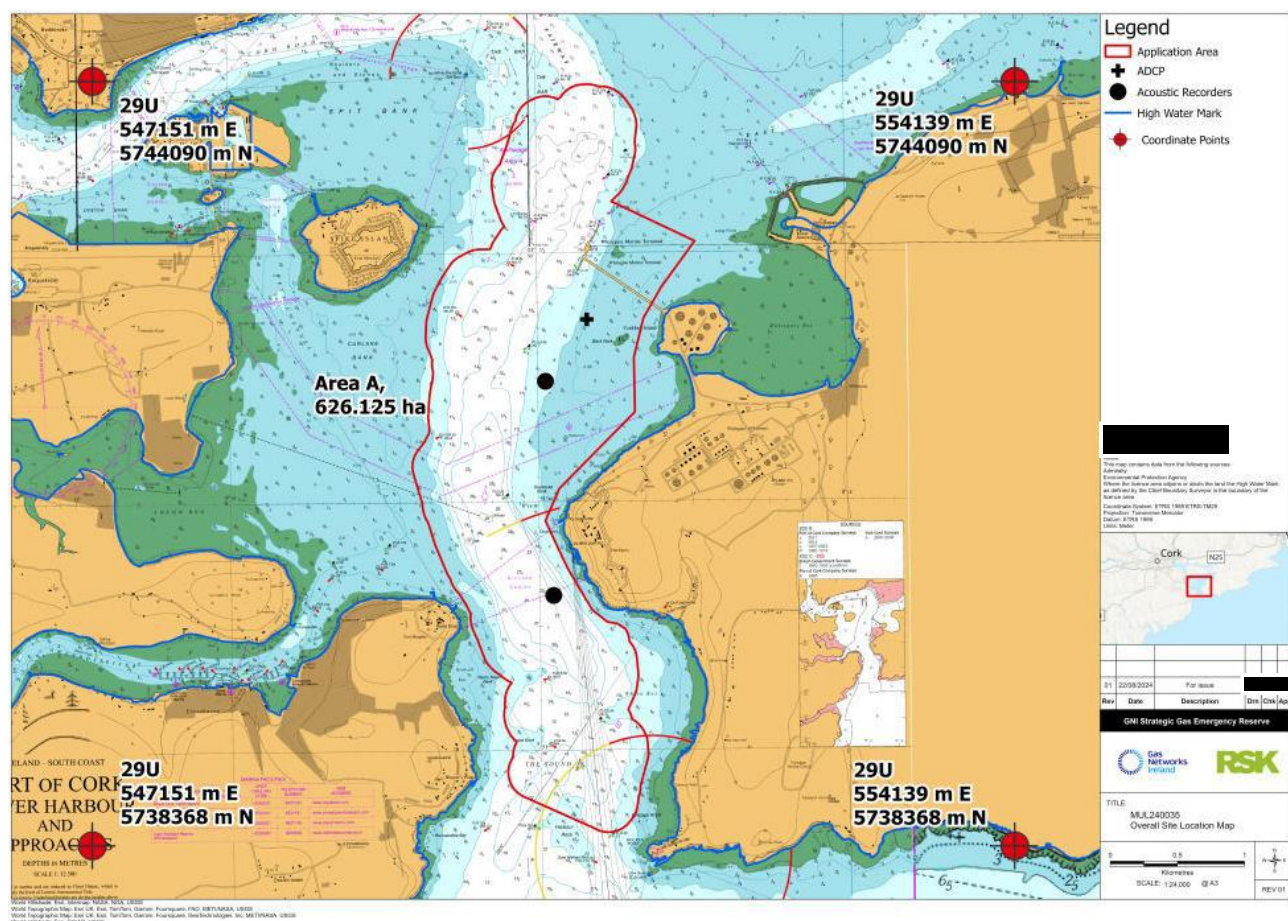
IWDG (Irish Whale and Dolphin Group) (2024) Sightings Data. Available at

[<https://iwdg.ie/browsers/sightings.php>] (Accessed 25 June 2024).





**Figure A1.1**  
*MUL application area: Cork Harbour*



### Figure A1.2

Indicative device deployment map: Cork Harbour