



MERC Consultants
environmental and conservation services

Natura Impact Statement

Department of Climate, Energy and the Environment (DCEE): South Coast Designated Maritime Area Plan (SCDMAP) geophysical reconnaissance, metocean, geotechnical, benthic and passive acoustic surveys.

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1. Introduction

Ireland has adopted a plan-led approach to achieving its offshore wind targets. The Minister for the Department of Climate, Energy and the Environment (DCEE) has commissioned the preparation of a Marine Usage Licence (MUL) application to conduct and support marine site investigations for the South Coast Designated Maritime Area Plan (DMAP) as shown in **Error! Reference source not found..** The programme is funded for data collection in 2026 and is being developed over a multi-year period, focusing on the-DMAP sites: Tonn Nua (A), Lí Bán (Area B), Manannán (Area C) and Danu (Area D). Survey activity will also include potential transit lines from Cork Harbour and corridors between the sites, with certain works extending across the wider SC-DMAP area where required.

Site investigations will include geophysical, geotechnical, metocean, and biological surveys. Surveying for marine data is a crucial step in the preparation for Offshore Renewable Electricity Support Scheme (ORESS) auctions. Providing extensive, accurate, and high-quality data helps inform and de-risk auctions, leading to more stable energy prices for consumers. It is expected that this multi-disciplinary marine survey programme will contribute to the SC-DMAP Regional Level Surveys. The Regional Level Surveys will support implementation and monitoring of the SC-DMAP and help inform potential cumulative and in-combination assessments at project level for development permission applications within Maritime Areas B, C, and D.

A report containing Supporting Information for Screening for Appropriate Assessment (SISAA) was prepared (MERC, 2026) to assist the Competent Authority, in undertaking Screening for Appropriate Assessment (AA). The SISAA concluded that the proposed project, without mitigation, may have the potential to lead to significant adverse effects on a number of European sites.

Based on that conclusion, this report represents a Natura Impact Statement (NIS) for the proposed project.

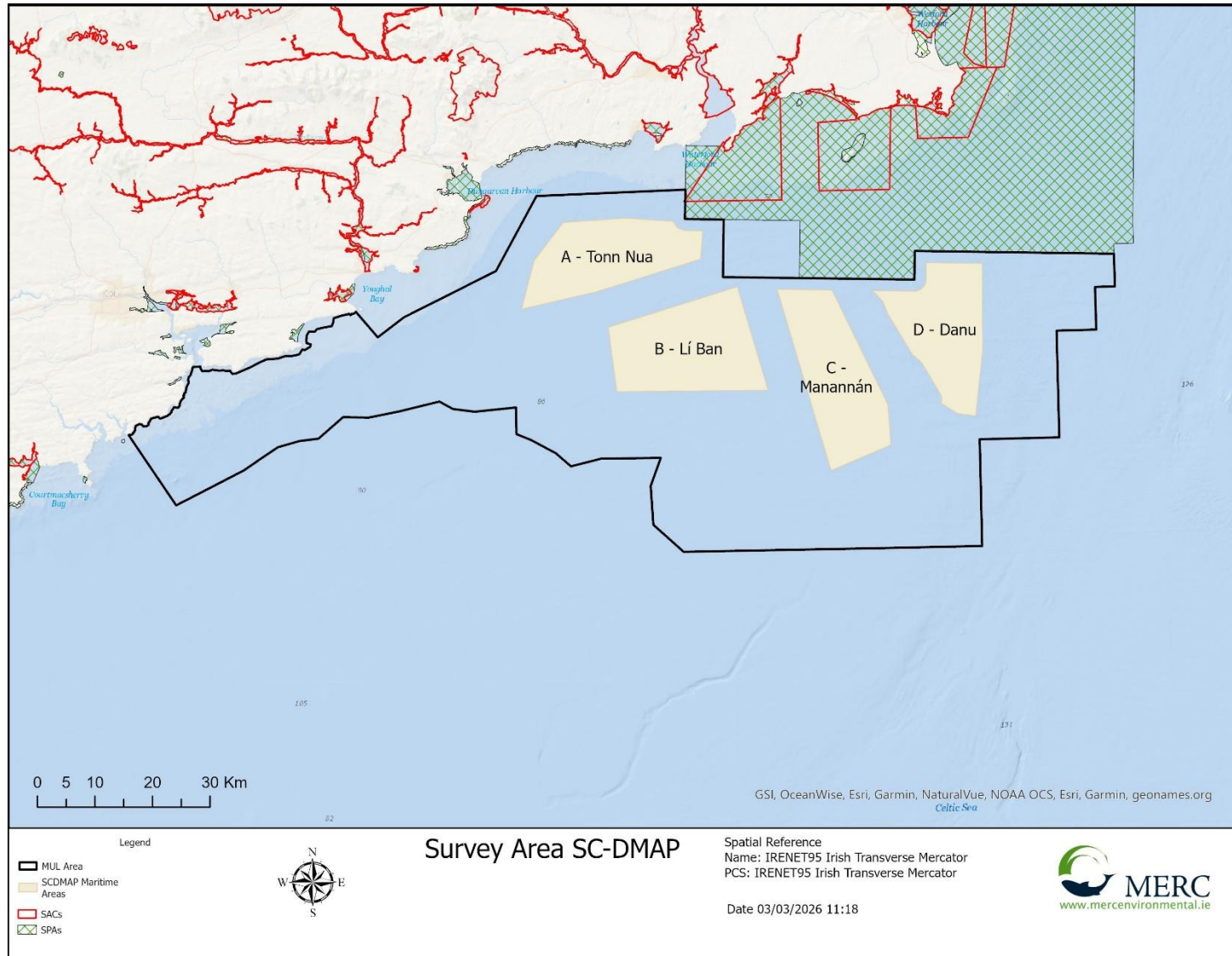


Figure 1. Overview of proposed survey area relative to adjacent European sites.

2. Statement of authority

This report was prepared by Louise Scally and Ronan Browne of MERC Consultants. MERC are a specialist marine ecological survey and consultancy firm. Core staff have many decades of combined experience and specialist knowledge in relation to Irish aquatic habitats and species in addition to the assessment and management of conservation interests. MERC were responsible for conducting surveillance monitoring and reporting for the NPWS national monitoring of marine Annex I habitats for compliance under Articles 11 and 17 of the EU Habitats Directive in the periods 2015-2019 and 2022-2025.

In addition to their scientific expertise MERC have an in-depth knowledge of Irish and European Environmental legislation and policy. In 2011 MERC prepared the text describing Activities Requiring Consent (ARCs) for inclusion in a handbook detailing the regulatory framework for all developments within designated sites in Ireland on behalf of the National Parks and Wildlife Service. They have also produced numerous Conservation Management Plans for the same department. To-date MERC have conducted in excess of 200 ecological reports in support of Appropriate Assessment under Article 6(3) of the EU Habitats Directive.

Louise Scally MCIEEM is a professional marine ecologist with a wide range of experience in the field of conservation biology, marine habitat mapping and ecology. She completed a M.Sc. in ecology and taxonomy at Trinity College Dublin in 1989 and a Ph.D. in taxonomy, also at Trinity College Dublin, in 2001. She is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). For the last 20 years she has specialised in the ecology of marine ecosystems. She has specialised in the assessment of benthic habitats with a focus on intertidal and subtidal reef habitats and sensitive seabed species and habitats. Over the last 15 years she has conducted extensive marine monitoring surveys and assessments of EU Habitats Directive marine Annex I habitats and their associated species within European sites in Ireland to inform national compliance obligations under the EU Habitats Directive.

Ronan Browne is a marine and environmental scientist with extensive experience in coastal ecology, WFD water-quality monitoring, and the assessment of intertidal and subtidal habitats. He holds qualifications in aquatic biology, shellfish biology, and fisheries (MSc, Bangor), and in fisheries science (PhD, University of Galway). He has worked across national marine monitoring programmes and applied research with organisations including BIM, the Marine Institute, CLS and MERC.

3. Methods

3.1. Guidelines and legislation

This report has been prepared, *inter alia*, with reference to the following European Directives, national legislation and guidance on the appropriate assessment of projects and plans with regard to the implementation of the provisions of Article 6(3) and (4) of the EU Habitats Directive 92/43/EEC.

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna. Official Journal of the European Communities.
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (codified version).
- European Communities (Birds and Natural Habitats) Regulations 2011. SI No. 477 of 2011.

- Managing Natura 2000 sites: The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC. European Commission 2018. 7621 final. Office for Official Publications of the European Communities, Luxembourg.
- Assessment of plans and projects significantly affecting Natura 2000 sites; Methodological Guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission, 2002.
- European Commission (2021). Communication from the Commission: Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC. 2021/C 437/01.
- Appropriate Assessment Screening for Development Management. OPR Practice Note PN01. Office of the Planning Regulator. March 2021.
- Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters. Department of Arts, Heritage and the Gaeltacht, 2014.
- Relevant case law.
- MARA (2025). Guidance for Applicants: Marine Usage Licence (MUL) Applications. Version 7 updated 5 November 2025.
- MARA (n.d.). Marine Usage Licence (MUL) – Application Form. Accessed December 2025.
- MARA (n.d.). Technical Mapping Guidance Notes for MAC/MUL Applications under the Maritime Area Planning Act 2021 (MAPA). Accessed December 2025.
- **European Council (2003)**. *Council Regulation (EC) No. 1954/2003 of 4 November 2003 on the management of the fishing effort relating to certain Community fishing areas and resources and modifying Regulation (EEC) No. 2847/93 and repealing Regulations (EC) No. 685/95 and (EC) No. 2027/95*. Official Journal of the European Union, **L289**, 7 November 2003, pp. 1–7.

4. Screening determination

A SISAA report was prepared (MERC, 2026) to assist the Competent Authority, in undertaking a screening exercise for Appropriate Assessment (AA). The SISAA concluded that: *“The proposed project, without mitigation, may give rise to significant effects on a number of European sites. Accordingly, it is concluded that an Appropriate Assessment of the proposed project is required.”*

A list of European sites and the relevant Qualifying Interests (QIs) and Special Conservation Interests (SCIs) screened in are given in Table 1.

The Biologically Sensitive Area designation that overlaps this MUL application relates to fisheries management rather than Natura 2000 conservation objectives. Consequently, the presence of the BSA does not introduce additional European sites or qualifying interests to the Appropriate Assessment but provides an ecological context regarding fish sensitivity in the receiving environment.

Table 1. European sites and relevant QIs which have been screened in.*Distances (Hydrological for SACs, As the Crow flies for SPAs)*

European site	Distance (Km) (nearest point) to Site	Relevant QI Screened in	Reason
SACs			
Slaney River Valley SAC	40	<i>Phoca vitulina</i> (Harbour Seal) [1365]	Possible disturbance from underwater noise
Blackwater Bank SAC	31	<i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	Possible disturbance from underwater noise
Carnsore Point SAC	19.5	<i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	Possible disturbance from underwater noise
Saltee Islands SAC	11.5	<i>Halichoerus grypus</i> (Grey Seal) [1364]	Possible disturbance from underwater noise
Hook Head SAC	Adjoining	<i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]	Possible disturbance from underwater noise
Roaringwater Bay and Islands SAC	72	<i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Halichoerus grypus</i> (Grey Seal) [1364]	Possible disturbance from underwater noise
SPAs			
Seas off Wexford SPA	Adjoining	Red-throated Diver Fulmar Manx Shearwater Gannet Cormorant Shag Common Scoter Razorbill Puffin	Possible disturbance from underwater noise
Saltee Islands SPA	19.2	Fulmar Gannet Cormorant Shag Razorbill Puffin Guillemot	Possible disturbance from underwater noise
Mid-Waterford Coast SPA	7.3	Cormorant	Possible disturbance from underwater noise
Helvick Head to Ballyquin SPA	6.8	Cormorant	Possible disturbance from underwater noise
Cork Harbour SPA	1.1	Cormorant	Possible disturbance from underwater noise

5. Impact assessment

The screening determination identified the following as having the potential for likely significant effects.

- Disturbance from underwater noise with the potential for possible temporal impacts on Marine Mammals and Birds.
- Disturbance & displacement by underwater noise with the potential for possible temporal impacts on Birds.
- Potential for in-combination effects related to 7 projects.

The site-specific Qualifying Interests (QIs) for the SACs and Specific Conservation Interests (SCIs) for the SPAs screened in, as given in Table 1, are further discussed below and recommended mitigation measures are proposed. These waters also overlap, in part, Irish Biologically Sensitive Area designated under Council Regulation (EC) No.1954/2003, reflecting the ecological importance of the region for fish life-history stages including spawning and juvenile development.

5.1. Marine Mammals

5.1.1. Bottlenose Dolphin

Bottlenose dolphins are recorded all around the Irish coast and far offshore but are most often encountered close to land. They primarily calve during the summer months, with activity peaking in July and August. Mating can occur throughout the year.

Bottlenose dolphin area a QI for Hook Head SAC and may use the proposed project area for foraging. Noise related impacts from the use of the mini airgun has the potential to lead to TTS over a distance of 2.9 km from source, it is therefore considered that **the proposed project has the potential to lead to noise barriers causing LSEs to Bottlenose dolphin within Hook Head SAC which is immediately adjacent to the proposed MUL area.** Measures to mitigate such LSEs are given in section 6.1.

5.1.2. Harbour Porpoise

Harbour porpoise breeds annually in Ireland, predominantly during the months of May-September. The principal calving period in Irish waters is thought to occur in the months of May and June although it may extend throughout the summer months and early autumn. Mating commonly occurs several weeks after the calving season.

Harbour porpoise are a QI for Carnsore Point SAC, Hook Head SAC, Blackwater Bank SAC and Roaringwater Bay and Islands SAC and may use the proposed project area for foraging. Noise related impacts from the use of the mini airgun has the potential to lead to TTS over a distance of 2.9 km from source, it is therefore considered that the proposed project has the potential to lead to noise barriers causing to LSEs to Harbour porpoise within Hook Head SAC and Carnsore Point SAC. The remaining sites being too far distant for any meaningful SPR link. It is therefore considered that **Underwater noise may have the potential to lead to LSEs to Harbour Porpoise within Carnsore Point SAC which lies approximately 19 km north of the proposed MUL area and Hook Head SAC which is immediately adjacent to the proposed MUL area.** Measures to mitigate such LSEs are given in section 6.1.

5.1.3. Grey Seal

Grey seal are a QI for Saltee Islands SAC and Roaringwater Bay and Islands SAC and are present within these SACs throughout the year during all aspects of its annual life cycle. While it is recognised that individual grey seals associated with either of these sites may use the proposed project area for foraging, noise related impacts leading to behavioural/foraging disturbance to grey seal within these SACs are not considered possible due to the distance of the proposed survey and its ZoI relative to underwater noise and the large area of available foraging habitat. While use of the mini airgun has the potential to lead to TTS over a distance of 2.9 km from source, it is considered that, due to the distance of Saltee Islands SAC (11.5 km) and Roaringwater and Bay Islands SAC (72 km) from the proposed survey area, no noise related barriers would result that could impact the targets set for the conservation objectives for this species within the site. The source path receptor link being considered too weak for any potential for impact.

Even in the absence of the measures recommended in the Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters (NPWS, 2014), the proposed surveys are not likely to give rise to significant effects on any European Site designated for grey seal. **However, with due regard to the precautionary principle, the potential for LSEs on Grey seal within the Saltee Islands SAC are considered possible.** Measures to mitigate such LSEs are given in section 6.2.

5.1.4. Harbour Seal

Harbour seal are a QI for Slaney River Valley SAC (>40 km distant to the proposed survey area) and are present within this SAC throughout the year during all aspects of its annual life cycle.

While it is recognised that individual harbour seals associated with Slaney River Valley SAC may use the proposed project area for foraging, noise related impacts leading to behavioural/foraging disturbance to harbour seal within the SAC are not considered possible due to the distance of the proposed survey and its ZoI relative to underwater noise and large area of available foraging habitat. While use of the mini airgun has the potential to lead to TTS over a distance of 2.9 km from source, it is not possible that, due to the distance of Slaney River Valley SAC (>40 Km) from the proposed survey area, noise related barriers would result that could impact the targets set for the conservation objectives for this species within the site. The source path receptor link being considered too weak for any potential for impact.

Even in the absence of the measures recommended in the Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters (NPWS, 2014), the proposed surveys are not likely to give rise to significant effects on any European Site designated for harbour seal. **However, with due regard to the precautionary principle, the potential for LSEs on Harbour seal within Slaney River Valley SAC are considered possible.** Measures to mitigate such LSEs are given in section 6.2.

5.2. Seabirds

Table 2 presents a list of SPAs and their associated diving seabirds screened in. The impacts of underwater noise on diving seabirds is poorly understood and there is a paucity of data on the potential effects of underwater noise on diving seabirds. Recent reviews (e.g. Hartley Anderson Limited, 2020, Harding, 2022) have noted that evidence of harm to diving seabirds as a result of underwater noise is limited, but some studies have shown behavioural effects in diving seabirds. Research suggests (Yelverton *et al.* 1973, Cooper 1982, Stemp 1985, Danil & St Leger 2011) that likely impacts would be confined to an areas within very close proximity of very high-amplitude

low-frequency underwater noise (10's of metres) to the sound source. These studies relate to the use of explosives and there is a paucity of data on the effects of other forms of acoustic instrumentation including multibeam and mini airguns.

Very high-amplitude low-frequency underwater noise may result in acute trauma to diving birds, with several studies reporting mortality of diving birds in close proximity (i.e. tens of metres) to underwater explosions (Yelverton *et al.* 1973, Stemp 1985 and Danil K and St. Leger JA. 2011). Some studies (Cooper J. 1982) reported mortality in Penguins resulting from blasting, but details of the nature of the noise sources and distance to the species are lacking. Others (Danil K and St. Leger JA. 2011) reported mortality in diving seabirds associated with underwater detonation exercises. However, again the distance and profile of the blast is not documented. (Stemp, 1985) reported no significant difference in the abundance of thick-billed murre (Brünnich's guillemot) during seismic surveys using explosives and air guns) over 3 years. Stemp (1985) reported some mortality of birds in close proximity to explosive charges (up to 11 meters), but none associated with airguns.

The existing reviews recommend the need for dedicated research on the impacts of underwater noise from various sound sources on diving seabirds, while also suggesting a range of potential mitigations in the interim.

While potential for impacts from underwater noise is recognised in the SISAA it was considered that any seabirds present in the area would be temporarily displaced by the presence of the vessel and the effects therefore, would be the same as vessel displacement i.e. as few seabirds would be present, impacts on their fitness will not lead to any population-level effects at the SPAs or other adjacent colonies. **However, with due regard to the precautionary principle LSEs on diving seabirds within Seas off Wexford SPA, Saltee Islands SPA, Mid-Waterford Coast SPA, Helvick Head to Ballyquin SPA and Cork Harbour SPA are considered possible.** Measures to mitigate such LSEs are given in section 6.3.

Table 2. SCI species screened in

Species	SPA Screened in (MARA)	Description
Red-throated Diver	Seas off Wexford SPA	Red-throated Diver is a SCI for the Seas off Wexford SPA which abuts the proposed project area. During the non-breeding period divers (primarily Great Northern and Red-throated Diver) in the western Irish Sea are known to concentrate in the shallower coastal areas. Red-throated Diver can be quite mobile, and it is likely that there is interchange between this SPA and adjacent areas (NPWS, 2024).
Fulmar	Seas off Wexford SPA Saltee Islands SPA	Breeding Fulmar is also a SCI of Saltee Islands SPA. These birds use the marine waters of the Seas off Wexford SPA during the breeding season. As Fulmar can range large distances from their nest sites during the breeding season it is likely that the Seas off Wexford SPA does not contain all relevant foraging resources for the Saltee Islands SPA breeding population. Fulmar breeding at other colonies and non-breeding individuals may also use Seas off Wexford SPA during the breeding period (NPWS, 2024).
Manx Shearwater	Seas off Wexford SPA	Manx Shearwater is a SCI for the Seas off Wexford SPA and the area of marine waters on the south-east has been identified as being an important foraging resource for Manx Shearwater breeding in colonies located around the periphery of the Irish Sea. The area is also recognised

		as a transiting area for the species on long range foraging trips (NPWS, 2024).
Gannet	Seas off Wexford SPA Saltee Islands SPA	Gannet is a SCI for the Seas off Wexford SPA and Breeding Gannet is also a SCI for Saltee Islands SPA The breeding population exploits the surrounding marine waters of Seas off Wexford SPA during the breeding season. As Gannet can range large distances from their nest sites during the breeding season it is likely that the Seas off Wexford SPA does not contain all relevant foraging resources for the Saltee Island SPA breeding population (NPWS, 2024).
Cormorant	Seas off Wexford SPA Saltee Islands SPA Helvick Head to Ballyquin SPA Cork Harbour SPA Mid-Waterford Coast SPA Keeragh Islands SPA	Breeding Cormorant is a SCI for the Seas off Wexford SPA. Saltee Islands SPA, Mid-Waterford Coast SPA and Cork Harbour SPA. The breeding Cormorant of Saltee Islands SPA and Keeragh Islands SPA use Seas off Wexford SPA as a foraging resource.
Shag	Seas off Wexford SPA Saltee Islands SPA	Shag is a SCI for the Seas off Wexford SPA. Breeding Shag is also an SCI for Saltee Islands SPA.
Common Scoter	Seas off Wexford SPA	Common Scoter utilise the shallow nearshore coastal waters off County Wexford across the non-breeding period. Common Scoter flocks can be quite mobile, and it is likely that there is interchange between this SPA and adjacent areas (e.g the Raven SPA*)
Razorbill	Seas off Wexford SPA Saltee Islands SPA	Breeding Razorbill is also a SCI of Saltee Islands SPA. These birds exploit Seas off Wexford SPA during the breeding season. As birds can range large distances from the colony during the breeding season it is likely that this SPA does not contain all relevant foraging resources for the Saltee Islands SPA breeding population. Razorbill from other colonies and nonbreeding individuals may use this SPA during the breeding period (NPWS, 2024).
Puffin	Seas off Wexford SPA Saltee Islands SPA	Breeding Puffin is also a SCI Saltee Islands SPA. This breeding population exploits the surrounding marine waters of Seas off Wexford SPA during the breeding season. As Puffin can range large distances from their nest sites during the breeding season it is likely that the Seas off Wexford SPA does not contain all relevant foraging resources for the Saltee Island SPA breeding population.
Guillemot	Saltee Islands SPA	Breeding Guillemot is also a SCI for Saltee Islands SPA. This species comes ashore to nest from May onwards, colonies are deserted by the first week in August. Wintering at sea, It is thought that some birds winter near their nesting sites.
Shoveler	Cork Harbour SPA	The Species is an SCI for Cork Harbour SPA. Shoveler prefer shallow eutrophic waters rich in plankton and is unlikely to be actively utilising the waters of the proposed survey area.
Little grebe	Cork Harbour SPA	The Species is an SCI for Cork Harbour SPA. The species favours sheltered coasts, estuaries and coastal lakes and lagoons and is unlikely to be actively utilising the waters of the proposed survey area.

5.3. Potential for in-combination effects

The SISAA (MERC, 2026), identified the 7 projects as having the potential for in-combination effects (Table 3). No plans with the potential for in-combination effects were identified.

Table 3 In combination effects

Project No.	Application licence no.	Applicant	Description	Location	Project scope	Potential for cumulative impact
1	MUL240026	Uisce Éireann	Strategic modelling of currents and bathymetry (SE Coast)	> 5km north	Primarily modelling/analysis	Unlikely to contribute to cumulative pressures unless separate at-sea surveys occur with a temporal overlap. Cumulative effects possible if temporal overlap occurs.
2	MUL240036	EirGrid plc	Marine site investigations for OSS, cable corridors and landfall options (Tonn Nua)	Spatial overlap	SI works (geophysical / geotechnical / environmental)	Potential cumulative pathways if coincident in time/space with similar surveys. Cumulative effects possible if temporal overlap occurs.
3	MUL240003	Wexford County Council	Baseline marine environmental surveys	>25km	Baseline marine surveys	Generally low intensity: relevance depends on temporal/spatial overlap. Cumulative effects possible if temporal overlap occurs.
4	MAC20230004	Port of Cork Company	Capital dredging (Ringaskiddy East & West)	4 km	Capital dredging	Potential cumulative effects are limited to localised dredging interactions.
5	MAC240059	Electricity Supply Board (ESB)	Aghada Power Station: Energy Park and associated renewable infrastructure	>6 km	Renewable energy (non-wind)	Broad development but spatially discrete; Cumulative effects possible if temporal overlap occurs.
6	MUL230031	Amazon MCS Ireland Ltd	Transatlantic subsea fibre optic cable investigations	63 km	Cable route investigations	Narrow corridor footprint; cumulative effects unlikely unless coincident.
7	PENDING MAC	ESB and Ørsted	Tonn Nua	Within MUL	900MW Offshore wind development	Potential for in-combination effects: No in-combination effects anticipated when there is no temporal overlap.

The SISAA (MERC, 2026) stated that potential for cumulative impacts between the projects listed in Table 3 and the proposed project are possible, relative to the introduction of underwater noise into the marine environment, where a temporal overlap occurs. Measures to mitigate the potential for in-combination impacts is proposed in section 6.4.

6. Mitigation measures

6.1. Bottlenose dolphin and Harbour porpoise

NPWS (2014) provides guidance to manage the risk to marine mammals from man-made sound sources in Irish waters. This document provides guidance and mitigation measures to address key potential sources of anthropogenic sound that may impact negatively on marine mammals in Irish waters. The guidance set out in NPWS (2014), relates to geophysical acoustic surveys (seismic, multibeam and single beam surveys) and should be fully implemented as detailed below.

Passive acoustic monitoring (PAM): Where feasible, use the proposed towed passive acoustic array to supplement MMO effort during periods of reduced visibility, and document any constraints/limitations (gear conflicts, sea state).

Moorings and seabed frames (F-POD/C-POD, AMAR, ADCP, metocean buoys): should be designed to minimise entanglement risk (taut lines; minimise slack; avoid netting/loops; use weak links where appropriate), mark and chart all deployments, and implement prompt retrieval and incident response procedures.

Airgun contingency use: confirm in advance whether an airgun is required; if used, apply NPWS (2014) controls and any additional regulator-specified conditions (e.g., enhanced monitoring, restricted commencement conditions).

1. A qualified and experienced marine mammal observer (MMO) shall be appointed to monitor for marine mammals and to log all relevant events using standardised data forms.
2. Acoustic surveying using the geophysical survey equipment specified for this project shall not commence if marine mammals are detected within a 500m radial distance of the sound source intended for use, i.e., within the Monitored Zone.

Pre-Start Monitoring

Sound-producing activities shall only commence in daylight hours where effective visual monitoring, as performed and determined by the MMO, has been achieved. Where effective visual monitoring, as determined by the MMO, is not possible the sound-producing activities shall be postponed until effective visual monitoring is possible.

An agreed and clear on-site communication signal must be used between the MMO and the Works Superintendent as to whether the relevant activity may or may not proceed, or resume following a break (see below). It shall only proceed on positive confirmation with the MMO.

The MMO shall conduct pre-start-up constant effort monitoring at least 30 minutes before the sound-producing activity is due to commence. Sound-producing activity shall not commence until at least 30 minutes have elapsed with no marine mammals detected within the Monitored Zone by the MMO.

This prescribed Pre-Start Monitoring shall subsequently be followed by a Ramp-Up Procedure which should include continued monitoring by the MMO.

Ramp-Up Procedure

In commencing an acoustic survey operation using the above equipment, the following Rampup Procedure (i.e., “soft-start”) must be used, including during any testing of acoustic sources, where the output peak sound pressure level from any source exceeds 170 dB re: 1µPa @1m:

- (a) Where it is possible according to the operational parameters of the equipment concerned, the device’s acoustic energy output shall commence from a lower energy start-up (i.e., a peak sound pressure level not exceeding 170 dB re: 1µPa @1m) and thereafter be allowed to gradually build up to the necessary maximum output over a period of 20 minutes.
- (b) This controlled build-up of acoustic energy output shall occur in consistent stages to provide a steady and gradual increase over the ramp-up period.
- (c) Where the acoustic output measures outlined in steps (a) and (b) are not possible according to the operational parameters of any such equipment, the device shall be switched “on” and “off” in a consistent sequential manner over a period of 20 minutes prior to commencement of the full necessary output.

In all cases where a Ramp-Up Procedure is employed the delay between the end of ramp-up and the necessary full output must be minimised to prevent unnecessary high-level sound introduction into the environment.

Once the Ramp-Up Procedure commences, there is no requirement to halt or discontinue the procedure at night-time, nor if weather or visibility conditions deteriorate nor if marine mammals occur within a 500m radial distance of the sound source, i.e., within the Monitored Zone.

Breaks in sound output

If there is a break in sound output for a period greater than 30 minutes (e.g., due to equipment failure, shut-down, survey line or station change) then all Pre-Start Monitoring and a subsequent Ramp-up Procedure (where appropriate following Pre-Start Monitoring) must be undertaken.

For higher output survey operations which have the potential to produce injurious levels of underwater sound (see sections 2.4, 3.2) as informed by the associated risk assessment, there is likely to be a regulatory requirement to adopt a shorter 5-10 minute break limit after which period all Pre-Start Monitoring and a subsequent Ramp-up Procedure (where appropriate following Pre-Start Monitoring) shall recommence as for start-up.

Reporting

Full reporting on MMO operations and mitigation undertaken must be provided to the Regulatory Authority as outlined in Appendix 6 of NPWS (2014).

6.2. Mitigation measures: Grey seal and Harbour seal,

In line with the guidance to manage the risk to marine mammals (NPWS, 2014), the mitigation proposed in section 6.1 for Cetacean species are also proposed for grey and harbour seal.

6.3. Mitigation measures: Red throated diver, Fulmar, Manx Shearwater, Gannet, Cormorant, Shag, Common Scoter, Razorbill, Guillemot, Puffin, Shoveler, Little grebe

No reconnaissance surveys are proposed to be conducted within any SPA. However, it is noted that the proposed survey area abuts the Seas off Wexford SPA and is within close proximity (1.2-13.5km) of Cork Harbour SPA, Helvick Head to Ballyquin SPA, Mid-Waterford Coast SPA and Saltee Islands SPA.

To minimise the potential for underwater noise related disturbance or displacement on the diving seabirds associated these SPAs, the mitigation detailed below is proposed.

- The project MMO will also have suitable ornithological expertise in the identification of diving seabirds.
- Where the MMO observes a significant cluster of actively fishing, diving birds in the survey pathway, within 500 m of the vessel and within a 500m buffer zone of an SPA, the survey route will be modified to aim to maintain a 500m buffer distance from the diving birds

6.4. Mitigation: In-combination effects

Sections 6.1 to 6.3 set out the proposed mitigation to avoid the potential for likely significant effects as a result of:

- Disturbance from underwater noise: Possible temporal impacts on Marine Mammals and Birds
- Disturbance & displacement by underwater noise: Possible temporal impacts on Birds.

As the identified projects (listed in Table 3) are likely to result in the same or very similar underwater noise/disturbance effects, the implementation of the proposed mitigation will act to eliminate any potential for in-combination effects on the qualifying interests and special conservation interests of European sites within the Zone of Influence of the project.

However, it is recommended that elements of the proposed project, that result in introduction of underwater noise into the marine environment, should not occur simultaneously with any underwater noise inducing element of the additional projects listed in Table 3, should they also be in receipt of a MUL or MAC.

Operational planning will also consider the identified fisheries sensitivities, including advance communication with fisheries stakeholders and care of biological sensitivities.

7. Transboundary effects

Transboundary effects relate to the likelihood of significant effects on a site which is part of the Natura 2000 network but lies outside our national boundaries. Since 1 January 2021 nature conservation areas in the UK (including Northern Ireland) are no longer part of the Natura 2000 network (OPR, 2021).

The ZoI of the proposed project has been estimated and all European sites with the potential for project related impacts have been assessed, including *ex-situ* effects. This process and the subsequent assessment did not identify any potential for transboundary effects.

8. Residual impacts

No residual impacts of the proposed project have been identified or are considered possible.

9. Natura Impact Statement Conclusion

This assessment is based on complete, precise and definitive findings in the light of the best scientific knowledge. It objectively concludes that provided the mitigation measures described in this document are fully implemented, **no adverse effect on the integrity** of any European site will occur.

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