



MERC Consultants
environmental and conservation services

Natura Impact Statement

Uisce Éireann South Cork Strategic Model

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1. Introduction

Uisce Éireann wish to conduct a strategic modelling study of water currents along a section of the South Cork coast. The study requires the deployment of static Acoustic Doppler Current Profilers (ADCPs) within the study area (see Figure 1) to provide the required modelling data. Ancillary instruments, to collect salinity and temperature data, may also be contained within the trawl resistant frames in which the ADCPs will be deployed. The project also includes vessel-based assessments of water currents and bathymetry using a combination of vessel mounted ADCPs, single-beam, multibeam and LiDAR surveys, and potentially, the deployment of tidal gauges.

Supporting Information for Screening for Appropriate Assessment (SISAA) of the proposed project was prepared (MERC, 2024). The SISAA concluded that, in the absence of mitigation, it could not be excluded on the basis of objective scientific information, that the proposed project might have a significant effect on a number of European Sites. Accordingly, it was considered that an Appropriate Assessment of the proposed project is required.

Based on this conclusion, and the appropriate assessment screening carried out by MARA, this report represents a Natura Impact Statement (NIS) for the proposed project.

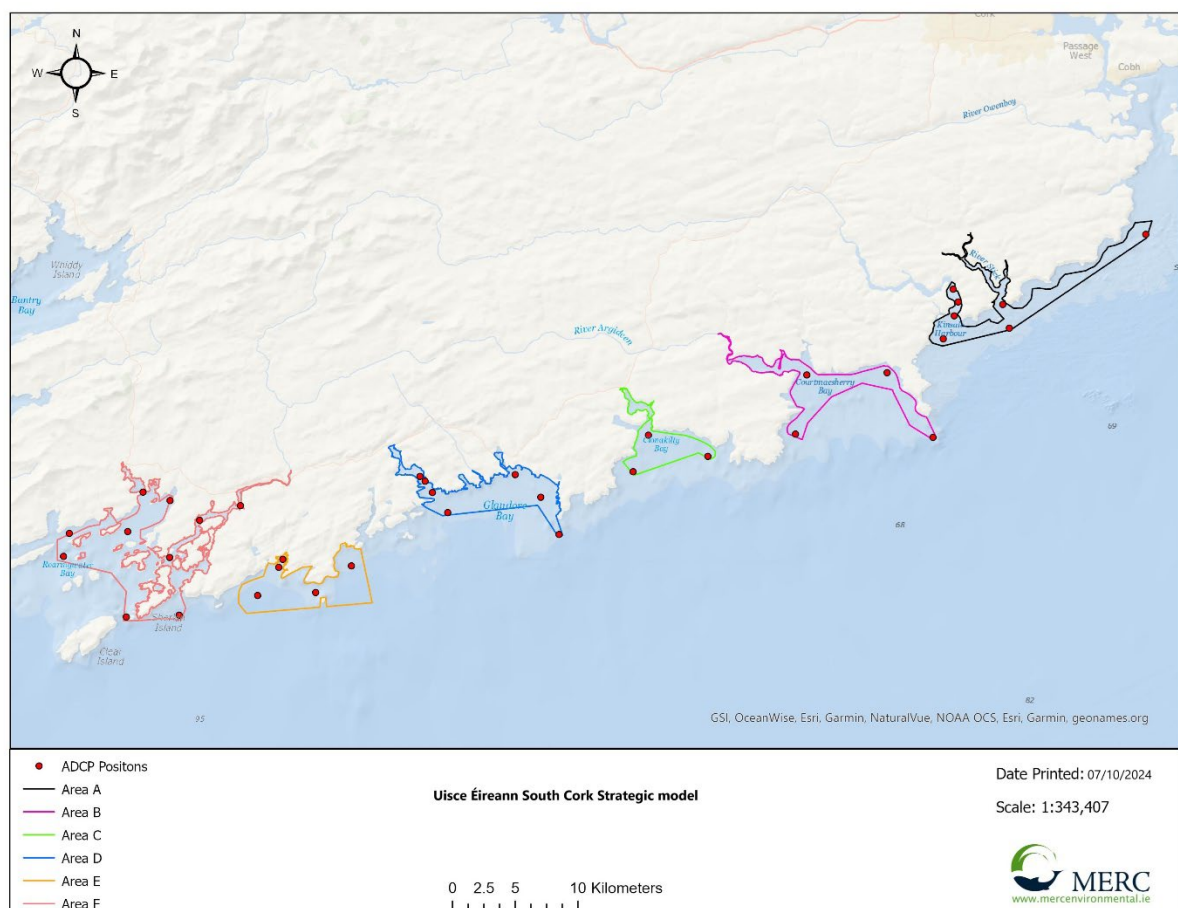


Figure 1. Survey areas and ADCP locations

2. Statement of authority

This report was prepared by MERC Consultants. MERC are a specialist marine ecological survey and consultancy firm. Core staff have more than 60 years 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 preparing the NPWS national monitoring of marine Annex I habitats for compliance under Article 17 of the EU Habitats Directive in the period 2015-2019. In this context MERC were responsible for the assessment and reporting of marine Annex I habitats in Ireland and were the authors of all Article 17 reports and overarching site monitoring reports. MERC are currently engaged in conducting surveys and preparing the relevant reports for the current (2022-2025) monitoring cycle.

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.

3. 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;
- 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.
- JNCC. 2023. JNCC guidance for the use of Passive Acoustic Monitoring in UK waters for minimising the risk of injury to marine mammals from offshore activities. JNCC, Peterborough.

4. Screening conclusion

The SISAA report (MERC, 2024) concluded that in the absence of mitigation, it cannot be excluded on the basis of objective scientific information, following the preparation of the SISAA, that the proposed project, individually or in combination with other projects, will have a significant effect on the following European Sites:

- Roaringwater Bay and Islands SAC (000101) QIs: Harbour Porpoise [1351], Grey Seal [1364], Otter [1355]
- Clonakilty Bay SPA (004081) – *wintering waterbirds including Shelduck, Dunlin, Black-tailed Godwit, Curlew*
- Courtmacsherry Bay SPA (004219) – *wintering waterbirds and Wetlands & Waterbirds [A999]*

A number of additional SACs and SPAs located within the Management Units (MUs) for Harbour Porpoise, Grey Seal or Harbour Seal, or within relevant foraging ranges, were taken forward to the NIS in accordance with MARA policy. However, it should be noted that the SISAA did not identify the potential for Likely Significant Effects (LSEs) on the conservation objectives of these sites.

These additional sites included:

- Saltee Islands SAC
- Slaney River Valley SAC
- Kenmare River SAC
- Glengarriff Harbour and Woodland SAC
- Blasket Islands SAC
- Lambay Island SAC
- Lower River Shannon SAC
- West Connacht Coast SAC
- Duvillaun Islands SAC
- Rockabill to Dalkey Island SAC
- Slyne Head Islands SAC
- Inishbofin and Inishshark SAC
- Slyne Head Peninsula SAC

A number of French SACs and four additional areas of the UK (outside of the Natura 2000 network) were also considered as per MARA policy where they fall within the broad MU range for harbour porpoise, grey seal or bottlenose dolphin, but the SISAA did not identify potential for LSEs on their conservation objectives. Having conducted Screening for Appropriate Assessment, MARA considered the Natura 2000 sites listed in Table 1. Qualifying Interests screened in by MARA are shown in bold.

Table 1. Identification of relevant European sites, their qualifying interests and site-specific conservation objectives. Bold indicates QI screened in. (Table after MARA 06/11/2025).

European site & site code	Distance from proposed MUL area (km)	List of Qualifying Interests	Connections (Source-pathway receptor)	European Site Screened in	Site-specific conservation objectives
SACs					
Courtmacsherry Estuary SAC [001230]	Within MUL Area	<p>Estuaries [1130]</p> <p>Mudflats and sandflats not covered by seawater at low tide [1140]</p> <p>Annual vegetation of drift lines [1210]</p> <p>Perennial vegetation of stony banks [1220]</p> <p>Salicornia and other annuals colonising mud and sand [1310]</p> <p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330]</p> <p>Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</p> <p>Embryonic shifting dunes [2110]</p> <p>Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</p> <p>Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</p>	No	No	NPWS (2014) Conservation Objectives: Courtmacsherry Estuary SAC [001230]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Clonakilty Bay SAC [000091]	Within MUL Area	Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150]	No	No	NPWS (2014) Conservation Objectives: Clonakilty Bay SAC [000091]. Version 2.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Kilkeran Lake and Castlefreke Dunes SAC [001061]	Within MUL Area	Coastal lagoons [1150] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]	No	No	NPWS (2016) Conservation Objectives: Kilkeran Lake and Castlefreke Dunes SAC [001061]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Myross Wood SAC [001070]	Within MUL Area	<i>Vandenboschia speciosa</i> (Killarney Fern) [6985]	No	No	NPWS (2020) Conservation Objectives: Myross Wood SAC [001070]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Castletownshend SAC [001547]	<5km	<i>Vandenboschia speciosa</i> (Killarney Fern) [6985]	No	No	NPWS (2020) Conservation Objectives: Castletownshend SAC [001547]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Lough Hyne Nature Reserve and Environs SAC [000097]	Within MUL Area	Large shallow inlets and bays [1160] Reefs [1170] European dry heaths [4030] Submerged or partially submerged sea caves [8330] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) [91E0]	No	No	NPWS (2014) Conservation Objectives: Lough Hyne Nature Reserve and Environs SAC [000097]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Roaringwater Bay and Islands SAC [000101]	Within MUL Area	<i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Halichoerus grypus</i> (grey Seal) [1364]	Yes – possible disturbance and displacement from underwater noise from bathymetry survey activities	Yes	NPWS (2011) Conservation Objectives: Roaringwater Bay and Islands SAC [000101]. Version 2.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
		<i>Lutra lutra</i> (Otter) [1355]	Yes - possible visual and above water noise disturbance and displacement from survey vessel activity		
		Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030] Submerged or partially submerged sea caves [8330]	No		

Barley Cove to Ballyrisode Point SAC [001040]	<5km	Mudflats and sandflats not covered by seawater at low tide [1140] Perennial vegetation of stony banks [1220] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] European dry heaths [4030] <i>Petalophyllum ralfsii</i> (Petalwort) [1395]	No	No	NPWS (2024) Conservation Objectives: Barley Cove to Ballyrisode Point SAC [001040]. Version 2.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Three Castle Head to Mizen Head SAC [000109]	10-25km	Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030]	No	No	NPWS (2016) Conservation Objectives: Three Castle Head to Mizen Head SAC [000109]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Dunbeacon Shingle SAC [002280]	5-10km	Perennial vegetation of stony banks [1220]	No	No	NPWS (2017) Conservation Objectives: Dunbeacon Shingle SAC [002280]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Reen Point Shingle SAC [002281]	10-25km	Sandbanks which are slightly covered by sea water all the time [1110]	No	No	NPWS (2017) Conservation Objectives: Reen Point Shingle SAC [002281]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Farranamanagh Lough SAC [002189]	10-25km	Coastal lagoons [1150] Perennial vegetation of stony banks [1220]	No	No	NPWS (2018) Conservation Objectives: Farranamanagh Lough SAC [002189]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Sheep's Head SAC [000102]	10-25km	Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] European dry heaths [4030] <i>Geomalacus maculosus</i> (Kerry Slug) [1024]	No	No	NPWS (2021) Conservation Objectives: Sheep's Head SAC [000102]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Great Island Channel SAC [001058]	10-25km	Mudflats and sandflats not covered by seawater at low tide [1140] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]	No	No	NPWS (2014) Conservation Objectives: Great Island Channel SAC [001058]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Glengarriff Harbour and Woodland SAC [000090]	10-25km	<i>Phoca vitulina</i> (Harbour Seal) [1365]	Yes – possible disturbance and displacement from underwater noise from bathymetry survey activities		NPWS (2015) Conservation Objectives: Glengarriff Harbour and Woodland SAC [000090]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
		Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) [91E0] <i>Geomalacus maculosus</i> (Kerry Slug) [1024] <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303] <i>Lutra lutra</i> (Otter) [1355]	No		
Kenmare River SAC [002158]	10-25km	<i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Phoca vitulina</i> (Harbour Seal) [1365]	Yes – possible disturbance and displacement from underwater noise from bathymetry survey activities	Yes	NPWS (2013) Conservation Objectives: Kenmare River SAC [002158]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

		<p>Large shallow inlets and bays [1160]</p> <p>Reefs [1170]</p> <p>Perennial vegetation of stony banks [1220]</p> <p>Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]</p> <p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]</p> <p>Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</p> <p>Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</p> <p>Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</p> <p>European dry heaths [4030]</p> <p>Juniperus communis formations on heaths or calcareous grasslands [5130]</p> <p>Calaminarian grasslands of the <i>Violetalia calaminariae</i> [6130]</p> <p>Submerged or partially submerged sea caves [8330]</p> <p><i>Vertigo angustior</i> (Narrow-mouthed Whorl Snail) [1014]</p> <p><i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) [1303]</p> <p><i>Lutra lutra</i> (Otter) [1355]</p>	No		
Blasket Islands SAC [002172]	50-100km	<i>Phocoena phocoena</i> (Harbour Porpoise) [1351]	Yes – possible disturbance and displacement from underwater noise from bathymetry survey activities	Yes	NPWS (2014) Conservation Objectives: Blasket Islands SAC [002172].

		Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030] Submerged or partially submerged sea caves [8330] <i>Halichoerus grypus</i> (grey Seal) [1364]			
SPAs					
Sovereign Islands SPA [004124]	Within MUL Area	Cormorant (<i>Phalacrocorax carbo</i>) [A017]	Yes – possible disturbance and displacement from underwater noise from bathymetry survey activities	Yes	NPWS (2025) Conservation Objectives. Sovereign Islands SPA [004124]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Old Head of Kinsale SPA [004021]	Within MUL Area	Guillemot (<i>Uria aalge</i>) [A199]	Yes – possible disturbance and displacement from underwater noise from bathymetry survey activities	Yes	NPWS (2025) Conservation Objectives. Old Head of Kinsale SPA [004021]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

		Kittiwake (<i>Rissa tridactyla</i>) [A188]	Yes - Possible visual and above water noise disturbance and displacement from survey vessel activity		
Courtmacsherry Bay SPA [004219]	Within MUL Area	<p>Great Northern Diver (<i>Gavia immer</i>) [A003] Shelduck (<i>Tadorna tadorna</i>) [A048] Red-breasted Merganser (<i>Mergus serrator</i>) [A069] Wetland and Waterbirds [A999]</p> <p>Golden Plover (<i>Pluvialis apricaria</i>) [A140] Lapwing (<i>Vanellus vanellus</i>) [A142] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Common Gull (<i>Larus canus</i>) [A182] Wigeon (<i>Mareca penelope</i>) [A855]</p>	<p>Yes – possible disturbance and displacement from underwater noise from bathymetry survey activities. Possible visual and above water noise disturbance and displacement from survey vessel activity</p> <p>Yes - possible visual and above water noise disturbance and displacement from survey vessel activity</p>	Yes	NPWS (2014) Conservation Objectives. Courtmacsherry Bay SPA [004219]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Seven Heads SPA [004191]	Within MUL Area	Chough (<i>Pyrhocorax pyrrhocorax</i>) [A346]	No	No	NPWS (2025) Conservation Objectives. Seven Heads SPA [004191]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Clonakilty Bay SPA [004081]	Within MUL Area	Shelduck (<i>Tadorna tadorna</i>) [A048] Wetland and Waterbirds [A999]	Yes – possible disturbance and displacement from underwater noise from bathymetry survey activities. Possible visual and above water noise disturbance and displacement from survey vessel activity	Yes	NPWS (2014) Conservation Objectives. Clonakilty Bay SPA [004081].
		Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Curlew (<i>Numenius arquata</i>) [A160]	Yes - possible visual and above water noise disturbance and displacement from survey vessel activity		

Galley Head to Duneen Point SPA [004020]	Within MUL Area	Chough (<i>Pyrhcorax pyrrhcorax</i>) [A346]	No	No	NPWS (2025) Conservation Objectives. Galley Head to Duneen Point SPA [004020]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Sheep's Head to Toe Head SPA [004156]	Within MUL Area	Peregrine (<i>Falco peregrinus</i>) [A103] Chough (<i>Pyrhcorax pyrrhcorax</i>) [A346]	No	No	NPWS (2025) Conservation Objectives. Sheep's Head to Toe Head SPA [004156]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
Cork Harbour SPA [004030]	<5km	Cormorant (<i>Phalacrocorax carbo</i>) [A017] Wetland and Waterbirds [A999]	Yes – possible disturbance and displacement from underwater noise from bathymetry survey activities	Yes	NPWS (2014) Conservation Objectives. Cork Harbour SPA [004030]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

		Little Grebe (<i>Tachybaptus ruficollis</i>) [A004] Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] Grey Heron (<i>Ardea cinerea</i>) [A028] Shelduck (<i>Tadorna tadorna</i>) [A048] Teal (<i>Anas crecca</i>) [A052] Pintail (<i>Anas acuta</i>) [A054] Red-breasted Merganser (<i>Mergus serrator</i>) [A069] Oystercatcher (<i>Haematopus ostralegus</i>) [A130] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Lapwing (<i>Vanellus vanellus</i>) [A142] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Redshank (<i>Tringa totanus</i>) [A162] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Common Gull (<i>Larus canus</i>) [A182] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Common Tern (<i>Sterna hirundo</i>) [A193] Wigeon (<i>Mareca penelope</i>) [A855] Shoveler (<i>Spatula clypeata</i>) [A857]	No		
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Beara Peninsula SPA [004155]	10-25km	Fulmar (<i>Fulmarus glacialis</i>) [A009] Chough (<i>Pyrrhocorax pyrrhocorax</i>) [A346]	No	No	NPWS (2025) Conservation Objectives. Beara Peninsula SPA [004155]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
Ballycotton Bay SPA [004022]	10-25km	Teal (<i>Anas crecca</i>) [A052] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Lapwing (<i>Vanellus vanellus</i>) [A142] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Turnstone (<i>Arenaria interpres</i>) [A169] Common Gull (<i>Larus canus</i>) [A182] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Wetland and Waterbirds [A999]	No	No	NPWS (2014) Conservation Objectives. Ballycotton Bay SPA [004022]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

The Bull and The Cow Rocks SPA [004066]	25-50km	Storm Petrel (<i>Hydrobates pelagicus</i>) [A014] Gannet (<i>Morus bassanus</i>) [A016] Puffin (<i>Fratercula arctica</i>) [A204]	No	No	NPWS (2025) Conservation Objectives. The Bull and The Cow Rocks SPA [004066]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
Ballymacoda Bay SPA [004023]	25-50km	Teal (<i>Anas crecca</i>) [A052] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Lapwing (<i>Vanellus vanellus</i>) [A142] Sanderling (<i>Calidris alba</i>) [A144] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Redshank (<i>Tringa totanus</i>) [A162] Turnstone (<i>Arenaria interpres</i>) [A169] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Common Gull (<i>Larus canus</i>) [A182] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Wigeon (<i>Mareca penelope</i>) [A855] Wetland and Waterbirds [A999]	No	No	NPWS (2015) Conservation Objectives. Ballymacoda Bay SPA [004023]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

Helvick Head to Ballyquin SPA [004192]	25-50km	Cormorant (<i>Phalacrocorax carbo</i>) [A017] Peregrine (<i>Falco peregrinus</i>) [A103] Herring Gull (<i>Larus argentatus</i>) [A184] Kittiwake (<i>Rissa tridactyla</i>) [A188] Chough (<i>Pyrrhocorax pyrrhocorax</i>) [A346]	No	No	NPWS (2025) Conservation Objectives. Iveragh Peninsula SPA [004019]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
Iveragh Peninsula SPA [004019]	25-50km	Fulmar (<i>Fulmarus glacialis</i>) [A009] Peregrine (<i>Falco peregrinus</i>) [A103] Kittiwake (<i>Rissa tridactyla</i>) [A188] Guillemot (<i>Uria aalge</i>) [A199] Chough (<i>Pyrrhocorax pyrrhocorax</i>) [A346]	No	No	NPWS (2025) Conservation Objectives. Iveragh Peninsula SPA [004019]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
Deenish Island and Scariff Island SPA [004175]	50-75km	Fulmar (<i>Fulmarus glacialis</i>) [A009] Manx Shearwater (<i>Puffinus puffinus</i>) [A013] Storm Petrel (<i>Hydrobates pelagicus</i>) [A014] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Arctic Tern (<i>Sterna paradisaea</i>) [A194]	No	No	NPWS (2025) Conservation Objectives. Deenish Island and Scariff Island SPA [004175]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
Skelligs SPA [004127]	50-75km	Fulmar (<i>Fulmarus glacialis</i>) [A009] Manx Shearwater (<i>Puffinus puffinus</i>) [A013] Storm Petrel (<i>Hydrobates pelagicus</i>) [A014] Gannet (<i>Morus bassanus</i>) [A016] Kittiwake (<i>Rissa tridactyla</i>) [A188] Guillemot (<i>Uria aalge</i>) [A199] Puffin (<i>Fratercula arctica</i>) [A204]	No	No	NPWS (2025) Conservation Objectives. Skelligs SPA [004127]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

Puffin Island SPA [004003]	50-75km	Fulmar (<i>Fulmarus glacialis</i>) [A009] Manx Shearwater (<i>Puffinus puffinus</i>) [A013] Storm Petrel (<i>Hydrobates pelagicus</i>) [A014] Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] Razorbill (<i>Alca torda</i>) [A200] Puffin (<i>Fratercula arctica</i>) [A204]	No	No	NPWS (2025) Conservation Objectives. Puffin Island SPA [004003]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
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5. Assessment of Likely Significant Effects (LSEs)

Table 2 provides the European Sites screened in under MARA criteria, including relevant QIs/SCIs and the identified source–pathway–receptor connections.

Table 2. European Sites screened in, relevant QIs/SCIs and identified source–pathway–receptor connections

QI (Qualifying Interest)	European Site	Connection / Source–Pathway	Screened In	Site-Specific Conservation Objectives (NPWS)
Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	Roaringwater Bay & Islands SAC [000101]	Possible disturbance/displacement from underwater noise (bathymetry survey)	Yes	NPWS (2011) Conservation Objectives: Roaringwater Bay & Islands SAC
Grey Seal (<i>Halichoerus grypus</i>) [1364]	Roaringwater Bay & Islands SAC [000101]	Possible disturbance/displacement from underwater noise (bathymetry survey)	Yes	NPWS (2011) Conservation Objectives: Roaringwater Bay & Islands SAC
Otter (<i>Lutra lutra</i>) [1355]	Roaringwater Bay & Islands SAC [000101]	Possible visual/above-water noise disturbance and displacement from survey vessels	Yes	NPWS (2011) Conservation Objectives: Roaringwater Bay & Islands SAC
Harbour Seal (<i>Phoca vitulina</i>) [1365]	Glengarriff Harbour & Woodland SAC [000090]	Possible disturbance/displacement from underwater noise from bathymetry survey activities	Yes	NPWS (2015) Conservation Objectives: Glengarriff Harbour & Woodland SAC
Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	Kenmare River SAC [002158]	Possible disturbance/displacement from underwater noise (bathymetry survey)	Yes	NPWS (2013) Conservation Objectives: Kenmare River SAC
Harbour Seal (<i>Phoca vitulina</i>) [1365]	Kenmare River SAC [002158]	Possible disturbance/displacement from underwater noise (bathymetry survey)	Yes	NPWS (2013) Conservation Objectives: Kenmare River SAC
Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	Blasket Islands SAC [002172]	Possible disturbance/displacement from underwater noise (bathymetry survey)	Yes	NPWS (2014) Conservation Objectives: Blasket Islands SAC [002172].
Cormorant (<i>Phalacrocorax carbo</i>) [A017]	Sovereign Islands SPA [004124]	Possible disturbance/displacement from underwater noise (bathymetry survey)	Yes	NPWS (2025) Conservation Objectives: Sovereign Islands SPA
Guillemot (<i>Uria aalge</i>) [A199]	Old Head of Kinsale SPA [004021]	Possible disturbance/displacement from underwater noise (bathymetry survey)	Yes	NPWS (2025) Conservation Objectives: Old Head of Kinsale SPA
Kittiwake (<i>Rissa tridactyla</i>) [A188]	Old Head of Kinsale SPA [004021]	Possible visual/above-water noise disturbance from survey vessels	Yes	NPWS (2025) Conservation Objectives: Old Head of Kinsale SPA
Waterbirds & Wetlands [A999] Great Northern Diver [A003], Shelduck [A048], Red-breasted Merganser [A069],	Courtmacsherry Bay SPA [004219]	Possible disturbance and displacement from underwater noise from bathymetry survey activities. Possible visual and above water noise disturbance and displacement from survey vessel activity.	Yes	NPWS (2014) Conservation Objectives: Courtmacsherry Bay SPA

(Golden Plover [A140], Lapwing [A142], Dunlin [A149], Black-tailed Godwit [A156], Bar-tailed Godwit [A157], Curlew [A160], Black-headed Gull [A179], Common Gull [A182], Wigeon [A855])	Courtmacsherry Bay SPA [004219]	Possible visual/above-water noise disturbance	Yes	NPWS (2014) Conservation Objectives: Courtmacsherry Bay SPA
Shelduck (<i>Tadorna tadorna</i>) [A048]	Clonakilty Bay SPA [004081]	Underwater noise disturbance; above-water vessel disturbance	Yes	NPWS (2014) Conservation Objectives: Clonakilty Bay SPA
Wetlands & Waterbirds [A999]	Clonakilty Bay SPA [004081]	Underwater noise disturbance; RB possible visual/above-water vessel disturbance	Yes	NPWS (2014) Conservation Objectives: Clonakilty Bay SPA
Cormorant (<i>Phalacrocorax carbo</i>) [A017]	Cork Harbour SPA [004030]	Possible disturbance/displacement from underwater noise	Yes	NPWS (2014) Conservation Objectives: Cork Harbour SPA
Wetlands & Waterbirds [A999]	Cork Harbour SPA [004030]	Possible disturbance/displacement from underwater noise	Yes	NPWS (2014) Conservation Objectives: Cork Harbour SPA

Summary of LSEs

Marine mammals — underwater noise

- Harbour Porpoise – Roaringwater Bay & Islands SAC
Possible disturbance or temporary displacement from underwater noise generated by bathymetry surveys.
- Grey Seal – Roaringwater Bay & Islands SAC
Possible disturbance or displacement due to underwater acoustic output.
- Harbour Seal – Glengarriff Harbour & Woodland SAC
Potential disturbance or displacement linked to underwater noise (bathymetry).
- Harbour Porpoise – Kenmare River SAC
Possible behavioural disturbance or short-term avoidance due to acoustic survey noise.
- Harbour Seal – Kenmare River SAC
Possible disturbance or displacement from underwater survey noise.
- Harbour Porpoise – Blasket Islands SAC
Risk of disturbance or temporary displacement from bathymetry survey noise.

Otter — above-water disturbance

- Otter – Roaringwater Bay & Islands SAC
Potential disturbance or displacement from visual and above-water vessel noise (underwater pathway uncertain/limited).

Breeding seabirds — noise & visual disturbance

- Cormorant – Sovereign Islands SPA
Potential displacement from underwater noise associated with bathymetric surveys.
- Guillemot – Old Head of Kinsale SPA
Risk of disturbance or displacement from underwater survey noise.
- Kittiwake – Old Head of Kinsale SPA
Susceptible to visual disturbance and above-water vessel noise, leading to temporary displacement.

Wintering waterbirds — underwater noise + visual disturbance

- Waterbirds & Wetlands (A999) – Courtmacsherry Bay SPA
Potential disturbance from underwater noise and above-water vessel presence.
- Listed waders/gulls (Golden Plover, Lapwing, Dunlin, Black-tailed/Bar-tailed Godwit, Curlew, Black-headed & Common Gull, Wigeon) – Courtmacsherry Bay SPA
Risk of visual/above-water disturbance causing temporary displacement.
- Shelduck – Clonakilty Bay SPA
Possible disturbance from underwater noise and vessel activity.
- Waterbirds & Wetlands (A999) – Clonakilty Bay SPA
Underwater noise; potential for additional above-water disturbance (RB note reflected).
- Cormorant – Cork Harbour SPA
Possible disturbance/displacement from underwater noise.
- Waterbirds & Wetlands (A999) – Cork Harbour SPA
Possible disturbance/displacement from underwater noise.

Mitigation is proposed (Section 6) to ensure the proposed surveys do not give rise to significant effects on any European site.

5.1 Potential for In-combination effects

There are a total of 3 projects, listed below (Table 3), following MARA's criteria for consideration of in-combination effects (MARA MAC and MUL applications and consents, Foreshore licences, An Coimisiún Pleanála map viewer, Department of Agriculture, Food and the Marine Aquaculture Viewer (AQUAMIS), Cork County Council Planning Systems, EPA authorisations, etc. Relevant projects, which may contribute to underwater noise in the receiving environment within the CESS and the CETS were identified. These projects may act in combination with the underwater noise resulting from the proposed project if they occur simultaneously.

Table 3. Potential projects for in-combination effects.

Application Ref.	Project description	Distance from proposed MUL area (km)	Project Status
MUL230039	UCC – marine survey activities	Overlap	Determined
MUL230031	Amazon MCS Ireland Ltd. – marine survey activities	Overlap	Determined
MUL240036	Eirgrid – marine survey activities	Overlap	Determined

The following Plans were also considered

- The climate Action plan 2024
- Water Action plan 2024
- Cork Development plan 2022-228
- Uisce Éireann Regional water Resource Plan-south west

Cumulative Assessment and AA Considerations

The above plans and projects have the potential for cumulative disturbance through overlapping vessel operations and short-term increases in acoustic output. However, each has proposed measures to mitigate adverse effects resulting from disturbance and/or the introduction of noise into the marine environment consistent with NPWS (2014) and JNCC (2023) guidance where appropriate to the project or plan.

Where spatial or temporal overlap could occur, coordination of survey timing and adherence to standard mitigation (soft-start, MMO/PAM protocols, vessel-speed and standoff controls) will ensure that cumulative exposure remains below behavioural-disturbance thresholds for marine mammals and waterbirds.

However, *potential* in-combination effects cannot be fully excluded in the absence of mitigation. Therefore, in line with the precautionary principle, the implementation of the mitigation measures detailed in section 6 will prevent any adverse effect on the integrity of European sites, in view of their conservation objectives. Mitigation to address the potential for in-combination impacts is proposed in section 6.5.

6. Mitigation measures

6.1 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.

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. A 500m zone is considered appropriate as empirical evidence¹ by the authors of this report has demonstrated that seals do not abandon their haul out sites unless approached within less than 200m of the site.

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 Ramp-up 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.

¹ Surveys, conducted on behalf of Bord Iascaigh Mhara, of seal disturbance at haul out sites as a result of fishing activity (potting) at haul out sites in Roaringwater Bay in 2015.

- (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 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 is also proposed for grey/ harbour seal.

In addition, it is proposed that the survey vessel should not approach haul out sites for grey/ harbour seal closer than 100m as observed by the MMO. It should be noted that the survey vessel will be moving through the intertidal area during high water. At this stage, seals will normally have abandoned their intertidal haul out sites during this timeframe due to the tidal state.

6.3 Wintering waterbirds

Clonakilty Bay SPA, Courtmacsherry Bay SPA and Cork Harbour SPA are designated for a range of wintering water birds. Vessel operations close to intertidal foraging habitats for wintering waterbirds within these sites should not take place within 50 meters of the Low water mark of these habitats during the months of September through March.

6.4 Breeding seabirds – Old Head of Kinsale SPA, Sovereign Islands SPA, Courtmacsherry Bay

Breeding Guillemot (*Uria aalge*) and Kittiwake (*Rissa tridactyla*) may be sensitive to disturbance from vessel activity and underwater noise associated with bathymetry surveys. The following measures will avoid disturbance:

Seasonal avoidance:

No survey operations to take place within 500 m of the Old Head cliffs during the core breeding season (April–July inclusive).

Stand-off distance (all seasons):

Maintain a minimum 500 m distance from the cliff base and any visible seabird aggregations.

Vessel behaviour:

Avoid abrupt manoeuvres and minimise engine noise where surveys occur within 500 m of breeding cliffs or rafting birds.

Route planning:

Plan vessel routes to avoid passing directly beneath nesting cliffs or through areas where birds are rafting, where safe alternatives exist.

Timing of acoustic work:

Schedule bathymetry operations closest to the Old Head outside the breeding period, where practicable.

Visual monitoring:

The MMO will note the presence of seabird aggregations and advise a temporary delay if birds are within the 500 m stand-off zone.

6.5 Otter (*Lutra lutra*)

To avoid the potential for disturbance to otters resulting from possible visual and above water noise disturbance and displacement from survey vessel activity. The following mitigation is proposed.

Vessel buffer zones

Remain at least 50 m from the shoreline where practical. The only area where distances are less than 50 m is the subtidal channel of the River Ilan, adjacent Old court bridge. The MMO will be vigilant to the possible presence of otters in this area.

Vessel behaviour:

Avoid abrupt manoeuvres and minimise engine noise where surveys occur within 200 m of shoreline.

General Disturbance:

Avoid work during dawn and dusk when otters are most active.

MMO observance

The MMO will pause operations if otters are detected near by.

6.6 In-combination effects

Three projects and four plans listed in section 5.5 above, may result in the same or very similar underwater noise/disturbance effects. It is therefore recommended that the proposed project should

not take place during the same time period as any noise inducing elements of any of these four projects.

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. The SISAA did not identify any potential for impact on *ex-situ* sites, due to the scale and scope of the project and the likely magnitude of any effects. Further, it is considered that the mitigation proposed in this document would similarly avoid any negative effects on the conservation of these *ex-situ* sites should they have been identified.

Therefore, no transboundary effects are considered possible.

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 recommended in this document are fully implemented, **no adverse effect on the integrity** of any European site will occur.

10. References

- Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).
- Directive 2009/147/EC on the conservation of wild birds (Birds Directive).
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- European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011).
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