MARA
An tÚdarás Rialála Limistéir Mhuirí
Maritime Area Regulatory Authority

Assessment, Research and Data Unit Appropriate Assessment Report and Determination for a Maritime Usage Licence			
To:	Maritime Authorisations Unit	**From:**	Dr. Alison McCarthy Senior Marine Advisor
Date	02/07/2025	**Maritime Usage Licence Application No:**	MUL240036
Approved by:		John Evans, Director of ARD Unit	
Applicant:		EirGrid, The Oval, 160 Shelbourne Road, Ballsbridge, Dublin 4	
Type of maritime usage in accordance with Schedule 7 of the Maritime Area Planning Act, 2021:		*(3) Marine environmental surveys for the purposes of site investigation or in support of an application under Part XXI of the Act of 2000.*	
Location of proposed Maritime Usage:		Various sites along the south coast of Ireland and within the South Coast Designated Maritime Area Plan	
Licence application received:		11/11/2024	
Section 117(6)(a) notice requesting Natura Impact Statement issued:		06/05/2025	
Natura Impact Statement received:		09/05/2025	
Further information requests issued:		29/11/2024, 24/01/2025, 11/04/2025	
Responses to further information requests received:		03/12/2024, 27/01/2025, 15/04/2025	
Public consultation:		20/05/2025 to 23/06/2025	
Submissions from the public received:		Four	
Comments from public bodies received:		Seven	

Contents

Statement of Authority

This Appropriate Assessment Report has been undertaken by the Assessment, Research and Data (ARD) Unit within the Maritime Area Regulatory Authority (MARA), a specialist unit with appropriate expertise in environmental assessment.

1 Introduction

1.1 Background

EirGrid (the applicant) applied to the Maritime Area Regulatory Authority (MARA) for a maritime usage licence (MUL) on 11/11/2024 under the Maritime Area Planning Act 2021 as amended (the MAP Act) to undertake marine environmental surveys for the purposes of site investigation to inform the engineering design and environmental assessments for two proposed offshore substations (OSS) and potential offshore transmission cable corridors from the OSS towards seven potential landfall zones. This maritime usage activity falls under Schedule 7(3) of the MAP Act '*Marine environmental surveys for the purposes of site investigation or in support of an application under Part XXI of the Act of 2000'.* The two proposed OSS will be located in Area A (Tonn Nua) as identified in the South Coast Designated Maritime Area Plan for Offshore Renewable Energy (SC-DMAP)[1]. The potential landfall zones are in coastal areas in counties Cork, Waterford and Wexford. The site investigation activities are integral to the delivery of offshore renewable energy projects within the SC-DMAP and are required as part EirGrid's Powering Up Offshore South Coast project.

1.2 Legislative Context

Part 5, Section 117 of the MAP Act sets out the requirements for MARA to undertake appropriate assessment in respect of a MUL application. The EU Habitats Directive (Council Directive 92/43/EC) and the Birds Directive (2009/147/EC) are transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011, as amended (the Regulations) and by Part XAB of the Planning and Development Act 2000. The requirements for screening for appropriate assessment and for undertaking appropriate assessment are set out in Regulation 42 of the Regulations. Where appropriate assessment is required to be undertaken on a MUL application, a minimum 30-day public consultation period is required on the application and the Natura Impact Statement (NIS) under Section 117 of the MAP Act and in line with Regulation 42 of the Regulations.

1.3 Screening for Appropriate Assessment

MARA published an appropriate assessment screening determination on 06/05/2025. The determination concluded that the proposal by EirGrid to carry out marine environmental surveys for the purposes of site investigation will require appropriate assessment, as it cannot be excluded, on the basis of objective scientific information, that the proposed activities,

[1] The South Coast Designated Maritime Area Plan for Offshore Renewable Energy (SC-DMAP).

individually or in combination with other plans or projects, will have a significant effect on a European Site(s). Following MARA's screening determination, the applicant submitted a Natura Impact Statement, dated 09/05/2025. The applicant undertook a period of public consultation on the application and the NIS from 20/05/2025 to 23/06/2025. MARA consulted with a number of public bodies in tandem with the public consultation period. These are detailed in the accompanying Maritime Usage Licence Assessment Report prepared by the ARD Unit.

2 Location and Proposed Maritime Usage

2.1 Site Location and Characteristics

The MUL application area, referred to by the applicant as the Area of Interest (AoI), is shown on Figure 1. The application area is 2,333 km^2 from the high-water mark (HWM) of coastal areas out into the Celtic Sea[2] and is almost entirely within the SC-DMAP. The western extent of the area is at Ringroe in Co. Cork, and it extends eastwards to Cullenstown in Co. Wexford. As described in the application, the site investigation activities will be confined to a much smaller area within the overall MUL application area, covering three potential locations in which the two OSS will be located, the potential cable route corridors and the seven potential landfall zones, as shown on Figure 1. The width of the cable survey corridor is 1,000 m. The locations and site characteristics of the proposed landfall locations are shown on Table 1.

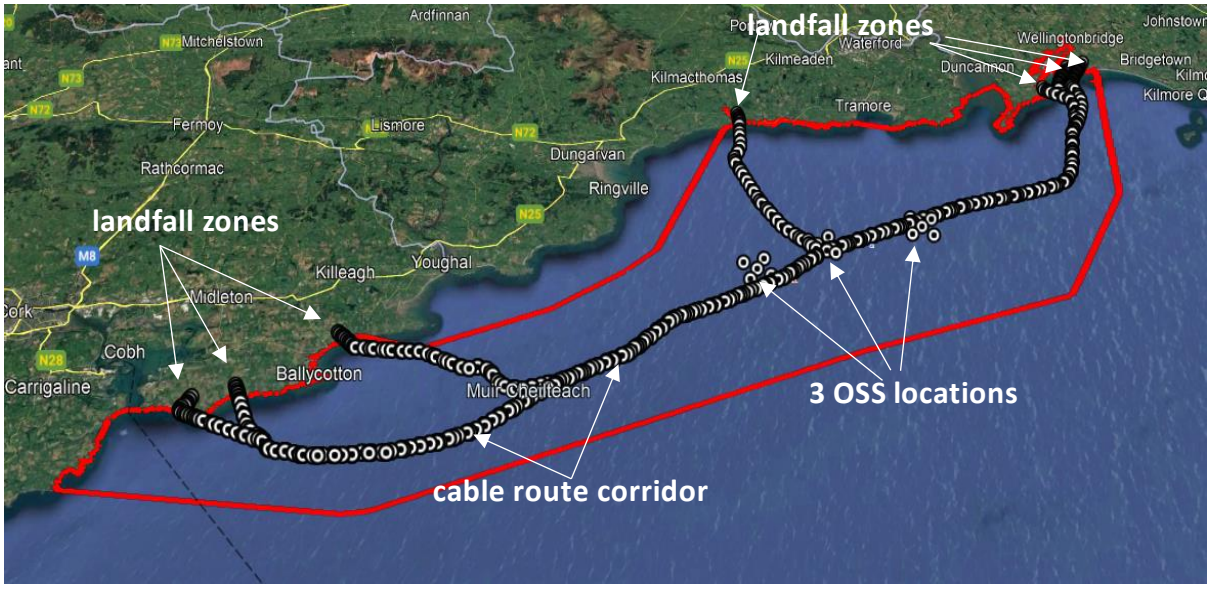

Figure 1: The MUL application area is shown in red and the areas in which the site investigation activities are proposed to take place are shown as white and black circles. The potential landfall locations are also indicated.

Water depths in the MUL application area range from 0–70 m. There is a wide range of habitat types described from this extensive area. Table 1 shows the general site

[2] Area defined according to ETRS_1989_UTM Zone 29N

characteristics at the landfall zones, which are predominantly sandy beaches with rocks cobble and hard substrates (including biogenic reef). High current flows along the south coast of Ireland scour sediments to expose underlying rocks. As a result, from the coastal areas out to the 50 m depth contour the broad benthic habitat types are described as moderate to high energy infralittoral and circalittoral rock and biogenic reef. Interspersed in these habitats are pockets of moderate to high energy infralittoral and circalittoral sand, muddy sand and coarse sediment[3]. Generally, beyond the 50 m depth contour the broad habitat types are a patchy mosaic of deep circalittoral coarse sediment interspersed with deep circalittoral mud and sand in a moderate to high energy environment.

Table 1: Locations and site characteristics of the seven proposed landfall zones.

Proposed Landfall Zone	Location	Site Characteristics
Landfall zone A	Ballintra West, Ballintra East, Inch, Lahard, Co. Cork	Sand, rock and hard substrate and high energy infralittoral seabed
Landfall zone B	Ballybrangan, Ballycroneen West, Ballyrobin South, Co. Cork	Sand, rock and other hard substrate
Landfall zone C	Garryvoe Lower, Ballybutler, Ballycrenane, Co. Cork	Sand, cobble, high energy infralittoral seabed, rock and other hard substrate
Landfall zone D	Templeyvrick, Ballynasissala, Bunmahon, Ballynagigla, Knockmahon, Co. Waterford	Sand, cobble, rock and other hard substrate
Landfall zone E	Ramstown, Carinvan, Co. Wexford	sand, rock and other hard substrates with pockets of high energy circalittoral seabed
Landfall zone F	Bannow Bay, Co. Wexford	sand, rock and other hard substrates with pockets of high energy circalittoral seabed
Landfall zone G	Haggard, Blackhall, Ballymadder, Co. Wexford	sand, rock and other hard substrates with pockets of high energy circalittoral seabed

2.2 Description of the Proposed Maritime Usage

The proposed maritime usage activities, or site investigation activities, are detailed on Table 2. The applicant has applied for a five-year licence duration during which the proposed activities will take place over a phased basis. Geophysical surveys will be sequential with geotechnical surveys, as the results of the first will inform the latter. The remaining surveys could take place at any time during the licence period, though the applicant notes that it is intended to complete the majority of the works in the first two years. The landfall surveys will be during daylight hours and subject to tidal conditions. Vessel details are not yet available,

[3] Ireland's Marine Atlas.

but the applicant has noted that on a precautionary basis a maximum of eight surveys vessels could be operating at any one time.

Table 2: Summary of the proposed site investigation activities, along with the associated survey area within the overall MUL application area, the estimated timeframe during which the surveys will take place and the maximum quantity of samples (where applicable).

Proposed site investigation activities & survey area	**Estimated timeframe for activities & maximum quantity (where relevant)**
Coastal geophysical surveys (land-based, below the High-Water Mark (HWM)). At seven potential landfall zones. • Ground penetrating radar and/or seismic refraction • Topographical surveys including Unmanned Aircraft Systems (UAS), Global Positioning Systems (GPS) and Global Navigation Satellite Systems (GNSS) devices	To take place at any time during licence period n/a
Marine geophysical surveys (undertaken from survey vessel(s)) Focussed on potential landfall zones, cable corridors and Tonn Nua area • Multi Beam Echosounder (MBES) • Sub-bottom profiler (SBP) including Ultra-High Resolution Seismic (UHRS) survey • Side Scan Sonar (SSS) – using Ultra-short baseline (USBL) positioning • Magnetometer – using USBL positioning	To take place at any time during licence period but ideally over first 2 yrs. n/a
Coastal geotechnical surveys (undertaken on land below the HWM) At seven potential landfall zones. • Trial pit investigations, 2 m depth, up to 2 m^2 area, manual excavation or with mechanical backhoe, up to 6 trial pits at each landfall zone, trial pits will be excavated during a single tidal cycle.	To take place at any time during licence period but ideally over first 2 yrs. 42
Marine geotechnical surveys (undertaken from survey vessel(s) or jack-up barge (with 4 legs, each 3 m^2) towed by tug boat, or vehicle-mounted drilling spread when required. Focussed in potential cable corridors, potential OSS locations, and potential landfall zones. • Subtidal grab sampling (same campaign as included under environmental surveys) (0.1 m^2 grab, 0.5 m depth) • Vibrocore testing (~6 m depth, 75–120 mm diameter) • Borehole investigations (including downhole Cone Penetration Testing (CPT) and sampling (up to 100 m depth at OSS locations	To take place at any time during licence period but ideally over first 2 yrs. 420 276 21 inshore 8 OSS locations

and up to 15 m depth at cable corridor and landfall zones). Borehole drilling head outside diameter 250 mm • Shallow CPT (~6 m depth) • Deep Drive CPT (~15 m depth)	276 16
Metocean and marine mammal acoustic device deployment (deployed by vessel and moored to seabed). At potential OSS locations. • Metocean buoy • Acoustic Doppler Current Profiler (ADCP) • Marine Mammal Static Acoustic Monitoring (SAM)	Deployed for approx. 1 year. To take place at any time during licence period 2 3 16 locations (4 SAMS in 4 areas)
Coastal environmental surveys (land-based below the HWM). At potential landfall zones, cable corridor or OSS locations. • Ecological walkover surveys (habitats, bat activity and roost assessment, mammal surveys including otter) • Ornithological vantage point surveys • Marine mammal vantage point surveys • Intertidal core sampling (0.01 m^2 core size)	To take place at any time during licence period apart from core sampling ideally in first 2 yrs. n/a n/a n/a 126 core
Marine environmental surveys (undertaken from survey vessel(s)). At potential landfall zones, cable corridor or OSS locations. • Drop down video (DDV) and/or Remotely Operated Vehicle (ROV) surveys • Grab sampling (same campaign as under the marine geotechnical surveys) • Ornithological surveys (boat-based) • Marine mammal surveys (boat-based) including passive acoustic monitoring (PAM) • Water sampling (for conductivity, temperature and depth)	To take place at any time during licence period n/a 420 (subtidal) n/a monthly surveys for 2 yrs n/a
Archaeological surveys. At potential landfall zones, OSS areas, and cable corridor and Tonn Nua area. • Intertidal survey • Coastal and marine geophysical surveys (same campaign as described under coastal and marine geophysical surveys) • Sampling • Dive survey • Wade survey • Monitoring	To take place at any time during licence period but ideally over first 2 yrs. n/a

Noise surveys. At potential landfall zones. • Unattended and attended monitoring stations	To take place at any time during licence period Up to 5 locations at each landfall zone
Shipping and navigation survey. Within entire site location area. • Shore based visual surveys or vessel surveys (potentially in tandem with other surveys)	To take place at any time during licence period n/a
Unmanned aircraft systems (UAS)/drone surveys. At potential landfall zones.	To take place at any time during licence period n/a
Aerial surveys (birds and marine mammals). Within entire site location area.	To take place at any time during licence period n/a

3 European Sites and Qualifying Interests

3.1 Identification of European sites likely to be affected

Twenty-eight European Sites were screened in for appropriate assessment (AA) as part of MARA's appropriate assessment screening determination. This included 11 Special Areas of Conservation (SACs) and 17 Special Protection Areas (SPAs). These European sites, their Qualifying Interests (also referred to as Special Conservation Interests or SCIs for the SPA sites) and likely or potential source of impact as a result of the proposed site investigation activities are given in Table 4 below. The distances given in Table 4 are from the MUL application area which is the red line boundary shown on Figure 1. However, as noted, the survey activities will take place over a much smaller area within the MUL application area (see Figure 1). The potential source of impact identified at the screening stage and possible significance of those impacts on the Qualifying Interests (QIs) are summarised on Table 3.

Table 3: Potential direct and indirect impacts on the Qualifying Interests of European sites identified at screening stage and possible significance of those impacts.

Potential Impacts	**Possible significance of Potential impacts (duration, magnitude, etc.)**
Deterioration of water quality	An increase in suspended sediments from surveys or water pollution from survey vessels that would cause Annex I habitat degradation or impacts on migratory fish species, birds and marine mammals, or their prey species.
Loss of habitat area	Should intrusive surveys occur in Annex I habitat at a level that would lead to permanent damage to a significant percentage of the habitat area.

No

No

Yes

Yes – possible visual and above water noise disturb

Habitat degradation	Should intrusive surveys be at a level that would cause a permanent alteration in the community complexes within the Annex I habitat. Indirect impact of habitat degradation on species relying on the habitat for feeding and/or breeding (marine mammals, fish, otter, seabirds)
Disturbance and displacement from underwater noise	Potential for sound sources from survey activities to be at a level and duration that would cause a significant negative impact on marine mammals, otter, fish and seabirds.
Disturbance and displacement from above water noise, vibration, lighting and human presence	Potential for survey activities generating noise, vibration, artificial lighting and increased human presence or vessel activity to be at an intensity and duration that would cause significant disturbance to bird populations, marine mammals and otter.
Collision risk	If death or injury occurred at a level that could affect marine mammal populations.

Table 4: European sites and qualifying interests which were screened in for appropriate assessment along with potential source of impact and site-specific conservation objectives.

(Note: Where Site-specific Conservation Objective (SSCO) documents are not available from the NPWS, the SSCOs from the closest relevant European site are used instead.)

European Site & site code	Approx. distance from MUL application area (km)	List of Qualifying Interests (for SACs)	Potential source of impact	Site-specific conservation objectives
SACs				
Bannow Bay SAC [000697]	SAC within MUL area	**Estuaries [1130]** **Mudflats and sandflats not covered by seawater at low tide [1140]** **Annual vegetation of drift lines [1210]** **Perennial vegetation of stony banks [1220]** **Salicornia and other annuals colonising mud and sand [1310]** **Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]** **Mediterranean salt meadows (*Juncetalia maritimi*) [1410]** **Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*) [1420]** **Embryonic shifting dunes [2110]** **Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]** **Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]**	Potential for direct habitat damage (habitat loss) or habitat degradation from survey activities. Water quality deterioration from survey activities or survey vessels, leading to habitat degradation.	NPWS (2012) Conservation Objectives: Bannow Bay SAC 000697. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Hook Head SAC [000764]	SAC within MUL area	**Large shallow inlets and bays [1160]** **Reefs [1170]**	Potential for direct habitat damage (habitat loss) or habitat	NPWS (2025) Conservation Objectives: Hook Head SAC 000764. Version 2. National

		Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] ***Tursiops truncatus* (Common Bottlenose Dolphin) [1349]** ***Phocoena phocoena* (Harbour Porpoise) [1351]**	degradation from survey activities. Water quality deterioration from survey activity or survey vessels, leading to habitat degradation or impacts on marine mammals. Potential for disturbance and displacement of marine mammals from underwater noise from survey activities. Potential collision risk to marine mammals from survey vessels.	Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
River Barrow and River Nore SAC [002162]	SAC adjacent to MUL area	**Estuaries [1130]** **Mudflats and sandflats not covered by seawater at low tide [1140]** **Reefs [1170]** **Salicornia and other annuals colonising mud and sand [1310]** **Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]** **Mediterranean salt meadows (*Juncetalia maritimi*) [1410]** ***Petromyzon marinus* (Sea Lamprey) [1095]** ***Lampetra fluviatilis* (River Lamprey) [1099]** ***Alosa fallax fallax* (Twaite Shad) [1103]** ***Salmo salar* (Salmon) [1106]** ***Lutra lutra* (Otter) [1355]**	Water quality deterioration from survey activities or survey vessels, leading to habitat degradation, or impacts on migratory fish and otter. Potential for disturbance and displacement of migratory fish and otter from underwater and above water noise from the survey activities.	NPWS (2025) Conservation Objectives: River Barrow and River Nore SAC 002162. Version 2. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Lower River Suir SAC [002137]	12 km (upstream	***Petromyzon marinus* (Sea Lamprey) [1095]** ***Lampetra fluviatilis* (River Lamprey) [1099]** ***Alosa fallax fallax* (Twaite Shad) [1103]** ***Salmo salar* (Salmon) [1106]**	Water quality deterioration from survey activities or survey vessels,	NPWS (2017) Conservation Objectives: Lower River Suir SAC 002137. Version 1. National Parks and Wildlife Service,

	from MUL area)	***Lutra lutra* (Otter) [1355]**	leading to impacts on migratory fish and on otter prey species. Potential for disturbance and displacement of otter and migratory fish from above water and underwater noise from survey activities.	Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
Ballyteige Burrow SAC [000696]	adjacent to MUL area	**Estuaries [1130]** **Mudflats and sandflats not covered by seawater at low tide [1140]** **Coastal lagoons [1150]** **Salicornia and other annuals colonising mud and sand [1310]** **Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]** **Mediterranean salt meadows (*Juncetalia maritimi*) [1410]** **Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*) [1420]**	Water quality deterioration from survey activity or survey vessels, leading to habitat degradation.	NPWS (2014) Conservation Objectives: Ballyteige Burrow SAC 000696. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Saltee Islands SAC	3 km	**Mudflats and sandflats not covered by seawater at low tide [1140]** **Large shallow inlets and bays [1160]** **Reefs [1170]** **Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]** **Submerged or partially submerged sea caves [8330]** ***Halichoerus grypus* (Grey Seal) [1364]**	Water quality deterioration from survey activities or survey vessels, leading to habitat degradation, or impacts on seals. Potential for disturbance and displacement of seals from underwater and above water noise from the survey activities. Potential collision risk to marine mammals from survey vessels.	NPWS (2011) Conservation Objectives: Saltee Islands SAC 000707 and Saltee Islands SPA 004002. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Carnsore Point SAC	20 km	***Phocoena phocoena* (Harbour Porpoise) [1351]**	Potential for disturbance and displacement of Harbour porpoise from underwater noise from the survey activities. Water quality deterioration from survey activities or survey vessels, leading to impacts on Harbour porpoise or their prey. Potential collision risk to marine mammals from survey vessels.	NPWS (2024) Conservation Objectives: Carnsore Point SAC 002269. Version 2. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
Blackwater River (Cork/Waterford) SAC [002170]	8.5	***Petromyzon marinus* (Sea Lamprey) [1095]** ***Lampetra fluviatilis* (River Lamprey) [1099]** ***Alosa fallax fallax* (Twaite Shad) [1103]** ***Salmo salar* (Salmon) [1106]** ***Lutra lutra* (Otter) [1355]**	Potential for disturbance and displacement of migratory fish and otter from underwater and above water noise from the survey activities.	NPWS (2012) Conservation Objectives: Blackwater River (Cork/Waterford) SAC 002170. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Blackwater Bank SAC [002953]	37	***Phocoena phocoena* (Harbour Porpoise) [1351]**	Potential for disturbance and displacement of Harbour porpoise from underwater noise from the survey activities. Water quality deterioration from survey activities or survey vessels, leading to impacts on Harbour porpoise or their prey. Potential collision risk to marine mammals from survey vessels.	NPWS (2024) Conservation Objectives: Blackwater Bank SAC 002953. Version 3. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

Roaringwater Bay and Islands SAC [000101]	80	***Phocoena phocoena* (Harbour Porpoise) [1351]** ***Halichoerus grypus* (Grey Seal) [1364]**	Potential for disturbance and displacement of Harbour porpoise from underwater noise from the survey activities. Water quality deterioration from survey activities or survey vessels, leading to impacts on Harbour porpoise or their prey. Potential collision risk to marine mammals from survey vessels.	NPWS (2011) Conservation Objectives: Roaringwater Bay and Islands SAC 000101. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Slaney River Valley SAC [000781]	17	***Petromyzon marinus* (Sea Lamprey) [1095]** ***Lampetra fluviatilis* (River Lamprey) [1099]** ***Alosa fallax fallax* (Twaite Shad) [1103]** ***Salmo salar* (Salmon) [1106]** ***Lutra lutra* (Otter) [1355]** ***Phoca vitulina* (Harbour Seal) [1365]**	Water quality deterioration from survey activities or survey vessels, leading to impacts on migratory fish and on seal and otter prey species. Potential for disturbance and displacement of otter, seals and migratory fish from above water and underwater noise from survey activities. Potential collision risk to marine mammals from survey vessels.	NPWS (2011) Conservation Objectives: Slaney River Valley SAC 000781. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht
SPAs				
Keeragh Islands SPA [004118]	SPA within MUL area	**Cormorant (*Phalacrocorax carbo*) [A017]**	Disturbance and displacement from underwater noise from survey activities	NPWS (2022) Conservation objectives for Keeragh Islands SPA [004118]. First Order Site-specific Conservation Objectives

			Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to a reduction in prey species.	Version 1.0. Department of Housing, Local Government and Heritage. As only first order SSCOs are available for this site, the detailed SSCOs for the Sovereign Islands SPA, also protected for cormorant, have been considered. NPWS (2025) Conservation Objectives: Sovereign Islands SPA 004124. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
Seas off Wexford Coast SPA [004237]	SPA partly within MUL area	**Red-throated Diver (*Gavia stellata*) [A001]** **Fulmar (*Fulmarus glacialis*) [A009]** **Manx Shearwater (*Puffinus puffinus*) [A013]** **Gannet (*Morus bassanus*) [A016]** **Cormorant (*Phalacrocorax carbo*) [A017]** **Shag (*Phalacrocorax aristotelis*) [A018]** **Common Scoter (*Melanitta nigra*) [A065]** **Mediterranean Gull (*Larus melanocephalus*) [A176]** **Black-headed Gull (*Chroicocephalus ridibundus*) [A179]** **Lesser Black-backed Gull (*Larus fuscus*) [A183]** **Herring Gull (*Larus argentatus*) [A184]** **Kittiwake (*Rissa tridactyla*) [A188]** **Sandwich Tern (*Sterna sandvicensis*) [A191]** **Roseate Tern (*Sterna dougallii*) [A192]** **Common Tern (*Sterna hirundo*) [A193]** **Arctic Tern (*Sterna paradisaea*) [A194]** **Little Tern (*Sterna albifrons*) [A195]** **Guillemot (*Uria aalge*) [A199]** **Razorbill (*Alca torda*) [A200]**	Disturbance and displacement from underwater noise from survey activities. Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to a reduction in prey species.	NPWS (2024) Conservation Objectives: Seas off Wexford SPA 004237. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

		Puffin (*Fratercula arctica*) [A204]		
Bannow Bay SPA [004033]	SPA partly within MUL area	**Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]** **Shelduck (*Tadorna tadorna*) [A048]** **Pintail (*Anas acuta*) [A054]** **Oystercatcher (*Haematopus ostralegus*) [A130]** **Golden Plover (*Pluvialis apricaria*) [A140]** **Grey Plover (*Pluvialis squatarola*) [A141]** **Lapwing (*Vanellus vanellus*) [A142]** **Knot (*Calidris canutus*) [A143]** **Dunlin (*Calidris alpina*) [A149]** **Black-tailed Godwit (*Limosa limosa*) [A156]** **Bar-tailed Godwit (*Limosa lapponica*) [A157]** **Curlew (*Numenius arquata*) [A160]** **Redshank (*Tringa totanus*) [A162]** **Wetland and Waterbirds [A999]**	Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to habitat degradation or a reduction in prey species.	NPWS (2012) Conservation Objectives: Bannow Bay SPA 004033. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Mid-Waterford Coast SPA [004193]	SPA partly within MUL area	**Cormorant (*Phalacrocorax carbo*) [A017]** **Peregrine (*Falco peregrinus*) [A103]** **Herring Gull (*Larus argentatus*) [A184]** **Chough (*Pyrrhocorax pyrrhocorax*) [A346]**	Disturbance and displacement from underwater noise from survey activities. Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to a reduction in prey species.	NPWS (2024) Conservation Objectives: Mid-Waterford Coast SPA 004193. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

Ballycotton Bay SPA [004022]	SPA partly within MUL area	**Teal (*Anas crecca*) [A052]** **Ringed Plover (*Charadrius hiaticula*) [A137]** **Golden Plover (*Pluvialis apricaria*) [A140]** **Grey Plover (*Pluvialis squatarola*) [A141]** **Lapwing (*Vanellus vanellus*) [A142]** **Black-tailed Godwit (*Limosa limosa*) [A156]** **Bar-tailed Godwit (*Limosa lapponica*) [A157]** **Curlew (*Numenius arquata*) [A160]** **Turnstone (*Arenaria interpres*) [A169]** **Common Gull (*Larus canus*) [A182]** **Lesser Black-backed Gull (*Larus fuscus*) [A183]** **Wetland and Waterbirds [A999]**	Disturbance and displacement from underwater noise from survey activities. Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to habitat degradation or a reduction in prey species.	NPWS (2014) Conservation Objectives: Ballycotton Bay SPA 004022. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Ballyteige Burrow SPA [004020]	1	**Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]** **Shelduck (*Tadorna tadorna*) [A048]** **Golden Plover (*Pluvialis apricaria*) [A140]** **Grey Plover (*Pluvialis squatarola*) [A141]** **Lapwing (*Vanellus vanellus*) [A142]** **Black-tailed Godwit (*Limosa limosa*) [A156]** **Bar-tailed Godwit (*Limosa lapponica*) [A157]** **Wetland and Waterbirds [A999]**	Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to habitat degradation or a reduction in prey species.	NPWS (2014) Conservation Objectives: Ballyteige Burrow SPA 004020. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Tramore Back Strand SPA [004027]	1	**Light-bellied Brent Goose (*Branta bernicla hrota) [A046]*** **Golden Plover *(Pluvialis apricaria*) [A140]** **Grey Plover (*Pluvialis squatarola*) [A141]** **Lapwing (*Vanellus vanellus*) [A142]** **Dunlin (*Calidris alpina*) [A149]** **Black-tailed Godwit (*Limosa limosa*) [A156]** **Bar-tailed Godwit (*Limosa lapponica*) [A157]**	Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities.	NPWS (2013) Conservation Objectives: Tramore Back Strand SPA 004027. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

		Curlew (*Numenius arquata*) [A160] **Wetland and Waterbirds [A999]**	Water quality deterioration from survey activities or survey vessels, leading to habitat degradation or a reduction in prey species.	
Cork Harbour SPA [00430]	1	**Little Grebe (*Tachybaptus ruficollis*) [A004]** **Great Crested Grebe (*Podiceps cristatus*) [A005]** **Cormorant (*Phalacrocorax carbo*) [A017]** **Grey Heron (*Ardea cinerea*) [A028]** **Shelduck (*Tadorna tadorna*) [A048]** **Wigeon (*Anas penelope*) [A050]** **Teal (*Anas crecca*) [A052]** **Pintail (*Anas acuta*) [A054]** **Shoveler (*Anas clypeata*) [A056]** **Red-breasted Merganser (*Mergus serrator*) [A069]** **Oystercatcher (*Haematopus ostralegus*) [A130]** **Golden Plover (*Pluvialis apricaria*) [A140]** **Grey Plover (*Pluvialis squatarola*) [A141]** **Lapwing (*Vanellus vanellus*) [A142]** **Dunlin (*Calidris alpina*) [A149]** **Black-tailed Godwit (*Limosa limosa*) [A156]** **Bar-tailed Godwit (*Limosa lapponica*) [A157]** **Curlew (*Numenius arquata*) [A160]** **Redshank (*Tringa totanus*) [A162]** **Black-headed Gull (*Chroicocephalus ridibundus*) [A179]** **Common Gull (*Larus canus*) [A182]** **Lesser Black-backed Gull (*Larus fuscus*) [A183]** **Common Tern (*Sterna hirundo*) [A193]** **Wetland and Waterbirds [A999]**	Disturbance and displacement from underwater noise from survey activities. Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to habitat degradation or a reduction in prey species.	NPWS (2014) Conservation Objectives: Cork Harbour SPA 004030. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Ballymacoda Bay SPA [004023]	4	**Wigeon (*Anas penelope*) [A050]** **Teal (*Anas crecca*) [A052]** **Ringed Plover (*Charadrius hiaticula*) [A137]** **Golden Plover (*Pluvialis apricaria*) [A140]** **Grey Plover (*Pluvialis squatarola*) [A141]** **Lapwing (*Vanellus vanellus*) [A142]** **Sanderling (*Calidris alba*) [A144]** **Dunlin (*Calidris alpina*) [A149]** **Black-tailed Godwit (*Limosa limosa*) [A156]** **Bar-tailed Godwit (*Limosa lapponica*) [A157]** **Curlew (*Numenius arquata*) [A160]** **Redshank (*Tringa totanus*) [A162]** **Turnstone (*Arenaria interpres*) [A169]** **Black-headed Gull (*Chroicocephalus ridibundus*) [A179]** **Common Gull (*Larus canus*) [A182]** **Lesser Black-backed Gull (*Larus fuscus*) [A183]** **Wetland and Waterbirds [A999]**	Disturbance and displacement from underwater noise from survey activities. Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to habitat degradation or a reduction in prey species.	NPWS (2015) Conservation Objectives: Ballymacoda Bay SPA 004023. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Helvick Head to Ballyquin SPA [004192]	5	**Cormorant (*Phalacrocorax carbo*) [A017]** **Herring Gull (*Larus argentatus*) [A184]** **Kittiwake (*Rissa tridactyla*) [A188]**	Disturbance and displacement from underwater noise from survey activities. Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels,	NPWS (2025) Conservation objectives: Helvick Head to Ballyquin SPA [004192]. Version 1. Department of Housing, Local Government and Heritage.

			leading to a reduction in prey species	
Dungarvan Harbour SPA [004032]	6	**Great Crested Grebe (*Podiceps cristatus*) [A005]** **Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]** **Shelduck (*Tadorna tadorna*) [A048]** **Red-breasted Merganser (*Mergus serrator*) [A069]** **Oystercatcher (*Haematopus ostralegus*) [A130]** **Golden Plover (*Pluvialis apricaria*) [A140]** **Grey Plover (*Pluvialis squatarola*) [A141]** **Lapwing (*Vanellus vanellus*) [A142]** **Knot (*Calidris canutus*) [A143]** **Dunlin (*Calidris alpina*) [A149]** **Black-tailed Godwit (*Limosa limosa*) [A156]** **Bar-tailed Godwit (*Limosa lapponica*) [A157]** **Curlew (*Numenius arquata*) [A160]** **Redshank (*Tringa totanus*) [A162]** **Turnstone (*Arenaria interpres*) [A169]** **Wetland and Waterbirds [A999]**	Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to habitat degradation or a reduction in prey species.	NPWS (2012) Conservation Objectives: Dungarvan Harbour SPA 004032. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Sovereign Islands SPA [004124]	7	**Cormorant (*Phalacrocorax carbo*) [A017]**	Disturbance and displacement from underwater noise from survey activities. Water quality deterioration from survey activities or survey vessels, leading to a reduction in prey species	NPWS (2025) Conservation Objectives: Sovereign Islands SPA 004124. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
Saltee Islands SPA [0040002]	8	**Fulmar (*Fulmarus glacialis*) [A009]** **Gannet (*Morus bassanus*) [A016]** **Cormorant (*Phalacrocorax carbo*) [A017]** **Shag (*Phalacrocorax aristotelis*) [A018]** **Lesser Black-backed Gull (*Larus fuscus*) [A183]** **Herring Gull (*Larus argentatus*) [A184]**	Disturbance and displacement from underwater noise from survey activities.	NPWS (2011) Conservation Objectives: Saltee Islands SAC 000707 and Saltee Islands SPA 004002. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

		Kittiwake (*Rissa tridactyla*) [A188] **Guillemot (*Uria aalge*) [A199]** **Razorbill (*Alca torda*) [A200]** **Puffin (*Fratercula arctica*) [A204]**	Water quality deterioration from survey activities or survey vessels, leading to a reduction in prey species.	
Blackwater Estuary SPA [004028]	9	**Wigeon (*Anas penelope*) [A050]** **Golden Plover (*Pluvialis apricaria*) [A140]** **Lapwing (*Vanellus vanellus*) [A142]** **Dunlin (*Calidris alpina*) [A149]** **Black-tailed Godwit (*Limosa limosa*) [A156]** **Bar-tailed Godwit (*Limosa lapponica*) [A157]** **Curlew (*Numenius arquata*) [A160]** **Redshank (*Tringa totanus*) [A162]** **Wetland and Waterbirds [A999]**	Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to habitat degradation or a reduction in prey species	NPWS (2012) Conservation Objectives: Blackwater Estuary SPA 004028. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
Tacumshin Lake SPA [004092]	16	**Little Grebe (*Tachybaptus ruficollis*) [A004]** **Bewick's Swan (*Cygnus columbianus bewickii*) [A037]** **Whooper Swan (*Cygnus cygnus*) [A038]** **Wigeon (*Anas penelope*) [A050]** **Gadwall (*Anas strepera*) [A051]** **Teal (*Anas crecca*) [A052]** **Pintail (*Anas acuta*) [A054]** **Shoveler (*Anas clypeata*) [A056]** **Tufted Duck (*Aythya fuligula*) [A061]** **Coot (*Fulica atra*) [A125]** **Golden Plover (*Pluvialis apricaria*) [A140]** **Grey Plover (*Pluvialis squatarola*) [A141]** **Lapwing (*Vanellus vanellus*) [A142]** **Black-tailed Godwit (*Limosa limosa*) [A156]** **Wetland and Waterbirds [A999]**	Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to habitat degradation or a reduction in prey species.	NPWS (2025) Conservation Objectives: Tacumshin Lake SPA 004092. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

Wexford Harbour and Slobs SPA [004076]	17	**Little Grebe (*Tachybaptus ruficollis*) [A004]** **Great Crested Grebe (*Podiceps cristatus*) [A005]** **Cormorant (*Phalacrocorax carbo*) [A017]** **Bewick's Swan (*Cygnus columbianus bewickii*) [A037]** **Whooper Swan (*Cygnus cygnus*) [A038]** **Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]** **Shelduck (*Tadorna tadorna*) [A048]** **Wigeon (*Anas penelope*) [A050]** **Teal (*Anas crecca*) [A052]** **Mallard (*Anas platyrhynchos*) [A053]** **Pintail (*Anas acuta*) [A054]** **Scaup (*Aythya marila*) [A062]** **Goldeneye (*Bucephala clangula*) [A067]** **Red-breasted Merganser (*Mergus serrator*) [A069]** **Coot (*Fulica atra*) [A125]** **Oystercatcher (*Haematopus ostralegus*) [A130]** **Golden Plover (*Pluvialis apricaria*) [A140]** **Grey Plover (*Pluvialis squatarola*) [A141]** **Lapwing (*Vanellus vanellus*) [A142]** **Knot (*Calidris canutus*) [A143]** **Sanderling (*Calidris alba*) [A144]** **Dunlin (*Calidris alpina*) [A149]** **Black-tailed Godwit (*Limosa limosa*) [A156]** **Bar-tailed Godwit (*Limosa lapponica*) [A157]** **Curlew (*Numenius arquata*) [A160]** **Redshank (*Tringa totanus*) [A162]** **Black-headed Gull (*Chroicocephalus ridibundus*) [A179]** **Lesser Black-backed Gull (*Larus fuscus*) [A183]** **Little Tern (*Sterna albifrons*) [A195]** **Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]** **Wetland and Waterbirds [A999]**	Disturbance and displacement from underwater noise from survey activities. Disturbance and displacement from above water noise, vibration, lighting, increased human presence or vessel activity from survey activities. Water quality deterioration from survey activities or survey vessels, leading to habitat degradation or a reduction in prey species.	NPWS (2012) Conservation Objectives: Wexford Harbour and Slobs SPA 004076. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Old Head of Kinsale SPA [001021]	18	**Kittiwake (*Rissa tridactyla*) [A188]** **Guillemot (*Uria aalge*) [A199]**	Disturbance and displacement from underwater noise from survey activities. Water quality deterioration from survey activities or survey vessels, leading to a reduction in prey species.	NPWS (2025) Conservation Objectives: Old Head of Kinsale SPA 004021. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

4 Assessment and Mitigation

4.1 Assessment of Likely/Possible Impacts on European Sites

The potential impacts on European sites and their QIs in view of the sites' conservation objectives are summarised as: deterioration of water quality; loss of habitat area; habitat degradation; disturbance and displacement of species from underwater noise; disturbance and displacement of species above water noise, vibration, lighting and human presence, and collision risk. This section discusses those impacts individually. Any mitigation measures recommended on foot of the assessment in this section are included in Section 4.6 - Mitigation Measures.

4.1.1 Deterioration of water quality

The applicant proposes to utilise a variety of survey vessels, depending on the nature of the specific activity, in addition to a jack-up barge with a tug vessel where needed in shallower waters and a vehicle mounted drilling spread or mechanical backhoe and support vehicles at the landfall zones. The applicant has noted that up to eight vessels may be operating at any one time. Survey operations from vessels and vehicles have the potential to lead to accidental spillages of harmful materials (e.g. fuel, oil or wastewater) into marine waters or the intertidal area, potentially affecting water quality. The marine geotechnical borehole drilling, vibrocore sampling and Cone Penetration Testing as well as the use of jack-up barges could increase suspended sediments in the water column. This could in turn lead to sediment deposition on nearby coastal habitats and habitat degradation. It could also lead to higher turbidity levels in the water column, or reduced dissolved oxygen levels, impacting migratory fish or reducing foraging potential for otter, marine mammals and diving birds.

With regard to water quality impacts from accidental spillages, the applicant notes in the NIS that all vessels utilised will be in compliance with international standards and national legislation for the prevention of pollution from ships. The applicant also notes that machinery and vehicles operating in the intertidal area will be fuelled on hard-standing areas and at least 10 m from drainage networks and will have spill kits available. Given this, it unlikely that spillages of harmful materials from the survey activities will occur. It is recommended to include a condition in any licence granted to ensure that the holder conforms to the appropriate certification standards for preventing pollution from vessels, as required by the Marine Survey Office (see Section 4.6 – Mitigation Measures). It is also recommended that a condition should be included in any licence granted to ensure the holder is prepared for any accidental oil pollution events by having a response plan in place, as well as a condition requiring an ecologist to be onsite during all of the intertidal activities to minimise disturbance and ensure that the integrity of the intertidal site areas is maintained. In addition a condition is recommended to ensure the mitigation measures as proposed by the applicant (the 'plans and particulars') are undertaken (see Section 4.6 – Mitigation Measures).

With regard to suspended sediments, the applicant notes that any sediment that enters the water column will not be in large enough quantities to significantly impact water quality or aquatic habitats and species, due to the limited scale of the activities and the relatively small diameter of the marine geotechnical sampling equipment (ranging from 10–250 mm). The marine geotechnical survey activities will take place mainly on sands and coarse sediments, which are subject to high current flows along the south coast of Ireland and in the MUL application area, thus it is expected that suspended sediments will quickly dissipate in the water column and will not negatively affect water quality. Considering this, and the mitigation recommended for the prevention of water quality deterioration, as discussed, it is not expected that water quality deterioration will occur from the proposed activities. Subsequent impacts on habitats, marine mammals, migratory fish, otter, and prey species as identified in the European sites on Table 4 are not likely, subject to the recommended mitigation measures which are outlined in Section 4.6. Impacts on habitats are discussed in further detail in Section 4.1.2.

4.1.2 Loss of habitat area and habitat degradation

The proposed site investigation activities, as shown on Figure 1, will take place within two SACs: Hook Head SAC and Bannow Bay SAC.

Hook Head SAC

Within Hook Head SAC it is proposed to undertake borehole, CPT, grab and vibrocore sampling, including the use of a jack-up barge if required. Intertidal works at Landfall zone E are within the SAC. The intertidal areas of Landfall zones F and G are just outside of the SAC. The NPWS website provides information and maps on the locations of the QI habitats within the SAC. Large shallow inlets and bays habitat as well as patches of reef habitat are present in the inshore area where geotechnical surveys are proposed. At proposed Landfall zone E, vegetated sea cliffs are present. The applicant notes that there will be no intrusive sampling of vegetated sea cliff habitat. Mitigation is required to ensure that this is the case, including the provision of an ecologist onsite during the survey activities in the intertidal areas and by using only existing access routes (see Section 4.6 – Mitigation Measures). With mitigation there will be no direct or indirect impacts on the vegetated sea cliffs habitat and associated vegetation composition.

It is not expected that the activities will lead to direct or indirect impacts on the large shallow inlets and bays habitat or on the community extent within this habitat, as the applicant notes that the combined footprint of the samples is <0.001% of this habitat area in the SAC. In addition, as the habitat is sedimentary in nature, it will recover quickly from the intrusive sampling and is tolerant of naturally fluctuating suspended sediment levels. The NPWS has noted two community complexes within this habitat in the SAC; 'sand with *Chaetozone christiei* and *Tellina* sp. community' and 'coarse sediment with *Pisida longicornis* and

epibenthic fauna community complex'. These habitat types have a high resilience and low sensitivity to penetration or disturbance of the substratum subsurface[4].

Similarly the applicant has estimated that <0.001% of reef habitat could be directly damaged due to the intrusive surveys, if they were to occur on that habitat. However, reef habitat and associated community complexes would not recover fully from direct damage. Thus, mitigation is required to altogether avoid geotechnical survey activities in this habitat, to ensure no permanent damage, or reduction in habitat area or habitat degradation occurs, as detailed in Section 4.6 – Mitigation Measures. Such measures include ensuring that in subtidal areas, geophysical surveys and drop-down video surveys take place in advance of geotechnical surveys and placement of the jack-up barge, so that reef habitat can be identified and avoided. In intertidal areas, a suitably qualified ecologist must be present to ensure reef habitat is avoided. With the implementation of the mitigation measures there will be no direct or indirect damage to the reef habitat in the SAC and the associated community complexes.

Bannow Bay SAC

Geotechnical surveys are proposed to take place at Landfall zones E and F and the proposed cable routes towards these landfalls at a distance of approximately 1 km to the south of Bannow Bay SAC. The applicant notes that although unlikely, minimal geotechnical sampling may occur within the mudflat and sandflat not covered by seawater at low tide habitat at the outer edges of Bannow Bay SAC. The community complex described by the NPWS for the mudflat and sandflat habitat in this part of the SAC is comprised of 'fine sands with *Pygospio elegans* and *Corophium volutator* community complex', which has a high resilience and low sensitivity to penetration or disturbance of the substratum subsurface[5]. Given the minimal area which may be sampled and the resilience of this sedimentary habitat and associated communities, the activities will not lead to a permanent reduction in the habitat area, or an indirect impact on the species supported by the habitat. No survey activity will take place within any of the other habitats in the SAC (as listed on Table 4) and indirect impacts are unlikely as any suspended sediments generated will be short term and localised and will dissipate quickly with tidal movements.

Given the mitigation measures required to protect these QI habitats, which must be included as conditions in any licence granted, as well as the nature and scale of the activities, there will be no permanent damage to habitats or habitat degradation.

4.1.3 Disturbance and displacement from underwater noise

The appropriate assessment screening report and determination issued by MARA identified the potential for underwater sound sources from survey activities to be at a level and duration

[4] The Marine Life Information Network.
[5] The Marine Life Information Network.

that would cause a significant negative impact on the QIs (marine mammals, otter, fish and seabirds) at a number of European sites (see Table 4).

Marine mammals

A number of European sites were screened in due to the potential for underwater noise to impact on Harbour porpoise, Bottlenose dolphin, Grey seal and Harbour seal which are QI species from these sites (see Table 4). Of these sites, only Hook Head SAC is within the MUL application area, however it is likely that Harbour porpoise, Bottlenose dolphin, Grey seal or Harbour seal from the other European sites would forage within the MUL application area and may also be indirectly impacted.

Marine mammals depend on sound for a wide range of functions including navigation, perception of their environment, communication, prey identification and capture, and the detection of predators. The production of underwater noise from the proposed site investigation activities could interfere with these functions by inducing permanent auditory injury (or Permanent Threshold Shift) at close range or temporary hearing impairment (or Temporary Threshold Shift – TTS) and disturbance at further distances from the noise source. The marine geophysical survey activities (MBES, SSS, USBL, SBP – see Table 2), the marine geotechnical survey activities (borehole drilling, CPTs and vibrocoring – see Table 2) and the use of ADCPs as part of the metocean surveys will all generate underwater noise. In terms of the conservation objectives for those European sites listed on Table 4, the relevant target for marine mammals is that underwater noise would not be at a level that would result in a significant negative impact to their populations.

The applicant submitted a Sub-sea Noise Report in support of the application which was used to inform the NIS. The distances from the noise sources at which PTS and TTS could impact on marine mammals were modelled under different geotechnical and geophysical survey activity scenarios. For the modelling of the geophysical surveys the worst-case scenarios were modelled with the SBP operating in different modes in tandem with the MBES, SSS and USBL. The geotechnical models also modelled the worst-case scenario including a combination of the vessel sounds, the USBL, vibrocore, CPT and borehole drilling. The modelling did not take account of marine mammal hearing ranges. Under the worst-case scenario, Harbour porpoise could experience PTS and TTS within 2.2 km and 4.3 km respectively of the SBP operating in tandem with the sparker/boomer. For Bottlenose dolphin they could experience PTS and TTS within 20 m and 200 m respectively of the SPB with the pinger/chirper. For Grey and Harbour seals they could experience PTS and TTS within 70 m and 1.5 km respectively of the SPB operating in tandem with the sparker/boomer. The applicant notes that behavioural disturbance distances are likely to be up to 5 km, in line with the JNCC guidance[6] on the

[6] JNCC, 2020

conservative Effective Deterrence Range for Harbour porpoise, which is the most sensitive to noise disturbance from geophysical surveys.

The ADCPs operate at a high frequency (> 300 kHz) which is outside of the hearing ranges of Harbour porpoise (200 Hz–180 kHz), Bottlenose dolphin (150 Hz–160 kHz) and Grey and Harbour seals (75 Hz–30 kHz). There may be a slight disturbance only impact (no PTS or TTS impact) within very close range (< 10 m) of the ADCPs but this will not lead to significant adverse impacts on marine mammals given the frequency at which the ADCPs operate.

In light of the above, mitigation measures are therefore required for all geophysical and geotechnical surveys, in order to minimise adverse impacts on marine mammals and avoid impacting their populations from the European sites listed on Table 4. The applicant notes that Marine Mammal Observers will be utilised for all geophysical and geotechnical surveys and that the current national guidance[7] on underwater noise will be followed. This includes the provision of a 30-minute soft start, or ramp-up procedure when utilising the survey equipment. The applicant notes that a 500 m monitored zone will be applied for all surveys. However, it is recommended that a 1,000 m monitored zone should be applied where the SBP is being used with the sparker or boomer systems, in accordance with the national guidance[7]. No surveys can commence if a marine mammal is detected within the monitored zone. Taking into account these mitigation measures (see Section 4.6) as well as the marine mammal exposure criteria noted in the national guidance, then there will not be significant adverse impacts on marine mammal populations. Mitigation measures will also be required to avoid adverse impacts from acoustic disturbance from the proposed activities in combination with other plans or projects and these are discussed in Sections 4.2 and 4.6.

Otter

Underwater noise from the activities, in particular the geophysical and geotechnical surveys, has been identified as having the potential to temporarily disturb and displace otter from the River Barrow and River Nore SAC, the Lower River Suir SAC, Blackwater River (Cork/Waterford) SAC and Slaney River Valley SAC that might be foraging in coastal waters where survey activity is taking place. Underwater noise disturbance could limit the extent of marine habitat available for otter to forage within.

The locations in which the activities are proposed within the MUL application area (as indicated on Figure 1) are at some distance away from the SACs designated for otter. The closest SAC is the River Barrow and River Nore SAC which is >5 km distance from the proposed activities. Otters have been observed to forage out to 80 m from the coastline[8] and there is the possibility, though small, that otter from these SACs could be present at coastal areas

[7] NPWS 2014. Guidance to Manage the Risks to Marine Mammals from Man-made Sound Sources in Irish Waters.

[8] Background to the conservation assessment for the otter Lutra lutra NPWS conservation assessment status report

near the proposed landfall zones. On the basis of their underwater noise modelling, the applicant notes that underwater noise could cause auditory injury within 30 m or TTS within 800 m of the geophysical activity. The models show that when a soft-start is applied, in accordance with underwater noise guidance for marine mammals, that this is reduced to < 10 m for otter. Thus, the mitigation measure previously discussed in relation to marine mammals, employing a soft-start procedure will ensure that there is no adverse impact on otters from underwater noise.

Fish

The potential for underwater noise to impact on migratory fish species including Sea and River lamprey, Twaite shad and Atlantic salmon from the River Barrow and River Nore SAC, the Lower River Suir SAC, Blackwater River (Cork/Waterford) SAC and Slaney River Valley SAC was screened in (see Table 4). The proposed activities will not take place within any of these SACs, however fish might migrate through the Celtic Sea to and from these SACs and in the vicinity of the activities. The conservation objectives for these fish species from the SACs primarily relate to measures and impacts within the SAC river and estuarine systems, however in general, the population structure and age classes of these species must not be negatively affected, which could relate to their at sea migration.

The underwater noise modelling carried out by the applicant also included fish in the various worst-case scenarios previously outlined for marine mammals. The geophysical surveys using the parametric SBP could lead to auditory injury (PTS) within 30 m of the noise source or a TTS within 150 m. These impacts were also modelled including a 30-minute soft start procedure and the impacts were reduced to < 10 m from the noise source. Thus, the application of the soft-start procedure as set out in the marine mammal mitigation measure, which follows national guidance on underwater noise, must be applied in order to minimise any potential impacts on fish that might be migrating in the vicinity. In terms of behavioural changes, the modelling shows that fish could be impacted up to 720 m from the noise source when using the SPB with the boomer, however, the Sound Pressure Level is below the behavioural response threshold for fish. Given this, the extent of the survey area and the temporary nature of the activities it is not likely that any behavioural or other impact on fish migrating to or from the SACs would be at the extent that would negatively affect their population structures. The mitigation in relation to soft-starts and marine mammals should be applied (see Section 4.6).

Birds

Seventeen SPAs along the south coast of Ireland were screened in for AA. Eleven of these sites were screened in for potential impacts of underwater noise on seabird species that use diving (e.g. Gannets, Terns, Shearwaters, Cormorants) and surface water scavenging behaviors (e.g. Gulls, Fulmars) to catch their prey. Of these, the eastern part of the area in which the activities are proposed is within the Seas Off Wexford Coast SPA and is close to the

Keeragh Islands SPA and the Saltee Islands SPA. Proposed Landfall zone D is adjacent to the Mid-Waterford Coast SPA and Landfall zone C is adjacent to the Ballycotton Bay SPA (though the MUL application area crosses through it). Diving birds can be sensitive to disturbance from underwater noise and fatalities can occur at close distance. Disturbance could be a significant impact if the underwater noise was at an intensity, frequency and duration that affected bird populations at those SPAs.

Flushing disturbance can be expected to displace these diving seabirds from close proximity to the survey vessels and underwater equipment, thereby limiting their exposure to the highest sound pressures generated. The likelihood of these birds being in the vicinity of a noise generating operation is low due to the surface activity associated with such operations disturbing the birds prior to commencement of the underwater noise. There is a low likelihood of interaction between the sound source and diving birds due to the relatively short exposure time when they dive. Given the temporary nature of the proposed activities, the mobile nature of the birds and their displacement due to flushing, underwater noise would be very unlikely to have a significant effect on diving seabird populations from those SPAs with diving bird species as listed on Table 4.

4.1.4 Disturbance and displacement from above water noise, vibration, lighting and human presence

A number of surveys are proposed to take place at the 7 proposed landfall zones along the coastline and intertidal areas which could cause a disturbance including the coastal geotechnical and geophysical surveys and the marine geophysical and geotechnical surveys occurring close to shore (see Table 2). There is the potential that noise, vibration, artificial lighting and increased human presence or vessel activity (visual impacts) from the activities would be at an intensity and duration that would cause significant disturbance to bird populations, marine mammals and otter should they be in close proximity to the activities.

Birds

Proposed Landfall zone C is in adjacent to Ballycotton Bay SPA which is designated as an important site for over-wintering birds (see Table 4). Should the geotechnical and geophysical surveys occur here during the winter period there is the potential that noise disturbance could deter the designated bird species from utilising the suitable areas within and adjacent to the SPA. Although the impacts are expected to be temporary, it is recommended to ensure the activities do not occur within 1 km of the SPA during the over-wintering bird season (October to March), due to the proximity of the activities to the SPA and the potential for the impacts to act in-combination with other activities on the beach (e.g. recreational use). The mitigation measure is set out in Section 4.6.

Proposed landfall zone D lies outside of the Mid-Waterford Coast SPA but in a beach area which is between two parts of the SPA. This SPA is designated as an important site for breeding birds along the seacliffs. It is possible that geotechnical and geophysical surveys could impact on the designated birds should they occur within the most sensitive period for breeding birds. Although the impacts are expected to be temporary, it is recommended to ensure the activities do not occur in close proximity (< 1 km) to the SPA during the most sensitive period for breeding birds (April to July) due to the proximity of the activities to the SPA and the potential for the impacts to act in-combination with other activities on the beach (e.g. recreational use). The mitigation measure is set out in Section 4.6.

Landfall zones E, F and G are all within the Seas Off Wexford Coast SPA designated for a number of breeding seabird species. While the landfall zones are in beach areas with sandy sediment and coarse and hard substrates, they are in close proximity to seacliffs which may provide suitable breeding habitat for SCI bird species. Thus there is the potential for breeding seabirds to be impacted by the geotechnical and geophysical surveys within close range. The Keeragh Islands SPA which is designated for breeding cormorant is also in close proximity to the proposed activities. It is recommended that no geotechnical and geophysical surveys should occur at the Landfall zones E, F and G and approaches, within the most sensitive period for breeding birds (April to July) or within 1 km of the Keeragh Islands SPA during this period.

Landfall zones E, F and G do not provide important habitat areas that would be utilised by overwintering birds from the nearby Bannow Bay (1 km west of proposed activities) or Ballyteigue Burrow SPAs (2 km east of proposed activities). Proposed Landfall zones A and B in Co. Cork are at sandy beach sites which do not provide important habitat areas that would be utilised by birds in Cork Harbour SPA, which is > 5 km from the landfalls, Therefore, no specific mitigation for above water noise and visual disturbance is required for these SPA sites. Seabirds foraging offshore may be disturbed and displaced by above water noise and visual impacts, however the impacts will be temporary in nature and the increase in vessel numbers is not significantly above existing background levels of vessel activity in the area.

There are no other SPAs on Table 4 that will be impacted by the proposed activities due to the lack of suitable habitat at the Landfall zones and/or the proximity of those SPAs to the proposed activities. In addition to the seasonal restriction mitigation measure outlined in relation to SPAs, it is also recommended to include a condition in any licence granted to ensure that an ecologist is present onsite site during all intertidal surveys carried out in order to minimise disturbance and ensure site integrity is maintained. With the application of the mitigation measures in Section 4.6 there will be no significant impact on the conservation objectives, or bird populations, of those SPAs listed on Table 4 from the proposed activities.

Otter

As discussed in Section 4.1.3, the locations in which the activities are proposed are at some distance away from the SACs designated for otter. The closest SAC is the River Barrow and River Nore SAC which is >5 km distance from the proposed activities. The applicant notes that the proposed activities in the landfall zones will take place during daylight hours only. As, otters are predominately nocturnal and are most typically seen at dawn or dusk it is unlikely that they will be in close vicinity to the proposed activities. It is not likely that above water noise and visual impacts from the proposed activities will cause and disturbance and displacement impact on any otters from those SACs. It is recommended to ensure that an ecologist is onsite during all intertidal surveys carried out in order to minimise disturbance and ensure site integrity is maintained.

Marine mammals

Above water noise and visual disturbance and displacement was screened in for potential impacts on Grey seal from the Saltee Islands SAC. This SAC is situated approximately 8 km from the closest landfall zone and thus seals hauled out in the SAC will not be impacted by above water noise and visual disturbance due to the separation distance. The applicant notes that the vessels will not be travelling at speeds > 4 knots and thus any seals foraging around vessels further offshore will be able to move away from any above water disturbance impacts. It is not expected that above water noise and visual disturbance will negatively impact Grey seals from this SAC.

4.1.5 Collision Risk

Collision risk was identified has having the potential to impact on QI marine mammal species from European sites, if death or injury occurred at a level that could affect their populations. The main factors influencing marine mammal collision risk are vessel size and travelling speed. An indirect impact of anthropogenic noise can also be that behavioural changes could lead to collision with vessels.

Harbour porpoise and Bottlenose dolphin

The potential impacts from collision risk on Harbour porpoise and Bottlenose dolphin from those SACs listed on Table 4 were screened in. The relevant conservation objective for Harbour porpoise and Bottlenose dolphin across the SACs is that human activities should not adversely affect the populations at the sites with a target that proposed activities should not cause death or injury to individuals to an extent that may ultimately affect the populations of either species at the sites.

Grey and Harbour seals

Grey seal and Harbour seal were screened in for those sites listed on Table 4. The relevant conservation objectives are that the populations should contain adult, juvenile and pup

cohorts annually and/or that human activities should not occur at levels that would adversely affect the seal populations.

Studies show that mortality rates drop significantly when vessels do not exceed a speed of 10 knots. The applicant has noted that the vessels involved in the proposed geophysical activities will be travelling slowly, at a speed of 4 knots, and at a predefined trajectory. These factors will reduce the risk of vessel collision significantly. In addition, a maximum of eight survey vessels could be operating at any one time (though the applicant notes this is unlikely) which would not be a significant increase in vessels in this area considering background levels of fishing and navigation. For the other survey activities (e.g. geotechnical surveys and placement of metocean equipment) the vessels will be stationary for extended periods and thus there is minimal risk of collision. The mitigation measure recommended for underwater noise impacts on marine mammals, including the soft-start procedure as recommended in the national guidance, will also serve to ensure that behavioural changes will not occur close to the survey activities that might lead to accidental collision. It is therefore not considered that the risk of vessel collision will negatively impact on marine mammal populations from any of the European sites listed on Table 4.

4.2 Assessment of In-combination effects

Article 6(3) of the Habitats Directive requires that an appropriate assessment be carried out in respect of any plan or project which is likely to have a significant effect on one or more European sites, either individually or in combination with other plans or projects. Therefore, regardless of whether or not the likely or possible effects of a plan or project are significant when considered in isolation, the potential for the plan or project to significantly affect European sites in combination with other plans or projects must also be assessed. All types of plans or projects that could, in-combination with the project under consideration, have a significant effect, should be taken into account. This in-combination assessment has been undertaken using professional and scientific judgement.

4.2.1 Defining the Cumulative Effects Spatial Scope (CESS)

Impacts of underwater noise associated with the proposed activities are considered to have the widest spatial reach, with Harbour porpoise being most sensitive to noise disturbance[9]. The CESS was defined at appropriate assessment screening stage as 10 km, based on geophysical survey equipment recommended Effective Deterrence Ranges[10].

4.2.2 Defining the Cumulative Effects Temporal Scope (CETS)

The temporal scope for examination of cumulative effects has been defined considering the period over which the proposed activities are proposed. The applicant has applied for a 5-year licence duration and thus the Cumulative Effects Temporal Scope (CETS) is 5 years.

[9] JNCC Guidance on Assessing the Significance of Noise Disturbance against Harbour Porpoise SACs Conservation Objectives
[10] Effective Deterrence Range – the radius of a circular area assumed to be disturbed.

4.2.3 Impacts and Pathway Identification

Impact	Potential Cumulative Pathway
Deterioration in water quality	Pathway possible via substances in the water or on intertidal areas with impacts possible where there is spatial and temporal overlap with similar activities.
Loss of habitat area and habitat degradation	Potential pathway where there is spatial and temporal overlap with similar activities.
Disturbance from underwater noise	Pathway possible via sound travelling through water with impacts possible within 10 km, or the CESS, and where there is temporal overlap with other underwater noise producing projects.
Disturbance and displacement from above water noise, vibration, lighting and human presence	Pathway possible via light and sound travelling through air with impacts possible within the CESS where there is spatial and temporal overlap with other visual and above water noise producing projects.
Collision risk	Pathway possible via vessel presence from other activities where there is spatial and temporal overlap.

4.2.4 Prediction:

The magnitude and extent of identified likely cumulative effects have been predicted below.

Disturbance due to water quality deterioration

There is potential for increased risk of accidental incidents or water quality deterioration if other relevant projects were to take place in the vicinity of the proposed activities at the same time.

Habitat loss and habitat degradation

There is the potential for increased habitat loss and habitat degradation if other relevant projects were to take place in the vicinity of the proposed activities at the same time.

Disturbance from underwater noise

There is the potential for increased underwater noise disturbance effects if other relevant projects, capable of producing similar underwater noise sources, were to take place at the same time.

Visual and above water noise disturbance

There is the potential for increased visual and above water noise disturbance if other relevant projects were to take place at the same time.

Collision risk

There is an increased likelihood of collision risk if vessel activity in the area increased significantly beyond background levels as a result of other relevant projects at the same time.

4.2.5 Identification of Plans or Projects that could act in combination:

A search was carried out on 01/07/2025 of relevant databases (including EPA, Foreshore, MARA, planning authorities *etc.*) for other plans and projects with characteristics that may cause in-combination effects with the proposed site investigation activities, on the QIs of the European sites identified on Table 4. The projects within the CESS and CETS have been considered for their potential to cause cumulative effects, in combination with the proposed activities being considered in this MUL application, on the QIs of those sites listed on Table 4. There were a number of foreshore licence applications submitted to the Department of Climate, Energy and the Environment (DCEE), for site investigation activities in the vicinity of the MUL application area linked with offshore renewable energy (ORE) development. These applications did not progress due to the Government's decision to take a plan-led approach rather than allow a developer-led approach to ORE development, and the subsequent publication of the SC-DMAP. The status of these applications on the DCEE website is 'closed' and those applications have not been considered in this part of the assessment.

Table 5: Those projects to which particular attention is given due to the nature and location of the activities in the context of this in-combination assessment.

Application Ref.	**Project description**	**Distance from AoI**	**Project Status**
LIC230017	Marine environmental surveys for the purposes of site investigation	<5 km	MUL granted
LIC240006	Marine environmental surveys for the purposes of site investigation	overlaps	MUL granted
LIC230025	Dredging and deposit of dredged material	overlaps	Applied not granted
MUL240042	Marine environmental surveys for the purposes of site investigation	<5 km	Applied not granted
MUL230029	Dredging and deposit of dredged material	Applied not granted	Applied not granted
MUL240035	Marine environmental surveys for the purposes of site investigation	< 5km	MUL granted
MUL240048	Marine environmental surveys for the purposes of site investigation	< 5km	Applied not granted
S0013-03	EPA Dumping at Sea permit	overlap	Permitted
S0005-03	EPA Dumping at Sea permit	overlap	Applied
S0021-03	EPA Dumping at Sea permit	overlap	Applied
S0039-01	EPA Dumping at Sea permit	overlap	Applied
FS006982	Marine site investigation activities	overlap	granted

FS006916	Installation, operation, repair, maintenance and decommissioning of submarine cable	overlap	granted
FS007050	Works in relation to laying of subsea electricity interconnector	overlap	granted

In addition, the in-combination assessment considers the potential cumulative impacts from minor development projects in the geographical area surrounding the proposed MUL application area.

The following plans in particular were identified as having the potential to result in-combination effects. In general these plans support offshore renewable energy development including supporting infrastructure in ports and harbours:

- The Climate Action Plan 2025,
- Port of Cork Masterplan 2050,
- Cork County Development Plan 2022–2028,
- National Marine Planning Framework,
- The National Development Plan 2021–2030, and
- South Coast Designated Maritime Area Plan (SC-DMAP).

4.2.6 In-Combination Effects Assessment conclusion

There is potential for in-combination effects on the conservation objectives of the European sites addressed in this appropriate assessment, where impacts from the proposed site investigation activities could interact synergistically with other plans and projects, to create adverse effects on the integrity of the European sites. In order for synergistic interactions to occur both sources of impacts must reach a threshold of interactive potential that is of sufficient character, magnitude, duration or intensity. The assessment in Section 4.1 of this report, has already assessed the potential for significant effects of the proposed site investigation activities on European sites.

The main pressures resulting from the proposed site investigation activities on European sites were identified as water quality deterioration, habitat loss and habitat disturbance, underwater noise, above water noise and visual disturbance and collision risk. Particular attention was given to those projects listed above (Table 5) as having spatial and temporal overlap.

It is not possible to exclude the possibility of in-combination effects on the conservation objectives of the European sites considered in this assessment as a result of underwater noise, in combination with those projects which will produce similar underwater noise sources. Therefore, it is recommended that a suitable mitigation measure be included in any Maritime Usage Licence granted for the proposed activities for the possibility of in-combination effects as a result of underwater noise (see Section 4.6).

4.3 Residual Effects

This assessment has identified Likely/Possible Significant Impacts on European Sites and their conservation interests in Section 4.1 and recommends mitigation measures for each at Section 4.6 below. It is considered that the mitigation measures described and their implementation through licence conditions will remove, or reduce to imperceptible levels, all negative impacts and that residual effects will not arise.

4.4 Assessment of Transboundary effects

The mitigation measures proposed as part of this appropriate assessment will mitigate against any transboundary effects on other European sites.

4.5 Public consultation

A public consultation was undertaken 20/05/2025 to 23/06/2025 (35 days), with the public invited to make observations. In addition to the public consultation, observations were invited from relevant public bodies. Four submissions were received on foot of the public consultation, while seven submissions were received from relevant public bodies. These submissions have been considered as part of the appropriate assessment and are summarised in Section 6 of the associated Maritime Usage Licence Assessment Report produced as part of the MUL application assessment.

4.6 Mitigation Measures

Mitigation measures for those impacts identified in Section 4.1 - Assessment of Likely/Possible Significant Impacts on European Sites and their conservation interests are detailed below.

4.6.1 Water quality mitigation

The Marine Survey Office (MSO) is responsible for the implementation of all national and international legislation in relation to safety of shipping and the prevention of pollution of the marine environment from ship-based sources. The following mitigation measure is required to ensure that all appropriate standards are met, as required by the MSO.

- The Holder shall ensure that all vessels engaged in this Permitted Maritime Usage conform to Irish Certification standards for vessels, as required by the Marine Survey Office.

In addition, to ensure that the Holder of any licence granted avoids spillages on the intertidal area and is prepared to deal with accidental spillages from survey vessels, the following mitigation measures are required:

- The Permitted Maritime Usage shall be carried out in accordance with the plans and particulars submitted in support of the application for this Licence.

- Accidental events

The Holder shall ensure that there is an oil pollution emergency plan on-board any survey vessels. This plan should specify:

(i) Information on the location and detail of spill response resources on-board;
(ii) Information on crew training in relation to oil pollution response;
(iii) How crew will interface with other site investigation operators, where applicable.

4.6.2 Water quality and habitat mitigation

Landfall site/Intertidal

(i) The Holder shall ensure that an ecologist will be on site during all intertidal surveys carried out as part of this Permitted Maritime Usage in order to minimise disturbance and ensure site integrity is maintained.
(ii) Access to the intertidal areas shall be exclusively through existing access routes.
(iii) The Permitted Maritime Usage shall not result in disturbance or damage to sea cliffs and reef habitat and these areas shall be avoided by machinery and personnel.
(iv) Any temporary access arrangements or structures that are put in place to allow machinery access to the shore area, shall be prepared or installed in consultation with the ecologist to ensure minimal disturbance and ensure site integrity. The site should be fully reinstated post works.

- The Holder shall plan for the Permitted Maritime Usage to be carried out at a time and in a manner which ensures that geophysical surveys are undertaken in advance of all geotechnical works to avoid potential significant adverse effects on underwater cultural heritage and reef habitats.

- Reef Habitat Protection

i) No geotechnical activities shall take place in Reef habitat (EU Annex 1 habitat code 1170).
ii) Prior to the commencement of the geotechnical activities a drop-down video shall be deployed, and imagery shall be recorded and retained, at each sampling location to ensure reef habitat is avoided in the course of such geotechnical activities.

4.6.3 Underwater noise mitigation

The most up to date national underwater noise guidance must be adhered to for all geophysical and geotechnical activities, including the relevant monitored zones for the particular geophysical surveys being undertaken. Should there be a revised or updated national guidance published then that should be adhered to. The current guidance includes a soft-start procedure which will also avoid significant impacts on fish and otter from underwater noise (see Section 4.1.3).

Marine Mammals

(i) The Holder shall appoint a marine mammal observer(s) for the purposes of overseeing the Permitted Maritime Usage. The Holder shall ensure the marine mammal observer(s) shall satisfy the requirements of the most up to date national guidance. During the activity the Holder shall comply with the directions of the marine mammal observer(s).

(ii) The Holder shall implement risk control and mitigation measures for marine mammals in strict accordance with the most up to date national guidance.

(iii) The Holder shall, within 30 days of completion of the Permitted Maritime Usage, forward a report of the marine mammal observer(s) operations and mitigation undertaken, to offshore@npws.gov.ie and compliance@mara.gov.ie

(iv) The Holder shall publish the report and recording and data forms on their website within 60 days of completion of the Permitted Maritime Usage unless otherwise agreed with the Grantor.

4.6.4 Above water noise mitigation

The Holder shall not undertake geotechnical and geophysical surveys as follows:

i) within 1 km of the Mid-Waterford Coast SPA, the Keeragh Islands SPA, and Landfall zones E, F, and G during the period April to July,

ii) within 1 km of the Ballycotton Bay SPA during the period October to March.

4.6.5 In-combination mitigation

In-combination effects

(i) Prior to the commencement of the Permitted Maritime Usage, the Holder shall coordinate with other authorisation holders carrying out geophysical, seismic and geotechnical activities within a 10 km radius of the Licensed Area.

(ii) Where a vessel-to-vessel distance of greater than 10 km cannot be maintained with respect to geophysical, seismic and geotechnical activities, the Holder shall co-ordinate with other authorisation holders to prevent temporal overlap of the activities. Where the Holder can submit evidence that there is a vessel-to-vessel distance of greater than 10 km, no temporal co-ordination of activities is required.

(iii) Where the Holder becomes aware of temporal overlap that cannot be resolved within the prescribed distance, the Holder shall notify the Grantor who shall determine the timing of activities.

(iv) Records of all engagements held and agreements reached, if any, shall be maintained by the Holder and made available to the Grantor if requested.

5 Appropriate Assessment Conclusion

The applicant provided an NIS which detailed the potential impact of the proposed project on relevant European sites and whether these impacts would adversely affect the integrity of the sites in light of their conservation objectives. The appropriate assessment screening process identified likely/possible significant impacts due to water quality deterioration, habitat loss and habitat degradation, disturbance from underwater noise, visual and above water noise disturbance and collision risk. Likely significant impacts from the proposed activities could not be ruled out, beyond reasonable scientific doubt, without mitigation. The potential for in-combination effects from the proposed activities with other plans and projects could not be ruled out, beyond reasonable scientific doubt, without mitigation.

Mitigation measures were identified to ensure that impacts on European sites and their qualifying interests and special conservation interests do not occur. Therefore, with adherence to the mitigation measures specified in section 4.6 Mitigation Measures, and in view of best scientific knowledge, and of the sites' conservation objectives, the project, individually, or in-combination with other plans or projects, will not have adverse effects on European sites.

Signature and Date of Recommending Marine Advisor	[redacted] **Dr. Alison McCarthy** Senior Marine Advisor Assessment, Research and Data 02/07/2025

6 Appropriate Assessment Determination

Having considered this report, the documents submitted by EirGrid, the observations received on foot of the public consultation on the application, along with my own assessment, it can be concluded, and I determine, for the purposes of Article 6(3) of the Habitats Directive and Regulation 42(11) of the Birds and Natural Habitats Regulations, that the **proposal to undertake '*Marine environmental surveys for the purposes of site investigation or in support of an application under Part XXI of the Act of 2000*' to inform the engineering design and environmental assessments for two proposed offshore substations (OSS) and potential offshore transmission cable corridors from the OSS towards seven potential landfall zones in the south coast of Ireland and within the South Coast Designated Maritime Area Plan location (MUL240036)** (either individually or in combination with any other plans or projects), will not adversely affect the integrity of any European sites, in view of the sites' conservation objectives, subject to the implementation of the mitigation measures specified in Section 4.6 Mitigation Measures adopted and outlined above, which must be included as conditions to any consent that may be granted in respect of the respective maritime usage licence application.

Signature and Date of Decision Maker	[redacted] _____ **John Evans** Director of Assessment, Research and Data 09/07/2025