

IRISH NATIONAL HERITAGE PARK

ENVIRONMENTAL SURVEYS AND GROUND INVESTIGATION WORKS



Supporting Information for Screening for Appropriate Assessment

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Client
Wexford County Council
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Irish National Heritage Park

Environmental Surveys and Ground Investigation Works

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1.0 INTRODUCTION

1.1 Summary

Roughan & O'Donovan (ROD) was appointed by Wexford County Council (WCC) to prepare a Supporting Information for Screening for Appropriate Assessment (SISAA) Report, to support a Marine Usage Licence application to the Maritime Area Regulatory Authority (MARA) for maritime usage. The licence application is in respect of marine environmental surveys and ground investigation works ("the proposed works") for the purposes of site investigation to inform the design of the Irish National Heritage Park at Ferrycarrig, Co. Wexford.

The SISAA Report serves the same function as an Appropriate Assessment (AA) Screening Report. The SISAA Report is intended to assess whether or not the proposed works, either individually or in combination with other plans or projects, in view of best scientific knowledge, are likely to have a significant effect on areas designated as being of European importance for nature conservation ("European sites"), thereby enabling MARA, as the Competent Authority in this case, to fulfil its obligations under Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive").

This document comprises the SISAA Report in respect of the proposed works and has been prepared by ROD on behalf of Wexford County Council in accordance with the requirements of the Habitats Directive, as transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 as amended (S.I. No.477 of 2011)¹ ("the Habitats Regulations"), including Part 5 thereof. The aim of this SISAA Report is to inform and assist the Competent Authority in determining whether or not the proposed works, either individually or in combination with other plans and projects, have the potential to significantly affect one or more European sites in view of their Conservation Objectives.

It is the considered opinion of ROD, as the author of this SISAA Report, that the proposed works, either individually or in combination with other plans or projects, in view of best scientific knowledge, has the potential to significantly affect European sites in view of their Conservation Objectives. Therefore, AA is required in respect of the proposed works.

1.2 Competent Experts

This SISAA Report was prepared by Patrick O'Shea and Síofra Sealy. Patrick is a Principal Ecologist with 13 years' experience in ecological consultancy. He holds a degree in Botany from Trinity College Dublin and an MSc in Ecological Management and Conservation Biology from Queen's University Belfast. Patrick is a Full member of the Chartered Institute of Ecological and Environmental Management (CIEEM).

Síofra is a Senior Ecologist with more than seven years' experience in ecological consultancy. She holds a BA (Hons) degree in Natural Sciences (Zoology) from Trinity College Dublin and is a Full Member of the Chartered Institute of Ecology and Environmental Management (MCIEEM).

¹ Including inter alia S.I. 290 of 2013; SI 499 of 2013; SI 355 of 2015; the Planning, Heritage and Broadcasting (Amendment) Act 2021, Chapter 4; SI 293 of 2021.

1.3 Legislative Context

Council Directive 92/43/EEC of the 21st May 1992 on the conservation of natural habitats of wild fauna and flora (“the Habitats Directive”) and Directive 2009/147/EC of the European Parliament and of the Council of the 30th November 2009 on the conservation of wild birds (“the Birds Directive”) list habitats and species which are, in a European context, important for conservation and in need of protection. This protection is afforded in part through the designation of sites which support significant examples of habitats or populations of species (“European sites”). Sites designated for wild birds are termed “Special Protection Areas” (SPAs) and sites designated for natural habitat types or other species are termed “Special Areas of Conservation” (SACs). The complete network of European sites is referred to as “Natura 2000”.

In order to ensure the protection of European sites in the context of land use planning and development, Article 6(3) of the Habitats Directive provides for the assessment of the implications of plans and projects for European sites, as follows:

“Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site² and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”

In Case C-323/17 [§34], *People Over Wind*, the Court of Justice of the European Union (‘the CJEU’) referred to the nature of the test to be applied in making a screening determination as follows:

“[...] it is settled case-law that Article 6(3) of the Habitats Directive makes the requirement for an appropriate assessment of the implications of a plan or project conditional on there being a probability or a risk that the plan or project in question will have a significant effect on the site concerned. In the light, in particular, of the precautionary principle, such a risk exists if it cannot be excluded on the basis of objective information that the plan or project will have a significant effect on the site concerned (judgment of 26 May 2011, Commission v Belgium, C-538/09, EU:C:2011:349, paragraph 39 and the case-law cited). The assessment of that risk must be made in the light inter alia of the characteristics and specific environmental conditions of the site concerned by such a plan or project (see, to that effect, judgment of 21 July 2016, Orleans and Others, C-387/15 and C-388/15, EU:C:2016:583, paragraph 45 and the case-law cited).”

Further clarification on the use of mitigation measures was provided in *Eco Advocacy*³, where the CJEU ruled that where constituent elements are incorporated into the design of a project as standard features required for all projects of that nature and not within the aim of reducing negative effects of a project on European sites, those features should not be interpreted as mitigation measures intended to avoid or reduce harmful effects (i.e. likely significant effects) of a project on those European sites. The judgment stated that:

“In the light of the foregoing considerations, the answer to the fourth question is that Article 6(3) of the Directive 92/43 must be interpreted as meaning that, in order

² Including, where applicable, ‘sites’.

³ *Eco Advocacy v. An Bord Pleanála* [2023] C-721/21.

to determine whether it is necessary to carry out an appropriate assessment of the implications of a plan or project for a site, account may be taken of the features of that plan or project which involve the removal of contaminants and which therefore may have the effect of reducing harmful effects of the plan or project on that site, where those features have been incorporated into that plan or project as standard features, inherent in such a plan or project, irrespective of any effect on the site."

Article 7 of the Habitats Directive provides that the provisions of, *inter alia*, Article 6(3) are to apply to SPAs under Directive 2009/147/EC (the "Birds Directive").

As stated, the requirements arising out of Article 6(3) of the Habitats Directive are transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 as amended (S.I. No.477 of 2011) (the Habitats Regulations), including Part 5 thereof.

The determination of whether or not a plan or project requires AA is referred to as "Stage 1" or "AA Screening". A "Stage 1" or "AA Screening" is completed to determine whether or not the project, either individually or in combination with other plans or projects, in view of best scientific knowledge, is likely to have a significant effect on areas designated as being of European importance for nature conservation ("European sites"), thereby enabling the Applicant, to fulfil its obligations under Article 6(3) of the Habitats Directive.

In accordance with Regulation 42 of the Habitats Regulations, AA Screening must be undertaken by the competent authorities. In Ireland, the competent authority is the relevant public authority for each plan or project (as defined in Part 1 of the Habitats Regulations), e.g. the local authority, in this case, MARA. Consequently, the responsibility for carrying out AA Screening lies solely with the competent authority. In that respect, this SISSA Report is not in itself an AA Screening Assessment but provides the competent authority with the information required carry out its AA Screening.

1.3.1 Maritime Area Planning Legislation

In December 2021, the Government passed the Maritime Area Planning (MAP) Act, 2021 to regulate the maritime area. The MAP Act will achieve this through the National Marine Planning Framework, maritime area consents for the occupation of the maritime area for the purposes of maritime usages for undefined or long periods of time, and licences for marine usages for a relatively short periods of time. The Maritime Area Regulatory Authority (MARA) has been established to oversee the enforcement of this Act. As part of this role, MARA will review applications for consents and licences within the maritime area.

The proposed works are located in a maritime area and are required to inform the design of the Irish National Heritage Park. The proposed works fall under Schedule 7(3) of the MAP Act, 2021 relating to the 'Maritime Usages which may be undertaken in Maritime Area pursuant to Licence':

"3. Marine environmental surveys for the purposes of site investigation or in support of an application under Part XXI of the Act of 2000".

In accordance with the Act, the proposed works are required to hold a valid licence prior to their commencement.

This report has been prepared to inform the licence application for the environmental surveys in accordance with the MARA Applicant Technical Guidance Note (2023), for the requirement to complete a SISAA Report.

1.4 Screening Methodology

At this stage of the process, the SISAA Report assesses the potential impacts from the plan or project on the European sites within the Zone of Influence and evaluates them in view of the sites' Conservation Objectives.

This SISAA Report has had regard inter alia to the following matters⁴:

- The threshold test is that an appropriate assessment will be required if the Project is likely *to have a significant effect* on (a) European site(s) either individually or in combination with other plans or projects.
- It is not necessary, in order to trigger the requirement to proceed to stage 2 AA that the Project will *'definitely'* have significant effects on the protected site, but such a requirement will arise if it is a *'mere probability'* that such an effect exists. The requirement to carry out an AA will be satisfied if there is a *'probability or a risk'* that the Project will have *'significant effects'* on (a) European site(s).
- Consequent upon the application of the precautionary principle, such a *'risk'* will be found to exist if *'it cannot be excluded on the basis of objective information'* that the particular Project *'will have significant effects'* on (a) European site(s).
- An AA will be required if, on the basis of objective information, a *'significant effect'* on a European site *'cannot be excluded'*. An AA will not be required if, on the basis of objective information, a *'significant effect'* on (a) European site(s) *'can be excluded'*.
- In the case of *'doubt as to the absence of significant effects'* an AA must be carried out.
- The requirement to conduct an AA will arise where, at the screening stage, it is ascertained that the particular development is *'capable of having any effect'* (albeit this must be any *'significant effect'*) on (a) European site(s).
- The *'possibility'* of there being a *'significant effect'* on (a) European site(s) will give rise to a requirement to carry out an AA for the purposes of Article 6(3). There is no need to *'establish'* such an effect and it is merely necessary to determine that there *'may be'* such an effect.
- In order to meet the threshold of likelihood of significant effect, the word *'likely'* in Article 6(3) means less than the balance of probabilities. The test does not require any *'hard and fast evidence'* that such a significant effect was likely. It merely has to be shown that there is a *'possibility'* that this significant effect is likely.
- The assessment of whether there is a risk of *'significant effect'* on the European site must be made in light, inter alia, of the *'characteristics and specific environmental conditions of the site concerned'* by the relevant plan or project.
- Plans or projects or applications for developments which have *no appreciable effect* on European sites are excluded from the requirement to proceed to AA. If all applications for permission for projects capable of having *any effect whatsoever* on such sites were to be caught by Article 6(3) *activities on or near the site would risk being impossible by reason of legislative overkill.*

⁴ See Eoin Kelly v. An Bord Pleanála [2019] IEHC 84; Kelly v. An Bord Pleanála [2014] IEHC 400; Connelly v. An Bord Pleanála [2018] IESC 31; [2018] ILRM 453.

While the threshold at the screening stage of Article 6(3) is very low nonetheless it is a threshold which must be met before it is necessary to proceed to the stage 2 AA.

Accordingly, best practice in undertaking AA Screening involves five steps as follows:

- 1) The first step involves gathering the information and data necessary to carry out a screening assessment. These include, but are not limited to, the details of all phases of the plan or project, environmental data pertaining to the area in which the plan or project is located, e.g. rare or protected habitats and species present or likely to be present, and the details of the European sites within the Zone of Influence.
- 2) The second step involves examining the information gathered in the first step and a scientific analysis of the potential impacts of the project on the receiving environment, particularly the European sites in the Zone of Influence.
- 3) The third step evaluates the impacts analysed in the second step against the Conservation Objectives of the relevant European sites, thereby determining whether or not those impacts constitute “likely significant effects”, within the meaning of Article 6(3) of the Habitats Directive.
- 4) The fourth step involves considering the potential for likely significant effects to arise from the combination of the impacts of the plan or project with those of other plans or projects. If it is determined in the third step that Stage 2 (AA) is required, consideration of potential cumulative impacts may be deferred to that stage.
- 5) The last step involves the issuing of a statement of the determination of the AA Screening. Notwithstanding the recommendation made in the AA Screening Report, the responsibility for completing this step lies solely with the competent authority.

The following guidance documents informed the assessment methodology:

- Department of Arts, Heritage and the Gaeltacht (DAHG) (2014) *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters*. Department of Arts, Heritage and the Gaeltacht, Dublin.
- Department of Environment, Heritage, and Local Government (DEHLG) (2010) *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities*. Department of the Environment, Heritage and Local Government, Dublin.
- Department of the Environment, Heritage and Local Government (DEHLG) (2007) *Code of Practice for the Protection of Marine Mammals during Acoustic Seafloor Surveys in Irish Waters*. Department of the Environment, Heritage and Local Government, Dublin.
- European Commission (EC) (2021) *Assessment of plans and projects in relation to Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. Environment Directorate-General of the European Commission.
- European Commission (EC) (2018) *Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*. European Commission, Brussels.
- European Commission (EC) (2007) *Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC: Clarification of the Concepts of Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence*. Opinion of the European Commission.

- Maritime Area Regulatory Authority (MARA) (2023) *Obtaining a Licence to Carry Out Specified Maritime Usages in the Maritime Area under the Maritime Area Planning Act 2021: Applicant Technical Guidance Note*. Maritime Area Regulatory Authority, Wexford.
- National Parks and Wildlife Service (NPWS) (2010) *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular Letter NPW 1/10 & PSSP 2/10. National Parks & Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.
- Office of the Planning Regulator (OPR) (2021) *Practice Note PN01: Appropriate Assessment Screening for Development Management*. Office of the Planning Regulator.

1.5 Ecological Assessment

In order to fully inform this SISAA Report in respect of the proposed works, it was necessary to establish the baseline ecological conditions in the receiving environment, particularly with regard to European sites.

1.5.1 Desk Study

During the desk study, the statutory consultee, the National Parks & Wildlife Service (NPWS), provided data on designations of sites, habitats and species of conservation interest. This included reports pursuant to Article 17 of the Habitats Directive (NPWS, 2025a, b, c) and Article 12 of the Birds Directive⁵ (Eionet, 2018), as well as the Site Synopses and Conservation Objectives for the relevant European sites.

The desk study involved a thorough review of existing information relating to ecology in the vicinity of the environmental surveys and the GI works and in the surrounding area. The following web-based Geographic Information Systems (GISs) were used to obtain information relating to the natural environment surrounding the project. These included the NPWS *Map Viewer* (NPWS, 2026), which provided information on the locations of protected sites, the National Biodiversity Data Centre's (NBDC) *Biodiversity Maps* (NBDC, 2026), which provided recent and historic records of rare and protected species in the area as well as the Environmental Protection Agency's (EPA) *Unified GIS Application* (EPA, 2026) which provided additional information on the wider environment.

As with all desk studies, the data considered were only as good as the data supplied by the recorders and recording schemes. The recording schemes provide disclaimers in relation to the quality and quantity of the data they provide, and these were considered when examining outputs of the desk study.

1.5.2 Field Surveys

Ecological field surveys have been undertaken at the proposed Irish National Heritage Park by ROD Ecologists at various dates since 2020.

The surveys adhered to the following guidelines:

- *Ecological Survey Techniques for Protected Flora and Fauna during the Planning of National Road Schemes* (TII, 2009a).
- *Guidelines for the Treatment of Otters Prior to the Construction of National Road Schemes* (TII, 2006).

⁵ Every three years, Member States of the European Union are required by Article 12 of the Birds Directive to report on implementation of the Directive. The most recent reporting available is for the period 2013-2018.

- *Guidelines for the Crossing of Watercourses During the Construction of National Road Schemes* (TII, 2005).
- *Guidelines for Assessment of Ecological Impacts of National Road Schemes* (TII, 2009b).
- *Best Practice Guidance for Habitat Survey and Mapping* (Smith et al., 2011).

The surveys with relevance to this SISSA Report are described below.

Habitats

A habitat survey for the proposed Irish National Heritage Park was undertaken at on the 19th April 2024. Habitats were classified in accordance with A Guide to Habitats in Ireland (Fossitt, 2000) and mapped following Smith et al. (2011). The study area for the habitat surveys included the proposed Irish National Heritage Park land plus the estuarine habitats to the north, where accessible. The study area was systematically and thoroughly walked, and all habitats were classified and sketched onto maps. Any Fossitt habitats with links to Annex I habitats were examined further to determine if they corresponded to Annex I habitat. The presence of Annex I habitats, or otherwise, was confirmed using the Interpretation Manual of European Union Habitats (EC, 2013).

Otter

An Otter survey for the proposed Irish National Heritage Park was conducted on the 19th April 2024 and 4th December 2025 adhering to best practice guidelines (TII, 2008a & b). The study area for otters included accessible areas along the southern bank of the River Slaney and the woodlands and scrub habitat on the northern side of the R730. The survey involved a search for signs of otter activity (prints, spraints, trails, holts, couches, slides, feeding remains etc.).

Wintering Birds

Monthly wintering bird surveys were conducted for the proposed Irish National Heritage Park from October 2020 – April 2021 and October 2023 – April 2024. The surveys were undertaken from six locations along the southern bank of the estuary and included the estuary upstream and downstream of Ferrycarrig Bridge. All wintering bird species were recorded using a 'look-see' approach (Bibby et al., 2012). Survey methodology followed Gilbert et al. (1998) and the Irish Wetland Bird Survey. All species recorded were classified according to British Trust for Ornithology (BTO) species codes. For each observation, the date, time, site, species, number of birds, position, activity and any other notes of interest were recorded.

1.5.3 Assessment

The ecological baseline which was established by the desk study described above was used to inform the assessment of the potential ecological effects likely to arise from the proposed works, particularly with regard to European sites. Any assumptions that were made in view of gaps in the ecological data were made in strict accordance with the Precautionary Principle.

2.0 DESCRIPTION OF THE ENVIRONMENTAL SURVEYS AND THE GI WORKS

2.1 Background

Wexford County Council, in conjunction with Fáilte Ireland, is committed to developing the Wexford as a tourism destination. The design of the proposed Irish National Heritage Park at Ferrycarrig, Co. Wexford aims to create, develop and incorporate a new experience '*Vikingar – Beyond Legend*' into its overall visitor experience.

The proposed works are required to inform the design of the proposed Irish National Heritage Project, whereby 3 No. jetties and a man-made beach area are proposed to be installed on the southern bank of the Lower Slaney Estuary, to the north of the existing Irish National Heritage Park.

2.2 Location

The Irish National Heritage Park is located in Ferrycarrig, on the R730, northwest of Wexford town. The proposed works will be undertaken within the Lower Slaney Estuary.

No alternatives have been considered for the proposed works. The locations have been selected based on a preliminary review of the site location, although the exact locations may vary slightly based on the conditions of the riverbed during the time of installation.

2.3 Environmental Surveys

2.3.1 Acoustic Doppler Current Profiler (ADCP) Hydro Acoustic Survey

It is proposed to install two Acoustic Doppler Current Profiler (ADCP) Flow Meters into the Lower Slaney River Channel north of the existing Irish National Heritage Park, to measure tidal flow, speed and direction within the channel.

An ADCP is a hydroacoustic current meter similar to a sonar, used to measure water current velocities over a depth range using the Doppler effect of sound waves scattered back from particles within the water column.

The ADCPs will either be:

- a) deployed in frames or bottom mounts on the riverbed, or
- b) attached to a floating buoy if site conditions are not suitable for bottom mounts at installation.

Bottom mounted ADCPs will have a footprint of approx. 1.5m² each.

An unmanned surface vessel may also be deployed over a period of 24 hours. This process may be repeated in different parts of the tidal cycle to supplement the data collection, pending any issues with the data or if the results come back as incomplete.

The ADCPs will be deployed for a full tidal cycle (approx. 29 days) to measure water flow within the river. A substantial vessel with a winch will be required to deploy the ADCPs. The frames / bottom mounts will be selected or developed to suit the riverbed environment upon inspection, prior to the surveys being undertaken. The frames / bottom mounts will sit on the riverbed and may be held there by lead weights or other heavy weights which will be attached to the frames to keep them in place.

Each of the ADCPs may be marked with a buoy and precautions will be made to avoid damage or loss of equipment. As they will be located in shallow water, the noise emitted will likely be within the range of 600kHz – 1 MHz. The results will be saved to internal memory or output online to an external display software.

The ADCPs will be installed at the approximate locations of the blue triangles in Figure 2.1 below. The locations for the ADCPs are situated in the River Slaney, upstream of the N11 Bridge and Ferrycarrig to monitor water flow in the area. The locations of the ADCPs may move slightly on the advice from the supplier at the time of installation, depending on the conditions of the riverbed.

2.3.2 Sediment Samples

Sediments samples will be obtained at five locations within the River Slaney, as presented in Figure 2.1. These samples will be obtained using a Van Veen grab (or similar method) from a small vessel. Two surface samples of approximately 5 litres (about 15 cm penetration) in suitable sediment will be extracted at each of the five locations (total volume of 50L) and removed to a laboratory for testing. One sample from each location will undergo gradient analysis to determine the particle sizes present. The second sample will be tested to determine benthic sediment quality.

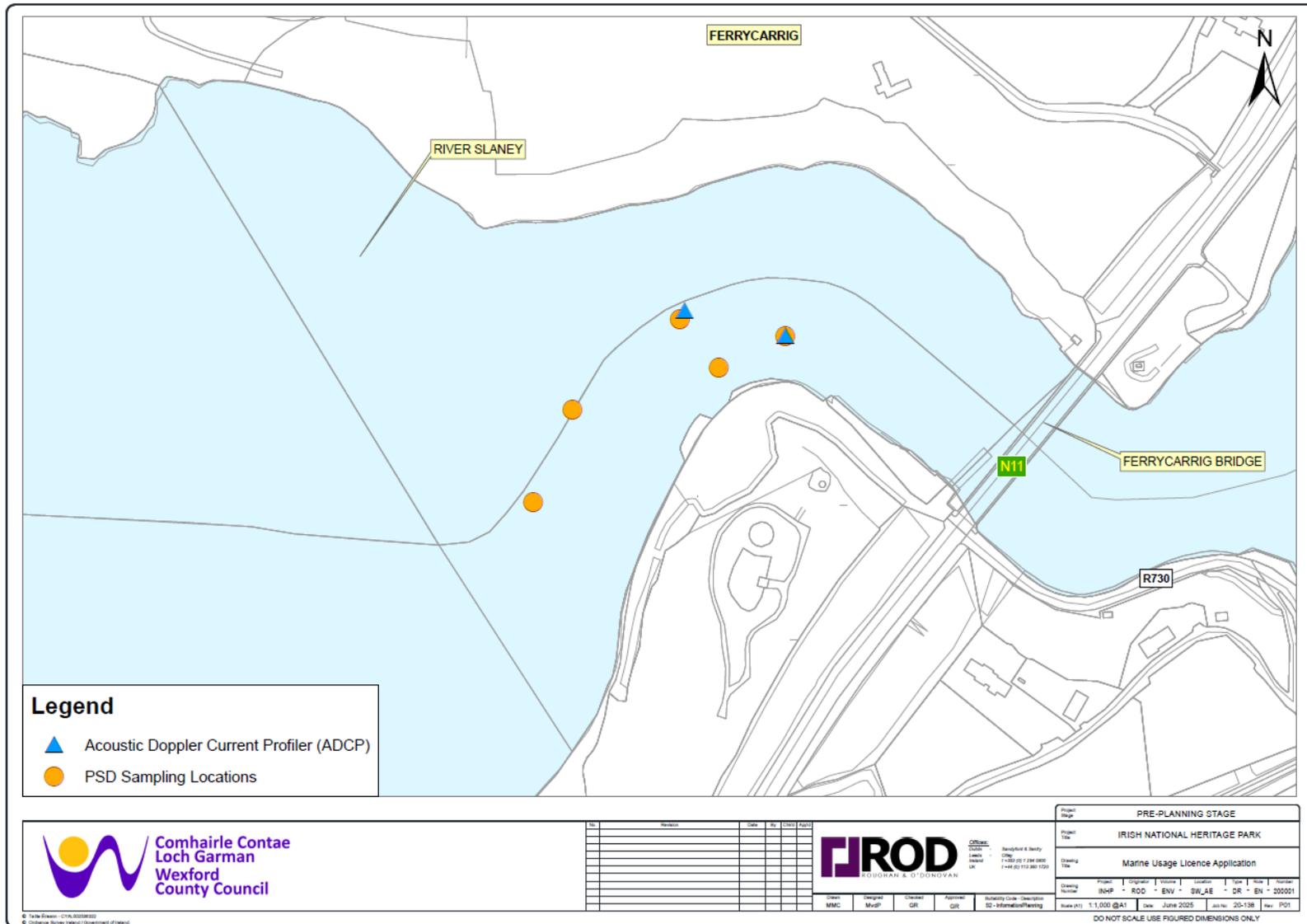


Figure 2.1 Proposed location of ADCPs and PSD samples in the Slaney Estuary.

2.4 Ground Investigations (The GI works)

2.4.1 Overview

The GI works will include five combined Cable Percussion (CP) and Rotary Core (RC) Boreholes (BH) in the river, one combined Cable Percussion and Rotary Core Borehole on land, grab sampling at five locations and geophysical surveys comprising Multi-Beam Echo Sounder, Side Scan Sonar and Sub-Bottom Profiling, as presented below in Table 2.1, Table 2.2 and Table 2.3. A piezometer will be installed as part of the land-based CP & RC to monitor groundwater levels.

2.4.2 Location

The proposed GI works will be undertaken within the tidal reaches of the River Slaney and in close proximity to the river wall along the edge of the old R730. The 5 no. in-river boreholes will be carried out from a barge. Some land-based investigation works will also be required, located along the alignment of the old R730 within 10m of the existing masonry river wall. The exact locations of the proposed GI works have yet to be determined.

2.4.3 Outline of the GI works

2.4.3.1 General Layout

The scope of the GI works envisaged under this ground investigation is as follows:

- a) Geophysical surveys comprising High Multi-Beam Echo Sounder survey, Side Scan Survey and Sub-Bottom Profiling techniques;
- b) Shell and auger or cable percussion boreholes, sampling and *in situ* testing;
- c) Vertical open hole rotary drilling, sampling and *in situ* testing;
- d) Rock coring, proving rock to a specified depth and *in situ* testing;
- e) Monitoring of groundwater levels in standpipes and piezometers;
- f) Detailed borehole and coring;
- g) Sampling to IS EN 22475-1 requirements, predominantly providing Category A samples for laboratory testing of strength and stiffness;
- h) Logs as described in IS EN14688-1; IS EN1489-1; and BS5930 and the specification;
- i) The ground investigation should be carried out in accordance with British Standard 10175:2001+A2:2017, Investigation of Potentially Contaminated Sites: Code of Practice and the EPA Landfill Manual: Investigations for landfill.
- j) Specific sediment grab samples to be carried out for the purpose of grading analysis, contamination assessment, waste classification and offshore marine disposal of excavated spoil plus laboratory testing of soil and groundwater samples for engineering properties, behaviour and suitability for reuse as engineering fill;
- k) Laboratory testing of soil and rock samples for engineering properties, behaviour and suitability;
- l) Laboratory testing of soil and groundwater samples for environmental contamination, waste classification and offshore marine disposal of excavated spoil;
- m) Preparation of detailed Main Factual Report as per S1.21.8 and cl 16.8 of the Specification, together with the production of Digital Data to AGS Format as per S1.21.10 and cl. 16.5;

- n) Preparation of an interpretive Ground Investigation Report in accordance with IS EN1997-2, Section 6 as per S1.21.9;
- o) Preparation of a Contamination Assessment Report in accordance with the EPA document '*Environmental Risk Assessment for Unregulated Waste Disposal Sites (2007)*' as per CI 1.21.9.
- p) Preparation of a Waste Classification Assessment and reporting of acceptability of materials for disposal as inert, non-hazardous or hazardous wastes to landfill facilities in accordance with the Commission Decision of 18 December 2014 and EU Commission Regulation No 1357/2014;
- q) Assessment of river bottom sediment samples for potential offshore marine disposal in compliance with Marine Institute (2006) "*Guidelines for Assessment of Dredge Material for Disposal in Irish Waters*".
- r) Liaison with the Wexford Harbourmaster and Waterways Ireland in respect of access, safety measures and employee training required for exploratory works within or in the vicinity of navigable waterways; and
- s) Liaison and compliance with Health & Safety requirements of PSCS and general contractor.

The schedule of investigations is presented in Table 2.1, Table 2.2 and Table 2.3 below.

2.4.4 Schedule of Investigations

Table 2.1 Borehole Schedule

Cable Percussion Borehole & Rotary Core Locations								
Hole ID.	Type	Scheduled Depth (m BGL)				Remarks	Coordinates (ITM Grid)	
		CP	RO	PG	RC		Easting	Northing
Marine BHs								
BH/RC101	CP & RC	15	-	-	20 to 30 (5m into rock)	RC may continue beyond its scheduled depth up to the level where rock is found. SPTs as per specification. Environmental samples.	TBC	TBC
BH/RC102	CP & RC	15	-	-	20 to 30 (5m into rock)	RC may continue beyond its scheduled depth up to the level where rock is found. SPTs as per specification. Environmental samples.	TBC	TBC
BH/RC103	CP & RC	15	-	-	20 to 30 (5m into rock)	RC may continue beyond its scheduled depth up to the level where rock is found. SPTs as per specification. Environmental samples.	TBC	TBC
BH/RC104	CP & RC	15	-	-	20 to 30 (5m into rock)	RC may continue beyond its scheduled depth up to the level where rock is found. SPTs as per specification. Environmental samples.	TBC	TBC
BH/RC105	CP & RC	15	-	-	20 to 30 (5m into rock)	RC may continue beyond its scheduled depth up to the level where rock is found. SPTs as per specification. Environmental samples.	TBC	TBC
Land BHs								
BH/RC106	CP & RC	15	-	-	20 to 30 (5m into rock)	RC may continue beyond its scheduled depth up to the level where rock is found. SPTs as per specification. Piezometer to be installed. Contamination Samples.	TBC	TBC
Notes	Each borehole may take approximately 3 no. days to complete. In-river borehole drilling will be undertaken from a low draft/flat-bottomed jack up barge.							

Table 2.2 Grab Sample Schedule for Contamination Assessment

Contamination Assessment Grab Sample Locations					
Hole ID.	Type	Scheduled Depth (m BGL)	Remarks	Coordinates (ITM Grid)	
				Easting	Northing
GS101	GS	0.5	Sediment samples to be taken from the riverbed soils at shallow depths and locations as per specification	TBC	TBC
GS102	GS	0.5	Sediment samples to be taken from the riverbed soils at shallow depths and locations as per specification	TBC	TBC
GS103	GS	0.5	Sediment samples to be taken from the riverbed soils at shallow depths and locations as per specification	TBC	TBC
GS104	GS	0.5	Sediment samples to be taken from the riverbed soils at shallow depths and locations as per specification	TBC	TBC
GS105	GS	0.5	Sediment samples to be taken from the riverbed soils at shallow depths and locations as per specification	TBC	TBC

Table 2.3 Geophysical Surveys

Geophysical Survey Locations			
Method	Remarks	Coordinates (ITM Grid)	
		Easting	Northing
Multi-Beam Echo Sounder (MBES)	<i>To provide continuous water depth profile and bathymetric chart</i>	-	-
Side Scan Sonar (SSS)	<i>To map riverbed conditions and sediments and detect potential obstructions, debris, existing infrastructure, etc.</i>	-	-
Sub-Bottom Profiling (SBP)	<i>Investigate shallow geology and sub-bottom stratigraphy</i>	-	-

Notes

1. CP = Cable Percussion, GS = Grab Sediment Sample; MBES = Multi-Beam Echo Sounder; RO = Rotary Open Hole, RC = Rotary Core, PG = Polymer Gel Geobor-S Rotary Coring, SBP = Sub-Bottom Profiling; SSS = Side Scan Sonar.
2. Coordinates to Irish Transverse Mercator Grid (ITM) and reduced levels to Malin Head Datum required for all BH i.e. CP and RC.
3. Undisturbed sampling is required in cohesive soils.
4. A minimum total core recovery of 95% and a minimum rock quality designation of 40% is required when coring in rock. Where voids are encountered a standard penetration test shall be undertaken.
5. Standard penetration tests are to be carried out as per the Specification.

2.5 Timing and Duration

The programming of the GI works has not yet been determined although they are anticipated to be completed within three months of their commencement.

2.6 Receiving Natural Environment

2.6.1 General Description and Context

As described in Section 2.2 above, the proposed works will be undertaken within the Lower Slaney Estuary in Co. Wexford. The land use on the northern side of the estuary is primarily agricultural while the southern side of the estuary is primarily urban development. The Lower Slaney Estuary is situated within the Slaney River Valley SAC and Wexford Harbour and Slobbs SPA.

2.6.2 Habitats

Estuaries (MW4) is the principal habitat type that exists within the footprint of the proposed works. Other aquatic habitats recorded in the vicinity of the proposed works include Mud shores (LS4), Lower salt marsh (CM1) and Reed and large sedge swamps (FS1). The wider aquatic landscape comprises Estuaries (MW4) with Lower Salt Marsh (CM1) habitat growing along the banks. Terrestrial habitats recorded beyond the southern estuary shoreline include Buildings and artificial surfaces (BL3), Amenity grassland (improved) (GA2), Scrub (WS1) and Recolonising bare ground (ED3) The wider terrestrial habitat comprises largely of agricultural grassland with scattered residential dwellings and woodland areas. The urban town centre of Wexford is located at least 3km southeast of the proposed works. Habitats are classified in accordance with 'A Guide to Habitats in Ireland' (Fossitt, 2000).

2.6.3 Marine Mammals

A review of records of marine mammals within the zone of influence was undertaken (NBDC, 2026) (Table 2.4).

Table 2.4 Marine Mammals Recorded within the Zone of Influence.

Common Name	Scientific name
Harbour Seal	<i>Phoca vitulina</i>
Grey Seal	<i>Halichoerus grypus</i>
Bottle-nosed Dolphin	<i>Tursiops truncatus</i>
Common Dolphin	<i>Delphinus delphis</i>
Harbour Porpoise	<i>Phocoena phocoena</i>
Minke Whale	<i>Balaenoptera acutorostrata</i>

Both Grey Seal and Harbour Seal are widespread and abundant in Irish waters. It is considered likely that these species could occur within close proximity to the proposed works. The risk of other marine mammals, including cetacean species, occurring in the vicinity of the proposed works is much lower, but it is considered possible that these species could occur in the vicinity of the proposed works.

2.6.4 Otter

Otter is listed under Annex II and Annex IV of the EU Habitats Directive and are also protected under the Irish Wildlife Acts. This species is distributed throughout Ireland. Otter territories are typically between 2 – 32km in length but can be up to 80km (Kruuk, 1995). There are records of Otter in the Slaney Estuary adjacent to the proposed works according to data supplied by the NPWS (2025) and NBDC (2026).

Surveys for Otter were carried out on the 19th April 2024 and the 4th December 2025 for the proposed Irish National Heritage Project. The survey was undertaken along the southern bank of the River Slaney, including the woodlands due to the potential for suitable habitat. A live Otter was recorded on the 4th December 2025 in the River Slaney, upstream of the proposed works locations and on occasional dates during wintering bird surveys undertaken over the preceding years. No other evidence of Otter (e.g. holts, spraints and couches) was recorded during the surveys. Remains of crustaceans were recorded on the fishing pier adjacent to the Ferrycarrig Bridge on the 4th December 2025, although no evidence of Otter was recorded on this pier.

2.6.5 Birds

Monthly wintering bird surveys were conducted for the proposed Irish National Heritage Park from October 2020 – April 2021 and October 2023 – April 2024. The surveys were undertaken from six locations along the southern bank of the estuary and included the estuary upstream and downstream of Ferrycarrig Bridge. All wintering bird species were recorded using a 'look-see' approach (Bibby et al., 2012). A total of 26 No. wintering bird species were recorded during the wintering bird surveys.

Survey for winter roosts of Hen Harrier have been undertaken from October 2025 to February 2026. This survey involved the surveyor carrying out a vantage point watch of the reed beds opposite the heritage park from two hours before sunset until dark.

2.6.6 Fish

The proposed works are proposed to take place entirely within the Lower Slaney Estuary Transitional Waterbody, which extends as far north as Enniscorthy and ends in Wexford Harbour.

Numerous studies of the fish populations of the River Slaney provide detailed information on the species present within the catchment. Several fish species protected under Annex II of the Habitats Directive have been recorded in the Slaney catchment including Atlantic Salmon (*Salmo salar*), Twaite Shad (*Alosa fallax*) and lamprey (*Lampetra sp.*).

Water Quality

The Water Framework Directive (WFD) requires that each EU Member State protects and improves water quality in all waters so that good ecological status is achieved. Additionally, proposed actions (within discrete River Basin Management Plans) are also required, to secure national natural water resources for the future. The Environmental Protection Agency (EPA) is the competent authority responsible for monitoring, protecting and improving the water environment in the Republic of Ireland. In accordance with WFD guidelines, water quality 'Status' is assigned using a variety of available data on aquatic flora and fauna (including fish), the availability of nutrients, and aspects like salinity, temperature and pollution by chemical pollutants. Morphological features, such as quantity, water flow, water depths and structures of

the riverbeds, are also taken into account. The current status for the waterbodies in proximity of the proposed works are presented in Table 2.4.

Table 2.4 EPA Water Quality Results

WFD Waterbody	Transitional Waterbody WFD Status 2019-2024	Transitional Waterbody WFD Status 2016-2021	Transitional Waterbody WFD Status 2016-2021	Waterbodies Risk
Lower Slaney Estuary Transitional Waterbody	Poor	Poor	Poor	At Risk

2.7 Assessment

The ecological baseline which was established by the desk studies and field surveys described above was used to inform the assessment of the potential ecological effects arising from the proposed works, particularly with regard to European sites. Any assumptions that were made in view of gaps in the ecological data were made in accordance with the Precautionary Principle.

2.7.1 Likely Effects on the Natural Environment

Underwater noise

Underwater noise emissions will come from the proposed works (e.g., acoustics from the ADCPs and geophysical surveys). **Error! Reference source not found.** presents an overview of the underwater noise levels which are emitted by the environmental survey equipment and GI works at 1m from the source.

Marine mammals and migratory fish are vulnerable to anthropogenic noise inputs into the aquatic environment. Underwater noise has the potential to cause a range of impacts to marine life including to injury (hearing damage) and behavioural changes. Hearing damage injury is known as threshold shift can be either permanent (Permanent Threshold Shift, (PTS)) or temporary (Temporary Threshold Shift, (TTS)).

Behavioural changes can include communication disruption, altered foraging behaviour or displacement from the area. Noise from anthropogenic sources have been measured to assess the levels which could cause injury to marine mammals. These are used as thresholds and are commonly used to assess the level of risk associated with noise producing activities in the marine environment. The lowest threshold for TTS in cetaceans is 183 dB SEL and for pinnipeds it is 171dB SEL (Southall et al. 2007), these are presented below in **Error! Reference source not found.**

Table 2.5 Annex II Marine mammal noise exposure criteria given by Southall et al. (2007).

Species	Hearing group and estimated auditory bandwidth (kHz)	Exposure Criteria (SPL – sound pressure level ⁶ , SEL – sound exposure level ⁷)		
		PTS – onset	TTS-onset	Behavioural response
Harbour Porpoise (<i>Phocoena phocoena</i>)	High-frequency cetaceans 0.2 - 180 kHz	230 dB SPL 198 dB SEL	224 dB SPL 183 dB SEL	90-170 dB RL ⁸
Common Bottlenose Dolphin (<i>Tursiops truncatus</i>)	Mid-frequency cetaceans 0.15 - 160 kHz	230 dB SPL 198 dB SEL	224 dB SPL 183 dB SEL	90-200 dB RL
Pinnipeds Harbour Seal (<i>Phoca vitulina</i>) Grey Seal (<i>Halichoerus grypus</i>)	Pinnipeds in water 0.075 - 75 kHz	218 dB SPL 203 dB SEL	212 dB SPL 171 dB SEL	100+ dB RL

Fish exhibit a high degree of variability in terms of sensitivity to sound impacts between different hearing-sensitive groups. Some research suggests that non-hearing specialist fish are 100-times less sensitive to sound than hearing specialists. A precautionary threshold of 186dB SEL has been adopted for this assessment based on information in Popper et al (2014).

⁶ Sound Pressure Level (SPL) – A logarithmic measure in decibels (dB) of the average pressure level in water/air, with respect to a standard reference pressure (i.e., re. 1µPa in water or 20µPa in air). Commonly standardised to a distance of 1 metre from the source (i.e., @ 1m), SPL represents the amplitude of a sound's waveform and it may be measured in a number of ways including peak or peak-to-peak (for short duration sounds) and root mean square (i.e., rms) estimates (for continuous sounds).

⁷ Sound Exposure Level (SEL) – A measure of sound energy over a given duration, i.e., time integral of instantaneous sound pressure squared, normalised to a 1 second period (dB re. µPa²-s or µPa².s).

⁸ Sound Received Level (RL) – the pressure level measured at the receiver, e.g., mammal.

Table 2.6 Underwater noise levels emitted by the environmental survey and GI equipment.

Sound Type	SIL (dB ref μ Pa at 1 m)	Frequency (kHz)	Within marine mammal and fishes frequency hearing ranges
Environmental Surveys			
Acoustic Doppler Current Profiler (ADCP) (Model: Signature1000)	217	600-1000	No
Vessel (Sediment Sampling)	180	<1	Yes
GI Works			
Cable Percussion (CP)	220	<0.5	Yes
Rotary Core (RC)	170	0.5-5	Yes
Multi-Beam Echo Sounder (MBES)	210-245	200 - 500	No
Side Scan Sonar (SSS)	200 - 240	200 - 700	No
Sub-Bottom Profiling (SBP)	185 - 215	2 – 15	Yes
Vessel	180	<1	Yes

The ambient underwater noise levels in Wexford Harbour is not known but is expected to be dominated by environmental noise (e.g. tidal movement of water and sediment) and shipping traffic. Downstream of the proposed development in Wexford Harbour, noise due to recreational and fishing vessels transiting between Wexford town and the Irish Sea adds to the baseline underwater noise levels. Mussel fishing vessels are particularly common in Wexford Harbour with a large area of the harbour licenced under active Aquaculture licences.

Based on the sound frequencies that will be emitted during the proposed works, as listed in **Error! Reference source not found.**, and the hearing ranges of the marine mammals as listed in **Error! Reference source not found.**, there is a potential impact to marine mammals as a result of the proposed works.

Airborne noise

The proposed works provide a source of airborne noise, which has the potential to cause disturbance to terrestrial species such as otter and birds. Engines and generators operating can produce noise levels ranging from 80–120 dB(A) at the source. These noise sources would produce a regular source of sound above 70 dB(A) which may result in a ‘moderate’ response from birds (Cutts *et al.*, 2013). Regular or constant sources of noise result in lower disturbance responses from bird species regardless of noise level, e.g. a dropped piece of scaffold at 65 dB will cause a greater disturbance reaction than ongoing vibratory piling at 80 dB(A).

An engine (or similar) producing noise of 120dB(A) at the source would reduce to acceptable dose levels between 170m and 341m from the source (Cutts *et al.*, 2013). 70dB(A) is considered acceptable for birds. An ‘acceptable dose level’ of noise is that which would not result in any impact to birds or that which may occasionally induce a

low-level behavioural response such as a heads-up. 120 dB(A) would reduce to 70 dB(A) at a distance of 316m. Therefore, noise disturbance to birds may occur within 316m of the proposed works.

However, given that the proposed works will take place in proximity to the existing N11 and the R730, there is a higher level of ambient noise due to the road traffic along and over the estuary and the area that would be impacted by noise is likely to be much less than 316m. Furthermore, birds utilising this area are also likely to have a level of habituation to sources of noise due to the close proximity of the existing roads and shipping traffic downstream in Wexford Harbour .

Disturbance/displacement

The presence of humans and vessels working in the Lower Slaney Estuary may cause visual disturbance to species (e.g. otter, bird species) in the water or on the mudflats exposed at low tide. Disturbance due to visual stimuli may occur up to 500m from the source for some highly sensitive species (Cutts *et al.*, 2013).

The sediment sampling surveys requires the removal of sediment from the riverbed. Aquatic species, such as fish, have the potential to be present in the vicinity of the sampling locations and have the potential to be disturbed or displaced during the sediment sampling surveys.

Injury/death

The sediment sampling surveys require removal of sediment from the riverbed. Suitable habitat for certain aquatic fauna. Should any individuals be present at a sediment sampling location during the environmental surveys, they have the potential to be directly impacted, resulting in potential injury or death.

Habitat loss

The sediment surveys and grab sampling require removal of sediment from the riverbed. The locations of the sediment sampling sites are presented above in Figure 1.2. The nature and tidal state of the habitat at the location of the sampling sites is such that, with any movement or removal of the sediment will cause the immediate surrounding sediment to infill any area immediately and not provide for any loss of sediment habitat.

Impacts to water quality

Threats to watercourses and associated habitats potentially include the mobilisation of sediment within the estuary during the proposed works as well as the release of pollutants such as fuels and hydrocarbons from the vessel and barge. The proposed works are of a nature and scale that any water quality impacts would be very localized and will dissipate in a very short time. The risk of pollution to the aquatic environment from such sources outlined above, particularly into the Slaney Estuary, arising from the proposed works is minimal. Owing to the nature, scale and location of the environmental surveys, it is not considered to provide for any significant effects on the natural environment.

3.0 IDENTIFICATION OF LIKELY SIGNIFICANT EFFECTS

3.1 Establishing the Zone of Influence

Section 3.2.3 of DEHLG (2010) outlines the procedure for selecting the European sites to be considered in AA. It states that European sites potentially affected should be identified and listed, bearing in mind the potential for direct, indirect and in-combination effects. It also states that the specific approach in each case is likely to differ depending on the scale and likely effects of the plan or project. However, it advises that the following sites should generally be included:

- All European sites within or immediately adjacent to the plan or project area;
- All European sites within the Zone of Influence of the plan or project; and,
- In accordance with the Precautionary Principle, all European sites for which there is doubt as to whether or not they might be significantly affected.

The “Zone of Influence” of a project is the geographic extent over which significant ecological effects are likely to occur. In the case of projects, the guidance recognises that the Zone of Influence must be established on a case-by-case basis using the Source-Pathway-Receptor Model (OPR, 2021). A project may only lead to significant effects on the integrity of the European site where all three elements of Source-Pathway-Receptor are linked. In the absence of one element of this model, likely significant effects can be screened out with confidence. The assessment should make reference to the following key variables:

- The nature, size and location of the project;
- The nature of the impacts which may arise from the project;
- The sensitivities of the ecological receptors; and,
- The potential for in-combination effects.

For example, in the case of a project that could affect a watercourse, it may be necessary to include the entire upstream and/or downstream catchment in order to capture all European sites with water-dependent features of interest.

In the marine environment, a Zone of Influence can be extensive as pollution and materials can easily be transported elsewhere and currents and waves can be altered causing effects well beyond the site and effects on mobile species may be manifest elsewhere (CIEEM, 2018).

Having regard to the above key variables, a zone of influence was established for Qualifying Interest species and species groups that have potential to occur within the vicinity of the proposed works. Only Qualifying Interest which are vulnerable to the types of impacts arising from the proposed works have been included. Each zone of influence is presented in **Error! Reference source not found.** below.

Table 3.1 Zone of Influence for QI species/ species groups.

Receptor	Zone of Influence	Justification
Cetaceans	Management Unit	Cetaceans are highly mobile species, with populations ranging over very large areas. Therefore, the Management Unit (MU) as defined in Review of Management Unit boundaries for cetaceans in UK waters (JNCC, 2023) has been considered as the zone of influence for each species of cetacean. Harbour Porpoise and Bottlenose Dolphin are the only Annex II cetacean species in Europe.
	Harbour porpoise (<i>Phocoena phocoena</i>) Management Unit	The relevant management unit for Harbour Porpoise in the vicinity of the proposed works is the 'Celtic and Irish Seas Management Unit'. This area includes the coast of Ireland excluding the north coast from north Antrim to Donegal, the west and southwest coast of Britain (from the south of Scotland to Bournemouth), the northwest coast of France (approximately Brest to Cherbourg) and the seas within this area. This species could be impacted by underwater noise arising from the proposed works.
	Bottlenose dolphin (<i>Tursiops truncatus</i>) Management Unit	The relevant management unit for Bottlenose dolphin in the vicinity of the proposed works is the 'Irish Sea Management Unit'. This area includes the east coast of Ireland (between Antrim and Waterford) and the west coast of Britain (between the south of Scotland and Pembrokeshire, Wales). This species could be impacted by underwater noise arising from the proposed works.
Grey Seal (<i>Halichoerus grypus</i>)	448km	Grey Seals have a foraging range of up to 448km (Carter et al, 2022). This species could be impacted by underwater noise arising from the proposed works. Therefore, the zone of influence for Grey Seal is 448km. This area includes the coastal areas of Ireland from the proposed works south to Loop Head and north to Malin Head, and the west coast of Britain from Islay in Scotland to Plymouth on the south coast of England.
Harbour Seal (<i>Phoca vitulina</i>)	273km	Harbour Seal has a foraging range of up to 273km (Carter et al, 2022). This species could be impacted by underwater noise arising from the proposed works. Therefore, the zone of influence for Harbour Seal is 273km. This area includes the coastal areas of Ireland from the proposed works south to Cape Clear and north to Strangford Lough, and the west coast of Britain from Liverpool to Land's End.
Otter	80km	Otter typically have territories between 2km and 32km in length, however can be as far as 80km (Kruuk, 1995). Therefore, the zone of influence for otter is 80km. This species could be impacted by noise or visual disturbance arising from the proposed works.

Receptor	Zone of Influence	Justification
Twaite Shad	The south and east coasts of Ireland, between Carlingford Lough and Cape Clear.	<p>Shad species have an affinity for coastal habitats (Maitland & Hatton-Ellis, 2003). However, the specific behaviour of Twaite Shad at sea is poorly understood. Acoustic tagging of Twaite Shad in the River Severn detected one tagged fish in the Munster Blackwater, 950km from where it had been tagged. Given this distance the low densities these fish would occur at, and the nature of the proposed works, the zone of influence for Shad is the south and east coasts of Ireland, between Carlingford Lough and Cape Clear.</p> <p>Given that this species is a hearing specialist species, it may be vulnerable to noise disturbance arising from the proposed works.</p>
River Lamprey & Sea Lamprey	The south and east coasts of Ireland, between Carlingford Lough and Cape Clear.	<p>As adults, river Lamprey spend most of their life cycle in coastal and estuarine habitats. Therefore, the zone of influence for River Lamprey is the south and east coasts of Ireland, between Carlingford Lough and Cape Clear.</p> <p>Sea lamprey is widely dispersed at sea and their movements are largely dictated by their host fish. Given the nature of the proposed works and the densities of Sea Lamprey at sea, the zone of influence for this species is restricted to the south and east coasts of Ireland, between Carlingford Lough and Cape Clear.</p>
Atlantic Salmon	The River Barrow, the River Suir and the River Slaney.	Atlantic Salmon migrate between river and the open ocean. Irish Salmon migrate to the Northeast Atlantic. Migrating Salmon move directly between saltwater and freshwater environments and are generally not found in coastal water around Ireland (Rikardsen et al, 2021), therefore a zone of influence includes the watercourses in south-east Ireland, namely the River Barrow, River Suir and the River Slaney, and their connections to the open sea.
Non-breeding seabirds, wildfowl and waders	15km	<p>Non-breeding seabirds, wildfowl and waders generally inhabit estuaries, migrating locally between feeding sites, roosts and between estuaries. The movements of wintering birds between these sites is likely to be between site that are close together (SNH, 2023). Considering this, European sites within 15km of the proposed works have been considered with regards to non-breeding seabirds, wildfowl and waders.</p> <p>These species could be impacted by noise or visual disturbance arising from the proposed works.</p>

Receptor	Zone of Influence	Justification
Breeding seabirds	The south and east coasts of Ireland, between Carlingford Lough and Cape Clear and the western coast of Britain, from Lands End to Anglesey Island.	<p>The zone of influence for breeding seabirds is based on the mean-max foraging ranges of the 15 breeding seabirds in Ireland (Woodward et al., 2019). The mean-max is the maximum range reported for colonies of each species averaged across studies/colonies.</p> <p>Considering the densities of seabirds will decrease over distance, as well as the nature and scale of the proposed works, the zone of influence for breeding seabirds is the south and east coasts of Ireland, between Carlingford Lough and Cape Clear and the western coast of Britain, from Lands End to Anglesey Island is appropriate. Birds from European sites outside this area may occur in the area of the proposed works, however this would be restricted to small numbers of individuals.</p> <p>These species could be impacted by noise or visual disturbance arising from the proposed works.</p>

European sites outside of the zones of influence identified above are excluded due to various factors such as lack of a pathway for impacts (considerable distance, lack of hydrological connection and/or lack of supporting habitat for qualifying interest species in the vicinity of the proposed works) or lack of source of impact (species not vulnerable to the types of impact that may be produced by the proposed works). There are no pathways for impacts arising from the proposed works to reach those sites, therefore there is no potential for likely significant effects to occur to the qualifying interests of those European sites.

Mapping on QGIS 3.40.8 was used to identify sites within each respective zone of influence, using the locations of the proposed works and publicly available Ordnance Survey Ireland maps. This was used in combination with NPWS shapefiles to identify the boundaries of European sites in Ireland, and the publicly available online GIS tools for the counties outside Ireland with the zone of influence. The sites within the zone of influence for each Qualifying Interest is presented below in **Error! Reference source not found.** Given the large number of European Sites which occur within the zone of influence for each Qualifying Interest, descriptions of these sites have not been provided.

Table 3.2 European sites within the zones of influence for each Qualifying Interest species

European site [site code]	Country	Are there potential pathways for impacts from the proposed works to this site? Explain.
European sites within the 'Celtic and Irish Seas' Management Unit of and designated for Harbour Porpoise (JNCC, 2023)		
Rockabill to Dalkey SAC (IE003000)	Ireland	Yes. Individuals from European sites within the Celtic and Irish Seas Marine Mammal Management Unit could be present in the area of the proposed works.
Lambay Island SAC (Site Code IE000204)	Ireland	
Codling Fault Zone SAC (Site code IE003015)	Ireland	
Roaringwater Bay and Islands SAC [Site code IE000101]	Ireland	
Carnsore Point SAC [Site code IE002269]	Ireland	

European site [site code]	Country	Are there potential pathways for impacts from the proposed works to this site? Explain.
Blackwater Bank SAC [Site code IE002953]	Ireland	
Kenmare River SAC [Site code IE002158]	Ireland	
Kilkieran Bay and Islands SAC [Site Code IE002111]	Ireland	
West Connact Coast SAC [Site Code IE002998]	Ireland	
Hook Head SAC [Site Code IE000764]	Ireland	
Bunduff Lough and Machair/Trawalua/Mullaghmore SAC [Site Code IE000625]	Ireland	
Blasket Islands SAC [Site Code IE002172]	Ireland	
Inishmore Island SAC [Site code IE000213]	Ireland	
North Channel SAC [Site code UK0030399]	Northern Ireland	
North Anglesey Marine SAC [Site code UK0030398]	Wales	
Bristol Channel Approaches SAC [Site code UK003039]	Wales	
West Wales Marine SAC [Site Code UK0030397]	Wales	
Récifs et landes de la Hague SAC [Site code FR2500084]	France	
Anse de Vauville SAC [Site code FR2502019]	France	
Chausey SAC [Site code FR2500079]	France	
Estuaire de la Rance SAC [Site code FR5300061]	France	
Cap d'Erquy-Cap Fréhel SAC [Site code FR5300011]	France	
Tregor Goëlo SAC [Site code FR5310070]	France	
Nord Bretagne DH SCI [Site code FR2502022]	France	
Abers - Côte des légendes SCI [Site code FR5300017]	France	
Côtes de Crozon SAC [Site code FR5302006]	France	

European site [site code]	Country	Are there potential pathways for impacts from the proposed works to this site? Explain.
Rivière Leguer, forêts de Beffou, Coat an Noz et Coat an Hay SAC [Site code FR5300008]	France	
Chaussée de Sein SAC [Site code FR5302007]	France	
Banc et récifs de Surtainville SAC [Site code FR2502018]	France	
Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard SAC [Site code FR5300012]	France	
Baie de Saint-Brieuc - Est SAC [Site code FR5300066]	France	
Baie de Morlaix SAC [Site code FR5300015]	France	
Mers Celtiques – Talus du golfe de Gascogne SCI [Site code FR5302015]	France	
Baie du Mont Saint-Michel SAC [Site code FR2500077]	France	
Ouessant-Molène SAC [Site code FR5300018]	France	
European sites within the 'Irish Sea' Marine Mammal Management Unit of and designated for Bottlenose Dolphin (JNCC, 2023)		
Hook Head SAC [Site code IE000764]	Ireland	Yes. Individuals from European sites within the Irish Seas Marine Mammal Management Unit could be present in the area of the proposed works.
Llyn Peninsula and the Sarnau SAC [Site code UK0013117]	Wales	
Cardigan Bay/ Bae Ceredigion SAC [UK0012712]	Wales	
European sites within the Zone of Influence of and designated for Grey Seal.		
Saltee Islands SAC [000707]	Ireland	Yes. The proposed works are within the foraging range of Grey Seals from these SACs.
Lambay Island SAC [000204]	Ireland	
Roaringwater Bay and Islands SAC [000101]	Ireland	
Lundy SAC [UK0013114]	England	
Isles of Scilly Complex SAC [UK0013694]	England	
Pembrokeshire Marine/ Sir Benfro Forol [UK0013116]	Wales	

European site [site code]	Country	Are there potential pathways for impacts from the proposed works to this site? Explain.
Pen Llŷn a'r Sarnau / Llein Peninsula and the Sarnau SAC [UK0013117]	Wales	
European sites within the Zone of Influence of and designated for Harbour Seal.		
Strangford Lough SAC [UK0016618]	Ireland	Yes. The proposed works are within the foraging range of Harbour Seals from this SAC.
Murlough SAC [UK0016612]	Ireland	
Lambay Island SAC [000204]	Ireland	
Slaney River Valley SAC [000781]	Ireland	
Glengariff Harbour and Woods SAC [00090]	Ireland	
Kenmare River SAC [002158]	Ireland	
European sites within the Zone of Influence of and designated for Otter.		
River Barrow and River Nore SAC [Site code IE002162]	Ireland	Yes. The proposed works are within the potential home range of Otter from these SACs.
Slaney River Valley SAC [000781]	Ireland	
European sites within the Zone of Influence of and designated for Twaite Shad.		
Slaney River Valley SAC [000781]	Ireland	Yes. For part of its life cycle, Twaite Shad inhabits coastal waters and is vulnerable to underwater noise.
River Barrow and River Nore SAC [002162]	Ireland	
Lower River Suir SAC [002137]	Ireland	
Blackwater River (Cork/Waterford) SAC [002170]	Ireland	
European sites within the Zone of Influence of and designated for River Lamprey		
Slaney River Valley SAC [000781]	Ireland	Yes. For part of its life cycle, River Lamprey inhabits coastal waters and is vulnerable to underwater noise.
River Barrow and River Nore SAC [002162]	Ireland	
Lower River Suir SAC [002137]	Ireland	
Blackwater River (Cork/Waterford) SAC [002170]	Ireland	
River Boyne and River Blackwater SAC [002299]	Ireland	
Blackwater River (Cork/Waterford) SAC [002170]	Ireland	
European sites within the Zone of Influence of and designated for Sea Lamprey.		
Slaney River Valley SAC [000781]	Ireland	Yes. For part of its life cycle, Sea Lamprey inhabits coastal waters and is vulnerable to underwater noise.

European site [site code]	Country	Are there potential pathways for impacts from the proposed works to this site? Explain.
River Barrow and River Nore SAC [002162]	Ireland	
Lower River Suir SAC [002137]	Ireland	
Blackwater River (Cork/Waterford) SAC [002170]	Ireland	
Blackwater River (Cork/Waterford) SAC [002170]	Ireland	
European sites within the Zone of Influence of and designated for Atlantic Salmon		
Slaney River Valley SAC [000781]	Ireland	Yes. Salmon pass through the work area on their inward and outward migration and are vulnerable to underwater noise.
River Barrow and River Nore SAC [002162]	Ireland	No. The inward and outward migrations of Salmon are direct, therefore, no pathways for impacts between the proposed works and this European site exist
Lower River Suir SAC [002137]	Ireland	No. The inward and outward migrations of Salmon are direct (inset ref), therefore, no pathways for impacts between the proposed works and this European site exist
European sites within the Zone of Influence of and designated for non-breeding birds.		
Wexford Harbour and Slobs SPA [IE004076]	Ireland	Yes. The proposed works are within this European site.
Seas off Wexford SPA [IE004237]	Ireland	Yes. The shortest distance from the proposed works to the site is 10km.
The Raven SPA [IE004019]	Ireland	Yes. The shortest distance from the proposed works to the site is 10km.
European sites within the Zone of Influence of and designated for Breeding Seabirds.		
Wexford Harbour and Slobs SPA [IE004076]	Ireland	Yes. The proposed works are within this European site.
Dalkey Island SPA [IE004172]	Ireland	No. This site is 105km north of the proposed works. This is a greater than the mean-max foraging ranges of the Qualifying Interests. Therefore, no pathways for effects between the proposed works and this European site exist.
Howth Head Coast SPA [IE004113]	Ireland	Yes. This site is 116km north of the proposed works and within the mean-max foraging range of Kittiwake, which is the only Qualifying Interest of this site.
Ireland's Eye SPA [IE004117]	Ireland	Yes. This site is 120km north of the proposed works and within the mean-max foraging range of one of the Qualifying Interests, Kittiwake.
Lambay Island SPA [004069]	Ireland	Yes. This site is 135km north of the proposed works and within the mean-max foraging range of Kittiwake, Fulmar and Puffin.

European site [site code]	Country	Are there potential pathways for impacts from the proposed works to this site? Explain.
South Dublin Bay and River Tolka Estuary SPA [004024]	Ireland	No. This site is 105km north of the proposed works. This is a greater than the mean-max foraging ranges of the Qualifying Interests. Therefore, no pathways for effects between the proposed works and this European site exist.
North West Irish Sea [IE004236]	Ireland	Yes. This site is 115km north of the proposed works and within the mean-max foraging range for the following Qualifying Interests: Fulmar, Manx Shearwater, Lesser Black-backed Gull, Kittiwake and Puffin.
Anglesey Terns / Morwenoliaid Ynys Môn SPA [UK9013061]	UK	No. This site is 165km east of the proposed works. This is a greater than the mean-max foraging ranges of the Qualifying Interests. Therefore, no pathways for effects between the proposed works and this European site exist.
Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA [UK9013121]	UK	No. This site is 170km east of the proposed works. This is a greater than the mean-max foraging ranges of the Qualifying Interests. Therefore, no pathways for effects between the proposed works and this European site exist.
Northern Cardigan Bay / Gogledd Bae Ceredigion SPA [UK9020327]	UK	No. This site is 170km east of the proposed works. This is a greater than the mean-max foraging ranges of the Qualifying Interests. Therefore, no pathways for effects between the proposed works and this European site exist.
Grassholm SPA [UK9014041]	UK	Yes. This site is 125km east of the proposed works and within the mean-max foraging range of the Qualifying Interest, Gannet.
Skomer, Skokholm and the Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA [UK9014051]	UK	Yes. This site is 125km from the proposed works and within the mean-max foraging range of Max Shearwater, Storm Petrel, Lesser Black-backed Gull and Puffin.
Isles of Scilly SPA [UK9020288]	UK	Yes. This site is 240km from the proposed works and within the mean-max foraging range of Storm Petrel.

3.2 Evaluation against Conservation Objectives

Table 3.1 to Table 3.9 below detail the evaluation of the potential for likely significant effects of the proposed works, in view of the Conservation Objectives of the sites identified in Section 3.1. As explained in Sections 1.3 and 1.4, AA is carried out in view of the Conservation Objectives of the relevant European sites, which are in turn defined by detailed Attributes and corresponding Targets. Therefore, the evaluation of whether or not an impact could have the potential to result in likely significant effects (in view of the Conservation Objective in question) is made with regard to these Attributes and Targets.

The Conservation Objectives and associated Attributes and Targets for each respective Qualifying Interest species are the same for all sites in which the Qualifying Interest is designated, therefore the evaluation has been carried out in view of the type of impact which could result in a significant effect. The evaluation thus applies for all

sites within the zone of influence for which the Qualifying Interest is designated. To carry out the evaluation for each individual site would lead to undue repetition.

Table 3.1 Evaluation of the likely effects of underwater noise disturbance from the proposed works in view of the Conservation Objectives of the sites where marine mammals are a qualifying interest

Qualifying Interest	Conservation Objective	Does the proposed works provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Harbour Porpoise (<i>Phocoena phocoena</i>)	To maintain (or restore) the favourable conservation condition of Harbour Porpoise in the sites in which it is designated.	Underwater noise has the potential to cause a range of impacts to marine life including to injury (hearing damage) and behavioural changes. Hearing damage injury to marine mammals is known as threshold shift can be either permanent (permanent threshold shift, PTS) or temporary (temporary threshold shift, TTS). Behavioural changes can include communication disruption, altered foraging behaviour or displacement from the area. Noise from anthropogenic sources have been measured to assess the levels which could cause injury to marine mammals. These are used as thresholds and are commonly used to assess the level of risk associated with noise producing activities in the marine environment. The lowest threshold for TTS in cetaceans is 196 dB and for pinnipeds it is 181 dB for non-pulsed sound. The sub-bottom profiler and cable percussive piling are the only elements of the proposed works that will emit sound at frequencies audible to marine mammals and at sound levels that exceed their TTS limits. Therefore, likely significant effects on the Conservation Objectives for these Qualifying Interest species resulting from the proposed works cannot be ruled out.	Yes
Common Bottlenose Dolphin (<i>Tursiops truncatus</i>)	To maintain (or restore) the favourable conservation condition Bottlenose Dolphin in the sites in which it is designated.		Yes
Harbour Seal (<i>Phoca vitulina</i>)	To maintain (or restore) the favourable conservation condition of Harbour Seal in the sites in which it is designated.		Yes
Grey Seal (<i>Halichoerus grypus</i>)	To maintain (or restore) the favourable conservation condition of Grey Seal in the sites in which it is designated.		Yes

Table 3.2 Evaluation of the likely effects of airborne noise and visual disturbance from the proposed works in view of the Conservation Objectives of the sites where Otter is a qualifying interest

Qualifying Interest	Conservation Objective	Does the proposed works provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Otter	To maintain (or restore) the favourable conservation condition of Otter in the sites in which it is designated.	<p>Otter have been recorded in the immediate vicinity of the proposed surveys as well as Lower Slaney Estuary and Wexford Harbour (NBDC, 2025). A survey of the south bank of the River Slaney in the vicinity of the proposed surveys was undertaken in April 2024 and December 2025. Otter were seen occasionally during wintering bird surveys undertaken over the preceding years.</p> <p>Otter are likely to be in the River Slaney during the proposed works. Temporary disturbance could occur if sampling is carried out near an active otter holt. However, the presence of the heritage park, the N11 and occasional boat traffic in the area means that otter in the will be habituated to the presence of vessels and people. The proposed works will occur in a small area for a brief period of time i.e. hours and the noise levels are below the level that could cause injury to Otter. Given these findings, there will be no disturbance impacts or acoustic-related injuries to otters as a result of the environmental surveys.</p> <p>There is also a potential risk of suspending contaminants from the sediment during sampling which could lead to heavy metals or other contaminants entering the food chain. However, given the small volume of sediment involved and given the dilution capacity of the Slaney Estuary, this risk is negligible.</p> <p>Therefore, it can be concluded beyond reasonable scientific doubt that the project will not significantly affect the European sites listed in Table 3.2 in view of the Conservation Objectives for Otter.</p>	No

Table 3.3 Evaluation of the likely effects of underwater noise disturbance from the proposed works in view of the Conservation Objectives of the sites where Twaite Shad is a Qualifying Interest.

Qualifying Interest	Conservation Objective	Does the proposed works provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Twaite Shad	To maintain (or restore) the favourable conservation condition of Twaite Shad in the sites in which it is designated.	<p>Twaite shad are found in coastal waters, and spawn close to the upper tidal limit, which is close to Enniscorthy c. 20km upstream. This species is a hearing specialist species, and is vulnerable to noise disturbance arising from the proposed works. The sound emittance from the cable percussive boring and the sub-bottom profiler are within the hearing range of Twaite Shad and will emit noise at levels that could cause injury.</p> <p>There is a risk of suspending contaminants from the sediment during sampling which could lead to heavy metals or other contaminants entering the water column, which may deteriorate the surrounding habitat. However, given the small volume of sediment (5 litres per site) and the shallow grab (15 cm), and given the dilution capacity of the Slaney Estuary, this risk is negligible.</p> <p>Therefore, likely significant effects on the Conservation Objectives for Twaite Shad resulting from the proposed works cannot be ruled out.</p>	Yes

Table 3.6 Evaluation of the likely effects of underwater noise disturbance from the proposed works in view of the Conservation Objectives of the sites where River Lamprey and Sea Lamprey are a Qualifying Interest.

Qualifying Interest	Conservation Objective	Does the proposed works provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
River Lamprey and Sea Lamprey	To restore the favourable conservation condition of River Lamprey and Sea Lamprey in the Slaney River Valley SAC.	<p>The Attributes of these Conservation Objectives focus on “<i>Distribution</i>”, “<i>Population structure of juveniles</i>”, “<i>Juvenile density in fine sediment</i>”, “<i>Extent and distribution of spawning habitat</i>” and “<i>Availability of juvenile habitat</i>”.</p> <p>The sound emittance from the cable percussive boring and the sub-bottom profiler are within the hearing range of lamprey species and will emit noise at levels that could cause injury.</p> <p>There is a risk of suspending contaminants from the sediment during sampling which could lead to heavy metals or other contaminants entering the water column, which may deteriorate the surrounding habitat. However, given the small volume of sediment (5 litres per site) and the shallow grab (15 cm), and given the dilution capacity of the Slaney Estuary, this risk is negligible.</p> <p>Therefore, likely significant effects on the Conservation Objectives for these Qualifying Interest species resulting from the proposed works cannot be ruled out.</p>	Yes

Table 3.7 Evaluation of the likely effects of underwater noise disturbance from the proposed works in view of the Conservation Objectives of the sites where Atlantic Salmon is a Qualifying Interest.

Qualifying Interest	Conservation Objective	Does the proposed works provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Atlantic Salmon	To restore the favourable conservation condition of Atlantic Salmon in the Slaney River Valley SAC.	<p>The Attributes of this Conservation Objective focuses on “<i>Distribution: extent of anadromy</i>”, “<i>Adult spawning fish number</i>”, “<i>Salmon fry abundance</i>”, “<i>Out-migrating smolt abundance</i>”, “<i>Number and distribution of redds</i>” and “<i>Water quality</i>”.</p> <p>The sound emittance from the cable percussive boring and the sub-bottom profiler are within the hearing range of Atlantic Salmon and will emit noise at levels that could cause injury.</p> <p>.</p> <p>There is a risk of suspending contaminants from the sediment during sampling which could lead to heavy metals or other contaminants entering the water column, which may deteriorate the surrounding habitat. However, given the small volume of sediment (5 litres per site) and the shallow grab (15 cm), and given the dilution capacity of the Slaney Estuary, this risk is negligible.</p> <p>Therefore, likely significant effects on the Conservation Objectives for Atlantic Salmon resulting from the proposed works cannot be ruled out.</p>	Yes

Table 3.8 Evaluation of the likely effects of airborne noise and visual disturbance from the proposed works in view of the Conservation Objectives of the sites where non-breeding wader, waterfowl, seabirds and Hen Harrier are a Qualifying Interest.

Qualifying Interest	Conservation Objective	Does the proposed works provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
<p>Non-breeding Seabirds</p> <p>Including:</p> <p>Light-bellied Brent Goose</p> <p>Shelduck</p> <p>Ringed Plover</p> <p>Golden Plover</p> <p>Grey Plover</p> <p>Bar-tailed Godwit</p> <p>Great Crested Grebe</p> <p>Pintail</p> <p>Goldeneye</p> <p>Red-breasted Merganser</p> <p>Oystercatcher</p> <p>Knot</p> <p>Dunlin</p> <p>Black-tailed Godwit</p> <p>Redshank</p> <p>Teal</p> <p>Shoveler</p> <p>Sanderling</p> <p>Curlew</p> <p>Turnstone</p>	<p>To maintain or restore the favourable conservation condition of non-breeding seabird species in the sites in which these species are designated.</p>	<p>Considering that the proposed works will take place over a short period of time and in proximity to the existing N11 and the R730, there is a higher level of ambient noise and visual cues due to the road traffic along and over the estuary and the area that would be impacted by noise will be within a small area around the vessels required for the proposed works. Furthermore, any birds utilising this area are also likely to have a level of habituation to sources of noise due to the close proximity of the existing roads, the heritage park and shipping traffic downstream in Wexford Harbour.</p> <p>There is a risk of suspended contaminants from the sediment during sampling which could lead to heavy metals or other contaminants entering the water column, which may deteriorate these habitats. However, given the small volume of sediment involved, and given the dilution capacity of the Slaney Estuary, this risk is negligible.</p> <p>Therefore, it can be concluded beyond reasonable scientific doubt that the project will not significantly affect this European site in view of its Conservation Objectives for these Qualifying Interests.</p>	<p>No</p>

Qualifying Interest	Conservation Objective	Does the proposed works provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Great Northern Diver Little Gull Hen Harrier Wetland and Waterbirds [A999]			

Table 3.9 Evaluation of the likely effects of airborne noise and visual disturbance from the proposed works in view of the Conservation Objectives of the sites where breeding seabirds are a qualifying interest

Qualifying Interest	Conservation Objective	Does the proposed works provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
Breeding Seabirds Little Tern Lesser Black-backed Gull Puffin Manx Shearwater Kittiwake Fulmar Storm Petrel Gannet	To maintain (or restore) the favourable conservation condition of breeding seabirds in the sites in which these species are designated.	<p>Little Tern</p> <p>Little Tern nest on the shingle islands and beaches around Wexford Harbour. The mean-max foraging range for Little Tern is 5km. The habitats in which Little Terns nest are dynamic and vary year to year. It is possible, although highly unlikely that Little Tern colonies could be within 5km of the proposed works. Given that this species primarily forages in deep coastal waters close to breeding colonies, the area surrounding the proposed works does not provide optimal foraging habitat. Therefore, the proposed works do not have the potential to cause noise disturbance to foraging Little Tern.</p> <p>Therefore, it can be concluded that noise and visual disturbance is unlikely to occur, or any such impacts will be limited to very few individuals and will not interfere with the achievement of the Conservation Objectives for these Qualifying Interests tern species.</p> <p>Lesser Black-backed Gull</p> <p>Lesser Black-backed Gull commonly breeds in urban environments (Keogh & Lauder (2021), often nesting on rooftops. No nests will be impacted by the proposed works and the individuals that may be present during the works would have a high level of habituation to human activity and noise. Therefore, the works will not result in disturbance to breeding Lesser Black-backed Gull.</p> <p>The breeding populations of the SPAs designated for Lesser Black-backed Gull are over 100km away from the proposed works. Given that these birds will preferentially forage in the waters surrounding the nesting colonies, the area surrounding the proposed works does not provide optimal foraging habitat, and very few individuals, if any, from breeding colonies would realistically occur within close proximity to the works. Therefore, the proposed works do not have the potential to cause noise disturbance resulting in likely significant effects to foraging Lesser Black-backed Gull.</p> <p><u>Other Breeding seabirds</u></p> <p>Puffin, Manx Shearwater, Kittiwake, Fulmar, Storm Petrel, Gannet.</p> <p>These species breed on islands off the coast of Ireland and forage in deep waters along the east coast during summer. Therefore, there is no potential for these species to occur within the vicinity of the proposed works and thus there is no potential for the proposed works to cause noise or visual disturbance that would cause impacts to these species.</p>	No

Qualifying Interest	Conservation Objective	Does the proposed works provide for any potential delay or interruption in the achievement of this Conservation Objective, as defined by its Attributes and Targets?	Likely Significant Effect
		Therefore, it can be concluded beyond reasonable scientific doubt that the project will not significantly affect this European site in view of its Conservation Objectives for these Qualifying Interests.	

4.0 IN-COMBINATION EFFECTS

Article 6(3) of the Habitats Directive requires that AA 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 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 past, present or foreseeable future plans or projects must also be assessed.

In the case of the proposed works, this SISSA Report has found that the proposed works, individually, is likely to have significant effects on the European sites identified in Table 3.2. Therefore, the assessment of the proposed works must proceed to Stage 2 (AA). The in-combination assessment of likely significant effects on these European sites arising from the proposed works, in combination with other plans or projects, should be undertaken at that stage.

5.0 CONCLUSION

In accordance with Article 6(3) of the Habitats Directive, Part 5 of the Birds and Natural Habitats Regulations, relevant case law, established best practice and the Precautionary Principle, this SISSA Report has considered the proposed works and their potential to significantly affect the integrity of European sites. This report has concluded, on the basis of objective information, that the proposed works, either individually or in combination with other plans or projects, have the potential to give rise to impacts which would constitute significant effects on the European sites identified in Table 3.2.

In light of this conclusion, it is the considered opinion of ROD, as the author of this SISSA Report, that the Marine Area Regulatory Authority (MARA), as the Competent Authority in this case, in completing its AA Screening in respect of the proposed works, should find that the proposed works, either individually or in combination with other plans or projects, is likely to have a significant effect the European sites identified in Table 3.2, in view of their Conservation Objectives. Therefore, it is the recommendation of the author of this SISSA Report, that MARA should determine that AA is required in respect of the proposed works.

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