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N11/N25 Oilgate to Rosslare Harbour Scheme
River Slaney MUL Application

Attachment 4.3 - Report for the Screening of Appropriate Assessment and Natura Impact Statement

June 2026

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Mott MacDonald
South Block
Rockfield
Dundrum
Dublin 16
D16 R6V0
Ireland

T +353 (0)1 2916 700
mottmac.com

Wexford County Council,
Roads Department,
Wexford County Council,
Carricklawn,
Wexford Town.
Y35 WY93

Tel: (053) 9196000

N11/N25 Oilgate to Rosslare Harbour Scheme River Slaney MUL Application

Attachment 4.3 - Report for the Screening of Appropriate Assessment and Natura Impact Statement

June 2026

Directors: B Williams BE (Hons) MEngSc CEng FIEI FConsEI (Managing), R Jefferson MSCSI MRICS BSc Dip Con Law, T Keane BE (Hons) CEng MIET, D Kelly BEng (Hons) CEng FIEI, J H K Harris BSc CEng (British), C H Travers MEng CEng (British), R Risdon, E G Roud FCA MA (Hons) Economics (British)
Innealtoirí Comhairleach (Consulting Engineers)
Company Secretary: S O'Donovan BBS (Hons), CTA, FCCA
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Contents

1 Introduction 1
1.1 Project Overview 1
1.2 Survey Location 1
1.3 Requirement for Appropriate Assessment 2
1.3.1 European Law 2
1.3.2 Irish Law 3
1.4 Definitions 3
1.4.1 European Sites and Features 3
1.5 Statement of Competence 4
1.6 Methodology 4
1.6.1 Desk study 5
1.6.2 Field Surveys 5
1.7 Limitations 7

2 Screening for Appropriate Assessment 8
2.1 Process for Screening for Appropriate Assessment 8
2.2 Management of European Sites 8
2.3 Proposed Survey Works Description 8
2.3.1 Hydrographic Survey (Bathymetric Survey) 10
2.3.2 Archaeological Wade and Metal Detector Survey 10
2.3.3 Subtidal and Intertidal Surveys 11
2.4 European Sites in the Zone of Influence 13
2.4.1 Direct Removal and Alteration of Existing Habitat 14
2.4.2 Increased Human Presence 14
2.4.3 Pollution from Spills and Leakages 14
2.4.4 Silt and Sedimentation 14
2.4.5 Disturbance of species 14
2.4.6 Assessment of Mobile Annex II Marine Species 15
2.5 Potential Likely Significant Effects on European Sites 18
2.6 Plans and Projects which might Act In Combination 35
2.7 Summary of Potentially Significant Effects 36
2.8 Appropriate Assessment Screening Conclusion 37

3 Natura Impact Statement 38
3.1 Description of Survey Works 38
3.2 Description of the Receiving Environment 38
3.2.1 Noise Levels in the aquatic Environment 38
3.2.2 Habitats 39
3.2.3 Otters 39
3.2.4 Birds 39

3.2.5 Marine Mammals 40
3.2.6 Aquatic Environment 40
3.2.7 European Sites 40
3.3 Likely Significant Effects 56
3.3.1 Potential Impact Types 56
3.3.2 Potential for Adverse Effects on Slaney River Valley SAC 62
3.3.3 Potential for Adverse Effects on Saltee Island SAC 77
3.3.4 Potential for Adverse Effects on Wexford Harbour and Slobs SPA 80
3.3.5 Potential for Adverse Effects on Blackwater Bank SAC 83
3.3.6 Potential for Adverse Effects on Carnsore Point SAC 85
3.3.7 Plans and Projects which might Act In-Combination 87
3.4 Mitigation Measures 90
3.4.1 Pollution Controls (aquatic species, birds, marine mammals and otter) 90
3.4.2 Noise and Vibration (birds, marine mammals, migratory fish and otter) 91
3.4.3 Physical Disturbance (benthic marine habitats) 96
3.4.4 Vessel Movements (birds, marine mammals and otter) 96
3.4.5 Good Practice: Avoid temporary disturbance to birds 96
3.4.6 Scheduling and Coordination of Marine Works 96

4 Conclusion 97

Appendices 98

A. Location of the Proposed Surveys in relation to European sites 99

B. Location of the Proposed Surveys 100

C. Planning Applications 101

D. MARA MAC and MUL Determined Applications 121

Tables

Table 2.1: Special Area of Conservation (SAC) and Designated Annex II and Annex IV Marine Mammal Species Distance to the Proposed Surveys 17
Table 2.2: Source Pathway Receptor Assessment 20
Table 3.1: Generic information on Underwater Noise Levels for Survey Techniques 38
Table 3.2: Qualifying Interests for Slaney River Valley SAC 43
Table 3.3: Qualifying Interests for Saltee Islands SAC 47
Table 3.4: Special Conservation Interests for Wexford Harbour and Slobs SPA 49

Table 3.5: Qualifying Interests for Blackwater Bank SAC 53
Table 3.6: Qualifying Interests for Carnsore Point SAC 55
Table 3.7: Generalised Hearing Range of the cetacean Hearing Groups 56
Table 3.8: Cetacean Auditory Injury Onset threshold 56
Table 3.9: Cetacean TTS Onset Thresholds 56
Table 3.10: Potential for Impacts in the Absence of Mitigation 61
Table 3.11: Assessment of Potential for Adverse Effects on the Site Integrity of Slaney River Valley SAC – Otter (*Lutra lutra*) 63
Table 3.12: Assessment of Potential for Adverse Effects on the Site Integrity of Slaney River Valley SAC – Sea lamprey (*Petromyzon marinus*), Brook lamprey (*Lampetra planeri*) and River lamprey (*Lampetra fluviatilis*) 65
Table 3.13: Assessment of Potential for Adverse Effects on the Site Integrity of Slaney River Valley SAC – Twaite Shad (*Alosa fallax*) 69
Table 3.14: Assessment of Potential for Adverse Effects on the Site Integrity of Slaney River Valley SAC – Atlantic salmon (*Salmo salar*) 73
Table 3.15: Assessment of Potential for Adverse Effects on the Site Integrity of Slaney River Valley SAC – Harbour seal (*Phoca vitulina*) 76
Table 3.16: Assessment of Potential for Adverse Effects on the Site Integrity of Saltee Island SAC – Grey seal (*Halichoerus grypus*) 78
Table 3.17: Assessment of Potential for Adverse Effects on the Site Integrity of Wexford Harbour and Slobs SPA – Wintering (SCI) Birds 81
Table 3.18: Assessment of Potential for Adverse Effects on the Site Integrity of Wexford Harbour and Slobs SPA – Potential Breeding birds – Little Grebe (*Tachybaptus ruficollis*), Cormorant (*Phalacrocorax carbo*), Grey Heron (*Ardea cinerea*), Shelduck (*Tadorna tadorna*), Coot (*Fulica atra*), Black-headed Gull (Chroicocephalus ridibundus), Lesser Black-backed Gull (Larus fuscus) and Little tern (*Sterna alifrons*). 81
Table 3.19: Assessment of Potential for Adverse Effects on the Site Integrity of Blackwater Bank SAC – Harbour porpoise (*Phocoena phocoena*) 84
Table 3.20: Assessment of Potential for Adverse Effects on the Site Integrity of Carnsore Point SAC – Harbour porpoise (*Phocoena phocoena*) 86

Figures

Figure 1.1: Proposed Maritime Usage Licence Area 2
Figure 2.1: Location of Proposed Surveys 9
Figure 2.2: Natura 2000 Sites Located within 15km of the Proposed Survey Area 19

Tables – Appendices

Table C.1: In-Combination Effects Assessment 102
Table D.1: In-Combination Effects Assessment 122

1 Introduction

This Report for the Screening of Appropriate Assessment and Natura Impact Statement (June 2026) is updated in response to Maritime Area Regulatory Authority's Request (Reference no. MUL260047) dated 13 October 2026. All changes made in this report are highlighted in turquoise text (as per this text) and deleted text is shown in strikethrough.

1.1 Project Overview

Mott MacDonald Ireland Limited, on behalf of Wexford County Council (WCC) ('the Applicant'), are submitting a Maritime Usage Licence (MUL) application for site investigation surveys at the River Slaney, northwest of Wexford town. The MUL is being sought solely to facilitate site investigation surveys associated with the proposed N11/N25 Oilgate to Rosslare Harbour Scheme ('the proposed scheme').

A description of the surveys proposed to inform the design of the scheme, specifically works in/near the crossing of the River Slaney is provided in Section 2.3.

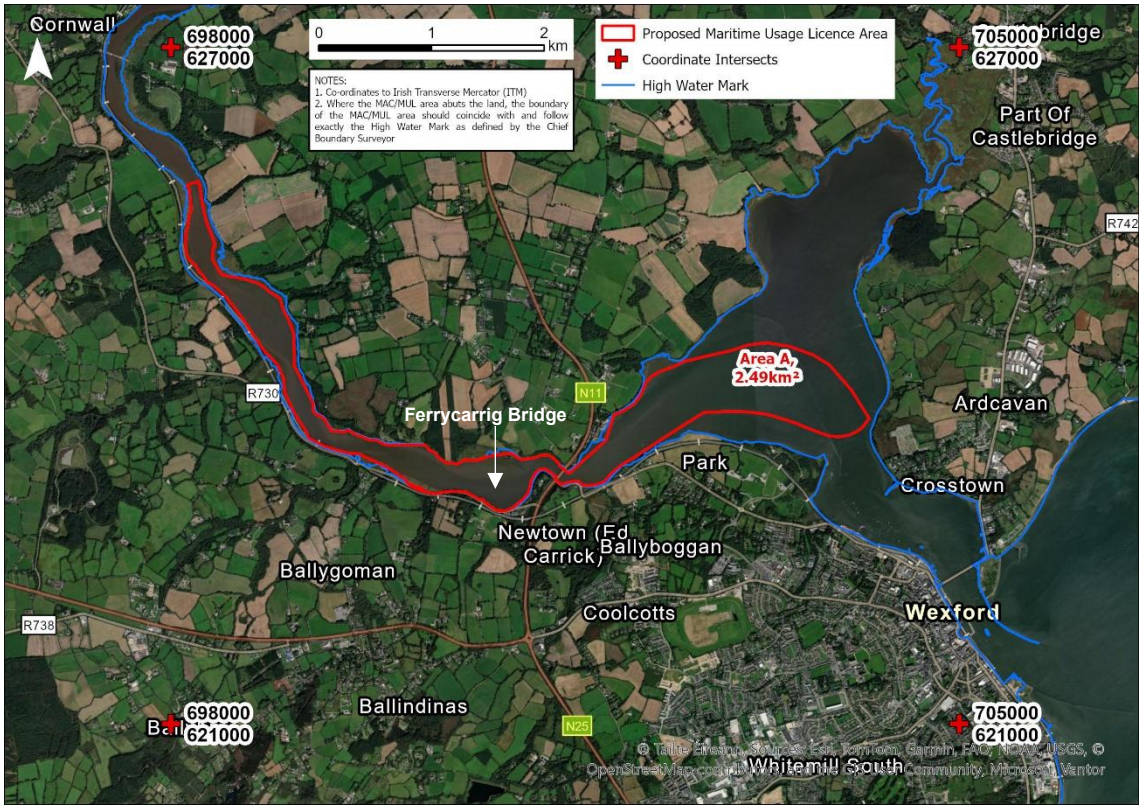
This report provides a Screening of Appropriate Assessment and Natura Impact Statement for proposed surveys, in line with Question 4.3 of the Maritime Usage Licence (MUL) General Application Form (MUL1). For the purposes of this report the site investigations surveys are described as "the Proposed surveys or Proposed Development".

1.2 Survey Location

The proposed surveys will be undertaken at the River Slaney west of Wexford town, Co. Wexford. The MUL application area is approximately 2.49km^2, as shown in Figure 1.1.

The western extent of the MUL area is approximately 4.8km west of the existing Ferrycarrig bridge (along the river), near the townlands of Carigmannon and Newtown Lower. The eastern extent of the MUL area is approximately 3km east of the Ferrycarrig bridge (along the river), near the townlands of Park and Crosstown. The Ferrycarrig bridge carries the existing N11 over the River Slaney.

Figure 1.1: Proposed Maritime Usage Licence Area



Source: Mott MacDonald, 2026

1.3 Requirement for Appropriate Assessment

1.3.1 European Law

Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora ('the Habitats Directive') is European Community legislation aimed at nature conservation.

The Habitats Directive requires that where a plan or project is likely to have a significant effect on a European site (s), (and where the plan or project is not directly connected with or necessary to the nature conservation management of the European site), the plan or project will be subject to 'Appropriate Assessment' (AA) to identify any implications for the European site(s) in view of the site's Conservation Objectives. Specifically, Article 6(3) of the Habitats Directive states:

"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 site 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."

Case law of the Court of Justice of the European Union (CJEU) has determined that AA is required, if likely significant effects cannot be excluded on the basis of objective information. Case law has also clarified that measures intended to avoid or reduce harmful effects on

European sites, must not be considered when determining whether it is necessary to carry out an AA.

1.3.2 Irish Law

In the context of the proposed survey works, the Habitats Directive is transposed into Irish law by Part XAB of the Planning and Development Act 2000 (as amended) ('the Planning Acts'), and the Planning and Development Regulations 2000 as amended ('the Planning Regulations').

Under Section 177U (1) of the Planning Acts, a screening for AA of the Proposed Development shall be carried out by the competent authority (in this case, the Maritime Area Regulatory Authority (MARA)) to assess in view of best scientific knowledge, if the Proposed Development, individually or in combination with other plans or projects, is likely to have a significant effect(s) on any European sites.

Under Section 177U (4) of the Planning Acts, the competent authority (in this case, Wicklow County Council) shall determine that an AA of a Proposed Development is required if it *cannot be excluded* [emphasis added], on the basis of objective information, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site(s).

AA is the process provided for under Article 6 (3) of the Habitats Directive to determine whether a project or plan could 'adversely affect the integrity' of any European sites, either alone or in-combination with other plans or projects, in light of the conservation objectives of the European sites in question.

Under Section 177V (1), An appropriate assessment *shall include a determination by the competent authority under Article 6.3 of the Habitats Directive as to whether or not a draft Land use plan or Proposed Development would adversely affect the integrity of a European site*

Under Section 177V (2), the competent authority (in this case, MARA) shall, in carrying out an Appropriate Assessment under subsection (1), "*take into account each of the following matters*:

a. the Natura Impact Report or Natura Impact Statement, as appropriate;
b. any supplemental information furnished in relation to any such report or statement;
c. if appropriate, any additional information sought by the authority and furnished by the applicant in relation to a Natura Impact Statement;
d. any additional information furnished to the competent authority at its request in relation to a Natura Impact Report;
e. any information or advice obtained by the competent authority;
f. if appropriate, any written submissions or observations made to the competent authority in relation to the application for consent for Proposed Development;
g. any other relevant information.

1.4 Definitions

1.4.1 European Sites and Features

A network of European sites of conservation importance has been identified by each Member State, hosting habitats and/or species identified in the Directives as needing to be either maintained at or returned to 'favourable conservation status'.

The sites of conservation importance known as European sites comprise the Natura 2000 network. European sites comprise areas designated as Special Areas of Conservation (SACs) and/or Special Protection Areas (SPAs) in Ireland. The process of designating cSACs as SACs

is ongoing in Ireland. Candidate sites (In Ireland, comprising cSACs) have the same legal protection as those whose designation is complete.

The designation features of SACs are referred to as Qualifying Interests (QIs), and these comprise both species (excluding birds), and habitats.

The designation features of SPAs are referred to as Special Conservation Interests (SCIs), and these comprise bird species, as well as wetland bird habitats.

The designation features of European sites are identified in the Statutory Instruments for European sites where such sites have completed the designation process. In all cases, designation features are also identified in Conservation Objectives published by the National Park and Wildlife Service (NPWS). Any Conservation Objectives referred to in this Natura Impact Statement (NIS) are referenced to identify the date of publication and version number.

1.5 Statement of Competence

Authors

Ryan Boyle: BSc (Hons), MSc Senior Ecologist, Mott MacDonald. Ryan is a qualified Senior Ecologist with ten years of experience in the ecological, environmental and conservation sector. Experience in conducting a number of surveys such as bat activity, Phase 1 habitat surveys, preliminary ecological appraisals, environmental farming schemes, soil carbon surveys and river fly surveys. Experienced in species identification, management and mitigation, badger surveys, otter surveys, biodiversity checklists, bat roost potential surveys, newt surveys, lizard surveys, pine marten surveys, breeding bird surveys, winter bird surveys, vantage point surveys, collision risk assessments, Ecological Clerk of Works duties supervising works close to sensitive ecological receptors. Experience on working on a wide variety of projects of varying scale across Northern Ireland, the Republic of Ireland and England and carrying out Appropriate Assessment Screening reports, Natura Impact Statements, Strategic Environmental Assessment and biodiversity chapters for larger EIA submissions. Training as an Ecological Detection Dog Handler and proficient in the use of infra-red/night vision camera equipment and thermal imaging technology.

Roger Macnaughton: MSc, BSc (Hons), MCIEEM (Senior Associate Ecologist. Mott MacDonald). Roger is a qualified and experienced environmental consultant specialising in ecology. He has over twenty-four year's professional experience in the environmental consultancy sector and an additional seven years of primarily research-based experience in freshwater and marine ecology. He specialises in the delivery of Ecological Impact Assessment (EcIA) and Appropriate Assessment (AA) for a broad range of projects potentially affecting; terrestrial, freshwater and marine ecology. His project related experience to date includes; two 400kV overhead lines, five 110kV overhead lines, overhead line up-rates, electricity substations, underground power cables, 35 terrestrial wind farms, two marine wind farms and five solar farms. Roger has extensive experience carrying out and co-ordinating walkover field surveys for protected species (birds, mammals, amphibians), along with Fossitt (2000) botanic/ habitat surveys, aquatic and fishery assessment, and targeted invasive species surveys.

1.6 Methodology

This report has been prepared having regard to European Commission and Irish departmental guidance on AA methodologies including:

- EC (2021) Assessment of Plans and Projects in Relation to Natura 2000 Sites – Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC
- EC (2018) Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC Commission Notice C (2018) 7621

- DEHLG (2009) Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities (Revised 2010).

1.6.1 Desk study

This assessment includes a desk-based review of available records of protected species and habitats including the following sources:

- Backing Documents and Maps prepared in accordance with Article 17 of the Habitats Directive;
- European site documentation including Conservation Objectives, NPWS
- NPWS Site Synopses, Natura Standard Data Forms available from NPWS;
- Published and unpublished NPWS reports on protected habitats and species including Irish Wildlife Manual reports, and
- Existing relevant mapping and databases e.g. waterbody status, species and habitat distribution etc. (sourced from the Environmental Protection Agency - http://gis.epa.ie/, the National Biodiversity Data Centre - http://maps.biodiversityireland.ie and the NPWS - http://www.npws.ie/mapsanddata/

1.6.2 Field Surveys

Ecological field surveys were carried out by suitably experienced Mott MacDonald ecologists as set out including personnel outlined in the Statement of Competence (Section 1.5).

Ecology surveys undertaken are listed below. **No surveys have been conducted to date that involved access below the marine High Water Mark (HWM).**

1.6.2.1 Walkover Surveys

Field surveys were carried out subject to landowner agreement along the entire route of the proposed N11/N25 Oilgate to Rosslare Harbour and Rosslare Europort access road as part of this proposal which included riverbank areas at the proposed Slaney River crossing point at the proposed survey area. The surveys recorded habitats, breeding birds, protected non volant mammal sites/ signs, potential bat roost features, watercourses and invasive species. Surveys were conducted regularly throughout the year from 2021 to 2025.

Habitats were classified to level three according to the scheme outlined in "*A Guide to Habitats in Ireland*"[1]. Fit to European Annex 1 habitats was informed with reference to the EU Interpretation Manual for EU Habitats[2] having regard to the Irish Vegetation Classification[3] where relevant.

Habitat survey methods were conducted in accordance with '*Best Practice Guidance for Habitat Survey and Mapping*'[4]. During site walkovers searches were conducted for Invasive species listed under the Third Schedule to the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011), as amended.

Bespoke field surveys were not conducted for a variety of Annex II species, either because suitable habitats were absent, no risks will arise to these species or because the species have restricted distributions and are known not to occur based on desktop data (including Favourable

[1] Fossit, J (2000) A Guide to Habitats in Ireland"

[2] European Commission, (2013) Interpretation Manual of European Union Habitats. EUR 28.Nature ENV B.3.

[3] https://biodiversityireland.shinyapps.io/vegetation-classification/

[4] Smith G., O'Donoghue, P., O'Hora, K., Delaney, E., (2011) Best Practice Guidance for Habitat Survey and Mapping'

Reference Range and Current Range in NPWS[5,8]. These species, for which field surveys were not required, were:

- Lesser horseshoe bat (*Rhinolophus hipposideros*), whose populations are restricted to the western Atlantic seaboard, and whose nearest occurrence (associated with SAC populations) is approximately 62km west of the Proposed Development site.
- Kerry slug (*Geomaculosus maculosus*), whose distribution is the south-west Ireland with localised outlier populations in Galway[6] and Tipperary[7];
- All other Annex II species whose Favourable Reference Range does not overlap the ZoI of the Proposed Development, as identified in NPWS Article 17 Reporting documents[2,8]

1.6.2.2 Wintering Birds

Surveys (vantage point surveys and winter walkover surveys) were undertaken from November to March between the years 2021 and 2026, with the exception of Winter 2024/2025. Based on the results of a desk study and reconnaissance site visits, the likely importance of the site for bird species was determined and, adopting a precautionary approach, a site-specific scope for the ornithological field surveys was developed. Target species included all Special Conservation Interest (SCI) waterfowl of Wexford Harbour and Slobs SPA which includes the study area for this MUL application. The surveys also covered all birds listed on **Annex I** of the EU Birds Directive (2009/147/EC), and species that are an SCI of a SPA within 15km of the site[9], species listed on the **Red List** of Birds of Conservation Concern in Ireland[10], and species considered sensitive to this type of development (i.e., raptor species).

Vantage point surveys were undertaken in accordance with Scottish Natural Heritage (SNH)[11,12] to monitor flight activity overlooking part of the study area for the MUL application. Surveys were conducted from fixed point vantage points at the N11/N25 Oilgate to Rosslare Harbour and Rosslare Europort access road's proposed bridge crossing of the Slaney River, covering potentially ecologically sensitive areas of the site (i.e. areas in proximity to waterbodies). Survey methodology followed SNH[11]. The surveyor collected data on bird observations and flight activity from a scanning arc of 180° to a 2km radius at the fixed vantage point locations for a 3-hour watch at the proposed Slaney River crossing point. Flight activity of target species was mapped and recorded in addition to the presence of any non-target species was recorded to inform the evaluation of supporting habitat.

1.6.2.3 Mammals

The survey for evidence of otter was carried out during the walkover surveys in particular where water courses were crossed or encountered along the proposed route. These surveys followed

[5] NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Unpublished NPWS report.

[6] Kearny (2010) Kerry slug (*Geomalacus maculosus* Allaman 1843) recorded at Lettercraffroe, Co. Galway. Irish Naturalists' Journal. 31: 68-69.

[7] Curtin, M. (2021) Discovery of Kerry Slug (*Geomalacus maculosus*) in Co. Tipperary. Irish Naturalists' Journal 38: 43-45.

[8] NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Unpublished NPWS report.

[9] It is noted that a determination will be made on whether there is connectivity between the SPAs and the site at the appropriate assessment stage.

[10] Gilbert, G., Stanbury, S., Lewis, L., (2021) Birds of Conservation Concern in Ireland 4: 2020-2026.

[11] Scottish Natural Heritage (2016) Assessment and mitigation of impacts of power lines and guyed meteorological masts on birds. Scottish Natural Heritage, Inverness, Scotland.

[12] Scottish Natural Heritage (2017). Recommended bird survey methods to inform impact assessment of onshore wind farms. Scottish Natural Heritage, Inverness, Scotland.

Monitoring the Otter *Lutra lutra*[13]. The extent of survey area was defined with regard to '*Guidelines for the Treatment of Otters during the Construction of National Road Schemes*'[14].

1.6.2.4 Aquatic Surveys

Detailed assessments were carried out by Ecofact Biodiversity and Ecology, a total of 29 survey sites were selected as part of the wider N11/N25 Oilgate to Rosslare Harbour and Rosslare Europort access road proposal, including within the Slaney River Valley SAC. All sites were initially surveyed during 2021/2022. Updated surveys were then completed during September 2024 and involved revisiting al the original sites with full updated surveys at 11 selected sites.

The surveys completed at each site were at a level required to make an evaluation of biological water quality, fish stocks and aquatic habitat value. This ranged from visual assessments for some of the sites mostly smaller or inaccessible watercourses to full scale aquatic ecological assessments. Current guidelines suggest that surveys should be updated every three years. However, it is not necessary to complete full surveys at all the original sites to achieve this. The surveys undertaken in 2024 were at a level required to allow an updated evaluation of the aquatic ecological importance of each site. The 2024 survey work was considered more than adequate to update the previous assessment.

The aquatic ecology surveys consisted of habitat surveys referencing the Environment Agency's '*River Habitat survey in Britain and Ireland Field Survey Guidance Material 2003'*[15]. And assessed habitat types for species such as lamprey and salmon. Macroinvertebrate surveys consisting of qualitative sampling of benthic macroinvertebrates using kick sampling methods. These surveys were completed during September 2021, August 2022, and September 2024. The late summer / autumn is the ideal time to undertake surveys of this type. Water levels were normal at all times during the surveys providing optimal survey conditions.

Strict biosecurity measures were employed during the survey. This included disinfecting gear between sites and working at the upstream sites first. The IFI (2010) '*Biosecurity Protocol for Field Survey Work'*[16] was followed during all survey work.

The electrofishing survey was completed under authorisation from the Department of the Environment, Climate and Communications under Section 14 of the Fisheries (Consolidation) Act (1959). Freshwater Pearl Mussel surveys were completed under authorisation (NPWS Licence No. C131/2024) from NPWS under Sections 23 and 34 of the Wildlife Acts (1976 to 2018).

1.7 Limitations

No significant limitations were noted to have been experienced. No constraints were identified during site investigations. No surveys have been conducted to date below the HWM. This AA screening report is for the purposes of obtaining a MUL for surveys (Section 2.3) required within the marine environment.

[13] Chanin P (2003). Monitoring the Otter *Lutra lutra.* Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough.

[14] NRA (2008) Guidelines for the Treatment of Otters during the Construction of National Road Schemes.

[15] Environment Agency, (2003). River Habitat Survey in Britain and Ireland Field Survey Guidance Manual: 2003 Version' published by the Environment Agency, United Kingdom.

[16] IFI (2010) Biosecurity protocols for fieldwork. Inland Fisheries Ireland. Available at: https://www.fisheriesireland.ie/documents/73-biosecurity-protocol-for-field-survey-work-1/file.html

2 Screening for Appropriate Assessment

2.1 Process for Screening for Appropriate Assessment

The purpose of this screening stage is to determine, on the basis of a preliminary assessment and objective criteria, whether a plan or project, alone and in-combination with the other plans or projects, could have likely significant effects on a European site in view of the site's conservation objectives.

There is no necessity to establish such an effect; it is merely necessary for the competent authority to determine that there may be such an effect. The need to apply the precautionary principle in making any key decisions in relation to the tests of Appropriate Assessment (AA) has been confirmed by the case law of the Court of Justice of the European Union (CJEU). Plans or projects that have no appreciable effect on a European site may be excluded. The threshold at this stage is a very low one and operates as a trigger in order to determine whether a Stage Two AA must be undertaken by the competent authority on the implications of the Proposed Development for the conservation objectives of a European site. Therefore, where significant effects are likely, uncertain or unknown at screening stage, a second stage AA will be required.

The European Commission Guidance 'Assessment of plans and projects significantly affecting Natura 2000 sites; Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC' (2021) prescribes a 4-step process in Screening for Appropriate Assessment as follows:

- Determine whether the project or plan is directly connected with or necessary to the management of the site.
- Describe the project or plan and describe and characterise other projects or plans that in combination have the potential for having significant effects on the Natura 2000 site.
- Identify the potential effects on the Natura 2000 site.
- Assess the significance of any effects on the Natura 2000 site.
- This report has been structured to reflect the 4-step screening process set out in the European Guidelines.

2.2 Management of European Sites

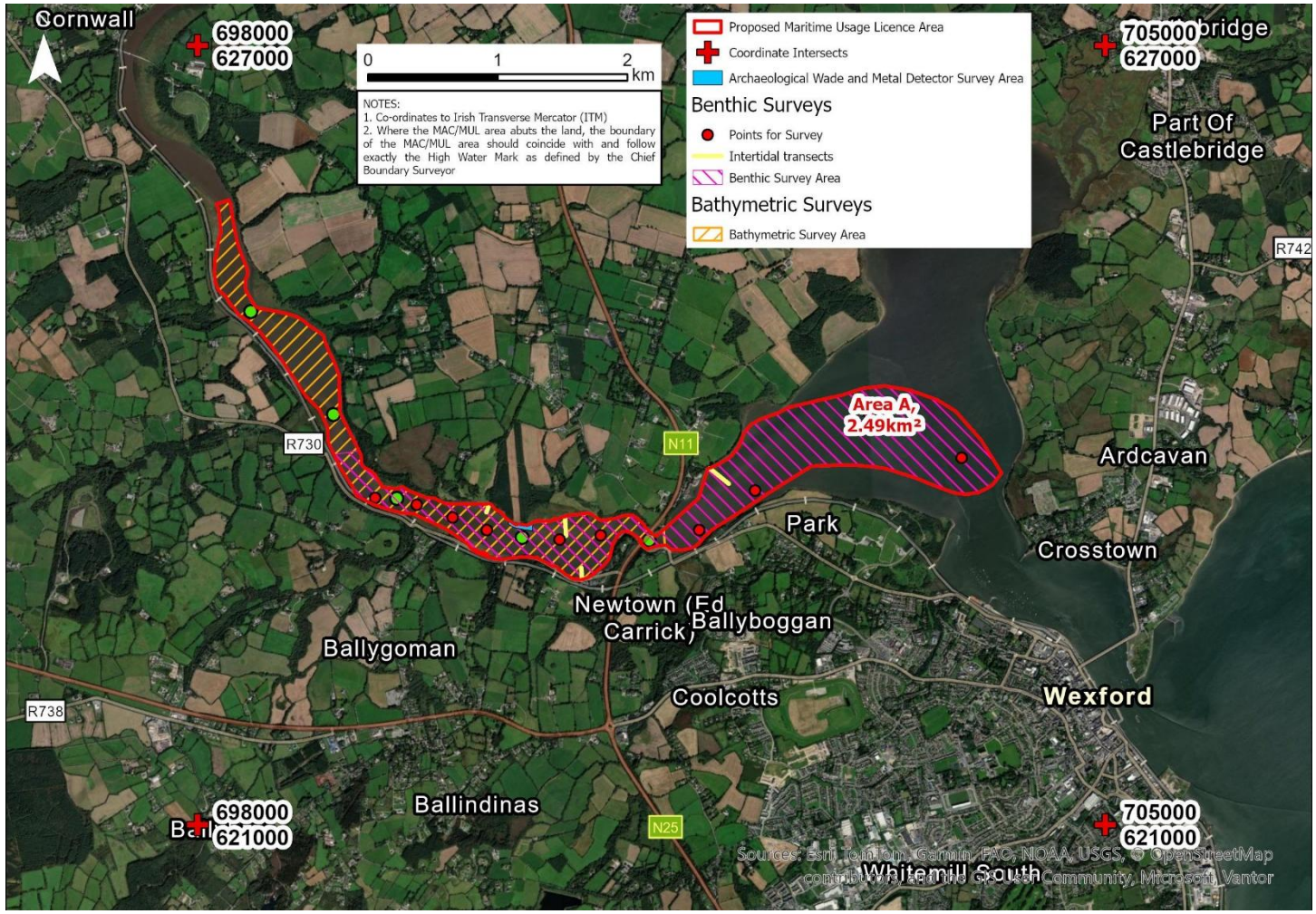
The proposed survey works are not directly connected with or necessary to the 'management' of European sites within the Natura 2000 Network having regard to Article 6 of the Habitats Directive. As such it is appropriate that the proposed survey works are subjected to screening for AA.

This screening assessment investigates, in view of best scientific knowledge, whether the proposed survey works, individually or in combination with other plans and projects, would be likely to have a significant effect on European sites. This report considers the likelihood of significant effects on European sites from the construction, operation, and decommissioning of the proposed survey works. A summary of the proposed survey works has been described in Section 1.1.

2.3 Proposed Survey Works Description

The proposed surveys are described in the following sections and locations indicated in Figure 2.1.

Figure 2.1: Location of Proposed Surveys



Source: Mott MacDonald, 2026

2.3.1 Hydrographic Survey (Bathymetric Survey)

2.3.1.1 Survey Description

The hydrographic survey will map the physical features of the River Slaney, such as depth, tides, currents, and the profile of the riverbed. The extent of the survey area is outlined in Figure 2.1, the bathymetric survey area is shown in orange hatch, with indicative locations of current measurements shown in green.

Survey works will be undertaken from a dedicated survey vessel. The equipment will be deployed from either a boat or a Remote Operated Vehicle (ROV). In the case of a ROV, a support boat would still be required.

Sonar equipment (multi-beam sonar or a side-scan sonar) will be deployed to develop a bathymetric survey of the riverbed profile. A current meter will be used to measure river velocity at five locations within the survey area (as shown in Figure 2.1) and at up to 5m depth intervals. The riverbed material build-up will be mapped using a sub-bottom profiler. Measurements will be undertaken over several tidal conditions to ensure full coverage of the riverbed bathymetric survey area and record variance in current velocity between high and low tides. The hydrographic survey will be used to inform a hydraulic model of the River Slaney, specifically in the vicinity of the proposed bridge crossing.

2.3.1.2 Survey Timeline

The surveys will commence as soon as feasible following the grant of a MUL and appointment of a contractor. The exact mobilisation dates will not be known until the maritime usage licence has been obtained and the process of procuring a contractor is complete. It is estimated that the proposed surveys will take approximately four weeks to complete in the field.

2.3.2 Archaeological Wade and Metal Detector Survey

2.3.2.1 Survey Description

In October 2024, an intertidal walkover survey and geoarchaeological assessment of the Ground Investigations (GI) results was undertaken, investigating a c.190m stretch of the north bank of the River Slaney at spring low tide. Following this survey, as discussed with the Transport Infrastructure Ireland (TII) Project Archaeologist and the UAU at the NMS, archaeological wade and metal detector surveys were recommended to further understand the archaeological potential of this area along the River Slaney and to fully interpret the impact of the proposed Scheme.

The survey area for both the wade and the metal detector survey will be finalised in consultation with the TII Project Archaeologist and the UAU at the NMS but will likely cover the same area as the 2024 intertidal walkover survey. This indicative area is shown in Figure 2.1 in blue. The surveys will be performed within this survey area. Allowances will be made for immovable obstacles or areas unsuitable for survey.

The survey area will be subject to a systematic wade survey and inspection at low tide to identify any evidence for archaeological remains (structures/ features/ deposits) and archaeological objects located in/ on/ adjacent to it. Any identified or potential archaeological remains or objects will be described, recorded, photographed and their location and extent surveyed. Their condition will also be recorded.

The metal detector survey is designed to record the location of ferrous and non-ferrous metal objects/ material contained on/ within sediments on the nearshore. The objective of the metal detector survey is to provide a quantitative estimation of the amount of metal finds in the

Mott MacDonald Public

development area and to record their locations. The survey will be undertaken using a metal detector suitable for use in a nearshore environment.

The locations of all archaeological remains or objects identified will be recorded using EDM (Electronic Distance Measurement) and/ or DGPS (Differential Global Positioning System), as appropriate. All archaeological remains or objects identified will be photographed in-situ with a scale and north point. Any submerged remains/ objects observed will be photographed using a bathyscope or an underwater digital camera.

Any constraints encountered (e.g. immovable obstacles or areas unsuitable for survey etc.) which impede completion of the survey will be recorded and described, and the locations shown on a drawing.

A full descriptive report of the survey will be produced following completion of the surveys. As the wade and metal detection survey will be carried out under a Detection Device Consent and Dive Licence issued by the NMS, a standalone report will need to be submitted to the Licensing Authorities, as part of their conditions.

The key aim of these surveys is to inform any further mitigatory works that will be carried out in advance of the commencement of construction of the proposed scheme. The surveys will also aid in describing the nature of the sediments present within the riverine environment of the study area, and inform the Cultural Heritage Impact Assessment in the Environmental Impact Assessment Report for the proposed scheme.

2.3.2.2 Survey Timeline

These surveys are proposed during Phase 5 of the proposed scheme, so the exact dates are not currently known. It is estimated that the proposed surveys will take approximately one day to complete in the field.

2.3.3 Subtidal and Intertidal Surveys

The benthic surveys are proposed to provide a comprehensive and up-to-date description of the species and habitats found within subtidal and intertidal areas of River Slaney, in vicinity of the proposed scheme. The extent of the benthic survey area is outlined in Figure 2.1, shown in pink hatch.

2.3.3.1 Subtidal Survey Description

A stainless steel 0.025m^2 Van Veen grab sampler will be used to recover undisturbed sediment samples from the River Slaney riverbed at a total of ten (four upstream and six downstream of the proposed River Slaney bridge) faunal grab stations. The indicative locations of these are shown in Figure 2.1 in red. Triplicate samples will be collected at each station. An additional grab will also be collected for particle size analysis (PSA) and organic carbon at each station.

A Rigid Inflatable Boat (RIB) will be used to deploy the grab sampler. The Van Veen grab sampler comprises of a steel bucket with hinged access flaps, that is deployed in an open position, but which shuts when the sampler is in contact with the riverbed. In closing, sediment and biological material are retained inside the sampler. On arrival at each pre-selected survey station, the location will be recorded using DGPS. Additional information (such as date, site name, sample code, water depth at each replicate, type and specification of the sampler, anchorage, weather, quality of the sample, penetration depth, description of the sediment and mesh size) will be recorded if possible. The samples will be sieved on a 1mm mesh sieve. Following a successful grab, photographs of the sample (including sample label) and notes on sediment type, texture, grain size, colour, odour (H_2S), residues, layering, volume, presence of fauna/tubes, algae, surface features etc, will be taken.

A sample of 500ml will be collected for PSA and organic carbon using a plastic scoop and labelled sediment sample will be stored in a cool box prior to PSA analysis in the laboratory. Each faunal sample will be stored and documented separately. All samples will be labelled and the information on the labels will be sufficient to identify the sample with certainty (e.g. date, location, station, job number, client, survey name etc). The labelling will be done on waterproof chemical resistant paper using a soft carbon pencil that will not fade in the fixing or alcohol solutions. These labels will be placed in the bucket with the sample, and the bucket will also be labelled on the outside using a waterproof marker.

2.3.3.2 Intertidal Survey Description

A survey of the intertidal zone upstream and downstream of the proposed Slaney River crossing will be undertaken. This will involve a Phase 1 Intertidal Walkover Survey and Phase II Intertidal Quantitative Transect Survey.

Phase I – Walkover Survey

An intertidal walkover survey will be undertaken prior to the Phase II quantitative transect surveys. The intertidal Phase I Walkover Survey will cover an approximate 1km stretch of the riverbank (north and south banks), dependent on access and local conditions. A Marine Nature Conservation Review (MNCR) Phase I intertidal survey will be completed within the intertidal areas during mean low water spring (MLWS) tidal conditions. The “Common Standards Monitoring Guidance” (Joint Nature Conservation Committee (JNCC), 2004) and “Common Standards Monitoring Guidance for Littoral Sediments Habitats” (JNCC, Version 4, August 2004) will be followed. In addition, the “CCW Handbook for Marine Intertidal Phase I Survey And Mapping” (Wyn et al., 2000), and the “Guidelines for the Conduct of Benthic Studies at Marine Aggregate Extraction Sites (2nd edition)” (Ware and Kenny, 2011) will be adhered to.

These surveys will take place at or near spring low tide. During the walkover survey any observations that appear to be related to ongoing change to the littoral habitats, will be recorded. These may include saltmarsh encroachment, invasive species, localised erosion and sediment accretion. The distribution of features will be recorded using photographs and GPS fixes. Habitat and biotope boundaries will be mapped using GPS trackers, and detailed notes on biotope (using European Nature Information System (EUNIS) and JNCC guidance) and sediment character/taxa will be recorded in key habitats along the upper, mid and low shore.

This will be supplemented by occasional dig-overs of representative habitats (where required), which will entail digging over approximately 0.1m^2 of surface sediment and sieving through a 1mm sieve to provide a rapid in-situ assessment of benthic fauna. The survey will also include a record of sedimentary habitat, whereby sediment grain size is assessed in-situ using standardised Wentworth scale sediment comparison guides.

Phase II – Quantitative Transect Surveys

Following Phase 1 Walkover Surveys, Phase II Quantitative Intertidal Transect Surveys will be conducted within the benthic survey area as shown in Figure 2.1. The methodology will follow that set out within the *Marine Monitoring Handbook;* “Procedural Guideline No. 3-1 In situ intertidal biotope recording” (Wyn and Brazier, 2001) and “Procedural Guideline No. 3-6 Quantitative sampling of intertidal sediment species using cores” (Dalkin and Barnett, 2001). If rocky shore habitat is encountered, surveying will be adapted appropriately to use quadrats rather than core sampling. Photographic records during surveying will be taken, as appropriate, for recording and reporting purposes.

Four transects running perpendicular to the shoreline will be undertaken (two upstream and two downstream of the proposed River Slaney crossing). The indicative transects are shown in yellow in Figure 2.1. Along each transect, a 0.25m^2 quadrat will be used to survey at three stations (upper shore, mid shore and lower shore). Salient features will be noted as

encountered along each transect and additional notes, supplemental photographs and level readings made, where appropriate. Rocks and stones will be overturned, and the algal canopy cover (if present) will be partially removed at each station (where applicable) to investigate for the presence of any faunal species.

Quadrats will also be used to calculate the abundance of lug worms (Arenicola marina). In situ dig-overs of each quadrat following initial analysis will be conducted. At each quadrat location, a 15cm diameter core sample (in triplicate) will be taken to a depth of 15cm and preserved in 4% buffered formalin in separate labelled (inside and out) sealed containers. An additional 15cm diameter core sample will be taken at each station for PSA and organic carbon analysis in labelled (inside and out) containers. The anoxic layer depth will be recorded for each sample.

Where any features of conservation interest are identified, the boundaries of these will be mapped using GPS in order to provide information on extent. Within each area of conservation, an agreed number of quadrats will also be sited to allow estimates of mean % cover to be calculated for each bed. Station locations will be recorded on a hand-held GPS unit (accuracy 3-5m) and recorded in the survey notebook. A photograph will be taken of each sampling station in order to help visually characterise the sediments and notes will be taken. Any evidence of anthropogenic disturbance or damage at any of the stations will be logged, measured (where relevant) and photographed. This includes activities such as bait digging, fishing activities and coastal defence works.

This methodology will result in 36 intertidal cores and 12 samples for the analysis of PSA and organic content. Due to the nature of the substrate in the intertidal zone of the estuary it may not be feasible from a health and safety perspective to survey the intertidal area on foot. The soft mud in the vicinity of the proposed development may require sampling from a vessel instead. In this case AQUAFACT proposes to sample each transect (upper, mid, and lower shore) from a RIB at high water using a 0.025m^2 Van Veen grab sampler. Triplicate samples will be collected at each shore height, as well as an additional grab for sediment analysis, as outlined in the subtidal methods above.

2.3.3.3 Survey Timeline

The surveys will commence as soon as feasible following the grant of a MUL. The exact mobilisation dates will not be known until the MUL has been obtained and will be dependent on weather and tidal conditions. The subtidal survey and the intertidal survey will take approximately one day each.

2.4 European Sites in the Zone of Influence

In the context of an ecological impact assessment generally (CIEEM, 2018) the zone of influence (ZoI) for a proposed survey works is defined as that:

"*the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This is likely to extend beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries*" and that "*the zone of influence will vary for different ecological features depending on their sensitivity to an environmental change*."

The ZoI varies depending on the nature of the activity and the sensitivity of the receptor (e.g., flora, birds, terrestrial mammals, cetaceans) to the effect encountered.

In determining the zone of influence of the proposed activities, (i.e. SPAs, SACs, QIs and SCIs relevant to this report), consideration was given to variations in mobility of species in comparison to the stationary nature of Annex I habitats, designated sites and the nature of the proposed development.

As the proposed activities under this application occur outside of the marine space upstream, along the riverine habitat of the Slaney River, terrestrial habitats are also considered to be within the zone of influence of the proposed site activities as well as any marine habitats hydrologically linked to the Slaney River.

In order to establish the ZoI of the proposed development, nationally available data on protected habitats and species was mapped using Geographic Information System (GIS). The potential environmental effects of the proposed development are set out below.

2.4.1 Direct Removal and Alteration of Existing Habitat

Proposed survey works pose a potential risk of habitat alteration or removal as part of the intertidal and subtidal survey works. The ZoI for direct impacts to existing habitat are assessed as the footprint of the survey area itself and proposed survey works are not to occur outside of this area, as outlined in Section 2.3.

2.4.2 Increased Human Presence

There is potential for disturbance to species associated with the physical presence of humans. The survey area is located along the riverine corridor of the Slaney River which is screened along its banks by woodland areas and treelines as well as treelines and hedgerows further inland throughout the wider area. As such, the ZoI for human disturbance is assessed as the footprint of the site itself.

2.4.3 Pollution from Spills and Leakages

There is potential for hydrocarbon spills and leaks results from the survey activities due to the use of vessels on the Slaney River. On a precautionary basis the risk of accidental spills and leaks could potentially impact water quality of the designated sites and affect QI/SCI species. The ZoI For pollution events is taken as the marine area indicated in Figure 2.1.

2.4.4 Silt and Sedimentation

There is potential for siltation to occur as part of the survey works through sample collection causing minor localised habitat loss and/or alteration. The closest water body is the Slaney River where intertidal and subtidal surveys will take place on the riverbanks. The ZoI for surface water runoff and siltation is taken as the marine area indicated in Figure 2.1.

2.4.5 Disturbance of species

Survey works may result in disturbance of QI species through changes in noise, vibration and movement. Disturbance may lead to the abandonment of breeding, foraging or resting sites by QI/SCI species. The ZoI varies depending on the species being assessed.

2.4.5.1 Mammals

The ZoI for noise and visual disturbances demarcates the area within which marine mammal species could be disturbed/displaced by survey activities. NPWS guidance[17] states that underwater sound can have a number of impacts on marine mammals, including behavioural, physical, stress as well as indirect effects impacting food sources. Different species have different hearing levels with species such as harbour porpoise being the most at risk from high frequency noises. Species will also vary with regards to periods of sensitivity. NPWS guidance

[17] National Parks and Wildlife Service (NPWS) (2014). Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

states that for multibeam, single beam, side-scan sonar and sub-bottom profiler surveys a 500m radial distance of the sound source is required.

2.4.5.2 Wintering Birds

Engine noise from outboard motors can be aggravating and obtrusive, affecting physiological and behavioural responses in birds. Nervous and chronic stress as a result of such disturbances can contribute to decreased reproductive fitness, panic or escape behaviours may result from severe or alarming noise. The ZoI for noise and visual disturbances demarcates the area within which birds could be temporarily disturbed/displaced by the proposed survey works. At a strategic level it is suggested that a 300m[18] ZoI for noise and visual disturbances is suitably precautionary.

2.4.5.3 Other Species

The ZoI for other ecological receptors potentially in the study area are as follows:

- 150m for breeding otter holts[19]
- 250m for groundwater dependant terrestrial ecosystems (GWDTEs)[20]
- 1km for breeding raptors[21]

2.4.6 Assessment of Mobile Annex II Marine Species

Due to the location of the proposed survey area mobile Annex II species have been considered on their recorded range of movements. Annex II species such as Eurasian otter, Atlantic salmon, Sea lamprey, Brooke lamprey, River lamprey and Twaite shad are identified by designated sites within the previous distance limit guidance (15km) as well as based on their presence from preliminary ecological investigations. More migratory and highly mobile species such as Bottlenose dolphin and Harbour porpoise have been assessed based on management units. While harbour and grey seals have been assessed based on extended foraging ranges (180km)[22], foraging may more often occur within 50m of haul out sites but extended foraging trips can last much longer allowing seals to travel further.

Cetacean management units identified were[23]:

- Bottlenose Dolphin
  - Irish Sea (IS)
  - Offshore Channel, Celtic Sea & South West England (OCSW)
- Harbour Porpoise

[18] Cutts, N., Hemingway, K. and Spencer, J. (2013) Waterbird disturbance mitigation toolkit. Institute of Estuarine and Coastal Studies, University of Hull

[19] National Roads Authority (2006). Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes.

[20] Kilroy G, Dunne F, Ryan J, O'Connor A, Daly D, Craig M, Coxon C, Johnston P and Henning M (2008). A Framework for the Assessment of Groundwater Dependent Terrestrial Ecosystems under the Water Framework Directive. Environmental Research Centre Report. Environmental Protection Agency Ireland.

[21] Ruddock, M. and Whitfield, D.P. (2007). A Review of Disturbance Distances in Selected Bird Species. A Report from Natural Research (Projects) Ltd to Scottish Natural Heritage. Scottish Natural Heritage.

[22] Scientific Advice on Matters Related to the Management of Seal Populations: 2011 Contents Scientific Advice ANNEX I Terms of reference and membership of SCOS ANNEX II Briefing papers for SCOS 2011 Scientific advice. (n.d.). Available at: https://www.smru.st-andrews.ac.uk/files/2016/08/SCOS-2011.pdf.

[23] IAMMWG. 2023. Review of Management Unit boundaries for cetaceans in UK waters (2023). JNCC Report 734, JNCC, Peterborough, ISSN 0963-8091. https://hub.jncc.gov.uk/assets/b48b8332-349f-4358-b080-b4506384f4f7

– Celtic and Irish Seas (CIS)

Due to the foraging ranges of Annex II marine mammal species found in Irish waters, the following species listed as QIs in SACs in Ireland have been assessed in terms of their potential to occur in the project area.

Table 2.1: Special Area of Conservation (SAC) and Designated Annex II and Annex IV Marine Mammal Species Distance to the Proposed Surveys

SAC (Site Code)	Harbour seal (*Phoca vitulina*) [1365]	Grey seal (*Halichoerus grypus*) [1364]	Harbour porpoise (*Phocoena phocoena*) [1351]	Bottle-nose dolphin (*Tursiops truncatus*) [1349]	Distance from Site
Slaney River Valley SAC [000781]	X				Proposed survey area is located within the boundaries of the designated site
Blackwater Bank SAC [002953]			X		23.6km east
Rockabill to Dalkey Island SAC [003000]			X		104.6km northeast
Lambay Island SAC [000204]	X	X	X		129.5km northeast
Codling Fault Zone SAC [003015]			X		126.1km northeast
Carnsore Point SAC [002269]			X		14.4km southeast
Saltee Islands SAC [000707]		X			17.8km south
Hook Head SAC [000764]			X	X	27.6km southwest
Roaringwater Bay and Islands SAC [000101]		X	X		218.9km southwest
Kenmare River SAC [002158]	X		X		218.7km west
Blasket Islands SAC [002172]		X	X		275.8km west
Innishmore Island SAC [000213]			X		228.8km northwest
Kilkieran Bay ad Islands SAC [002111]			X		230.1km northwest
West Connacht Coast SAC [002998]			X		275km northwest
Bunduff Lough and Machair/Trawalua/Mullaghmore SAC [000625]			X		266.7km northwest

Based on the assessment for mobile Annex II marine species an additional two designated sites have been added to the assessment. These include:

- Blackwater Bank SAC (002953)
- Carnsore Point SAC (002269)

While these designated sites sit beyond the 15km ZoI for designated sites applied to this assessment, due to historic records from NBDC, ex-situ QI species have been identified within Wexford Harbour approximately 1km from the proposed survey area's boundary. Due to the tidal nature of the Slaney River, the brackish conditions at this section of the river and the highly mobile and unrestricted nature of the QI species in question there is potential for anomalous events for these QI species to travel further upstream than what is currently recorded; bringing them within the proposed survey area and the ZoI of the proposed survey works. As a result they may be a risk of potential impact and by extension the designated sites may experience indirect impacts via ex-situ QI species.

2.5 Potential Likely Significant Effects on European Sites

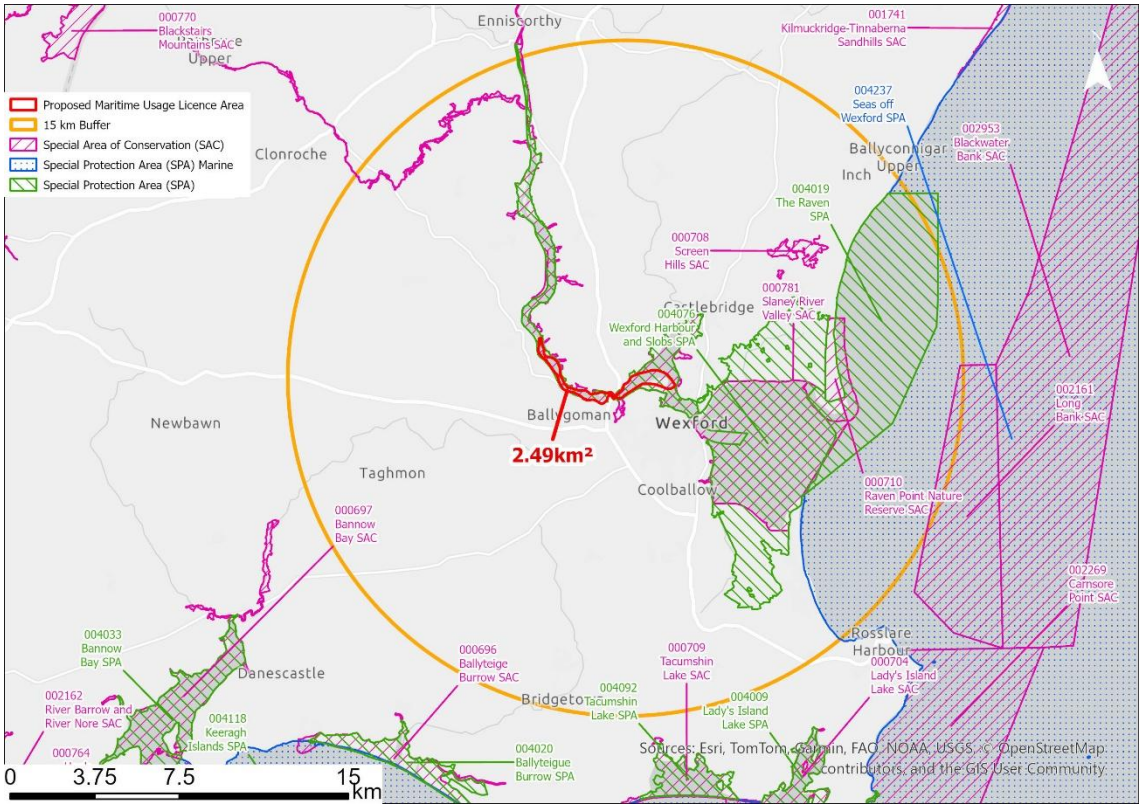
Projects have the potential to impact on European sites beyond the footprint of the project itself. National Guidance[24] states that screening for AA should be carried out for any European site within the likely ZoI of a plan or project. For projects, the guidance recommends that ZoI must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, the sensitivities of the ecological receptors, and the potential for in-combination effects.

In order to establish the ZoI of the proposed survey works, desktop and field survey data on protected habitats and species was mapped using a Geographic Information System (GIS). The potential ZoIs associated with the project are outlined in Section 2.4. GIS data was then interrogated for source-pathway-receptor connectivity.

The source (potential impacts from the proposed survey works), pathways (hydrological, physical or ecological connectivity) and receptors (QIs and SCIs of the European sites) were identified through a combination of bespoke field survey, and desktop survey including use of GIS software and through examination of aerial photography. Having regard to these ZoIs. any European sites identified to have a viable source-pathway-receptor link to the proposed survey works were then examined further to determine the potential for significant effects. The location of the proposed development relative to European sites is indicated in Figure 2.2.

[24] Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government, 2009

Figure 2.2: Natura 2000 Sites Located within 15km of the Proposed Survey Area



Source: Mott MacDonald, 2026

Table 2.2 includes the source-pathway-receptor assessment for the proposed survey works. All European sites within the Natura 2000 network were considered in the course of compiling Table 2.2.

Table 2.2: Source Pathway Receptor Assessment

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
Special Area of Conservation (SAC)				
Slaney River Valley SAC (000781)[25]	Intersects with proposed survey area	• Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • Mediterranean salt meadows (*Juncetalia maritimi*) [1410] • Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] • Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] • Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] • *Margaritifera margaritifera* (freshwater pearl mussel) [1029]	The proposed survey works will occur within the boundaries of the Slaney River Valley SAC. There is the potential for direct impacts to Annex I habitats and QI species through pollution, noise and vibration auditory disturbance, visual disturbance and increased human activity/vessel movements. As such, given the location of the SAC in relation to the proposed survey works, there is potential for both direct and indirect impacts to QIs of the Slaney River Valley SAC.	There is a potential for significant effects to the Slaney River Valley SAC. This is identified via direct and indirect impacts to QI of the SAC.

[25] NPWS (2011) Conservation Objectives: Slaney River Valley SAC 000781. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
		• *Petromyzon marinus* (sea lamprey) [1095] • *Lampetra planeri* (brook lamprey) [1096] • *Lampetra fluviatilis* (river lamprey) [1099] • *Alosa fallax fallax* (twaite shad) [1103] • *Salmo salar* (salmon) [1106] • *Lutra lutra* (otter) [1355] • *Phoca vitulina* (harbour seal) [1365]		
Carnsore Point SAC (002269)[26]	14.4km	• Mudflats and sandflats not covered by seawater at low tide [1140] • Reefs [1170] • *Phocoena phocoena* (harbour porpoise) [1351]	Carnsore Point SAC is located in the coastal waters to the east of the proposed survey works area and Wexford Harbour. No works are proposed within the boundaries of the SAC; there is no potential for direct impact to any QIs associated with the site. However, there is a potential for indirect impacts to ex-situ QI species with historic records of harbour porpoise in Wexford Harbour approximately 1.5km from the proposed survey area.	There is a potential for significant effects to the Carnsore Point SAC. This is identified via indirect impacts to *ex situ* QI.
Lady's Island Lake SAC (000704)[27]	2.8km	• Coastal lagoons [1150] • Reefs [1170]	The proposed survey works do not intersect with the boundary of	Given no source pathway receptor link exists to the SAC, the

[26] NPWS (2024) Conservation Objectives: Carnsore Point SAC 002269. Version 2. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage

[27] NPWS (2019) Conservation Objectives: Lady's Island Lake SAC 000704. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
		• Perennial vegetation of stony banks [1220]	Lady's Island Lake SAC. There is no potential for direct impact to any QIs associated with the sites. Lady's Island Lake SAC is located south of the proposed survey area in a separate catchment. As such, no hydrological connectivity is identified. Given the location of the Proposed Development relative to the SAC, and the QIs for which it is designated, no viable source pathway receptor links have been identified.	potential for likely significant effects can be excluded.
Long Bank SAC (002161)[28]	3.5km	• Sandbanks which are slightly covered by sea water all the time [1110	Long Bank SAC is located in the coastal waters to the east of the proposed survey works. No works are proposed within the boundaries of the SAC, there is no potential for direct impact to any QIs associated with the site. No significant hydrological connectivity has been identified to the SAC. Given the location of the proposed survey works relative to the SAC, and the QIs for which it is designated, no viable source pathway receptor links have been identified.	Given no source pathway receptor link exists to the SAC, the potential for likely significant effects can be excluded.

[28] NPWS (2013) Conservation Objectives: Long Bank SAC 002161. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Site Name (Code), and Conservation Objectives	**Distance between the Proposed Survey Works and European site (straight line) at closest point**	**Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)**	**Source-Pathway-Receptor Assessment**	**Potential for Significant Effects**
Tacumshin Lake SAC (000709)[29]	5.14km	• Coastal lagoons [1150] • Annual vegetation of drift lines [1210] • Perennial vegetation of stony banks [1220] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120]	Tacumshin Lake SAC is located to the south of the proposed survey works. No works are proposed within the boundaries of the SAC; there is no potential for direct impact to any QIs associated with the site. No hydrological connectivity has been identified to the SAC. Tacumshin Lake SAC is located in a separate catchment. Given the location of the proposed survey works relative to the SAC, and the QIs for which it is designated, no viable source pathway receptor links have been identified.	Given no source pathway receptor link exists to the SAC, the potential for likely significant effects can be excluded.
Blackwater Bank SAC (002953)[30]	23.6km	• Sandbanks which are slightly covered by sea water all the time [1110] • *Phocoena phocoena* (Harbour Porpoise) [1351]	Blackwater Bank SAC is located in the coastal waters to the east of the proposed survey works area and Wexford Harbour. No works are proposed within the boundaries of the SAC; there is no potential for direct impact to any QIs associated with the site. However, there is a potential for indirect impacts to ex-situ QI species with historic records of	There is a potential for significant effects to the Blackwater Bank SAC. This is identified via indirect impacts to *ex situ* QI.

[29] NPWS (2018) Conservation Objectives: Tacumshin Lake SAC 000709. Version 1. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht.

[30] NPWS (2011) Conservation Objectives: Raven Point Nature Reserve SAC 000710. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
			harbour porpoise in Wexford Harbour approximately 1.5km from the proposed survey area.	
Raven Point Nature Reserve SAC (000710)[31]	7km	• Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • Dunes with Salix repens ssp. argentea (Salicion arenariae) [2170] • Humid dune slacks [2190]	Raven Point Nature Reserve SAC is located a significant distance (9.8km) east of the proposed survey works. No works are proposed within the boundaries of the SAC, there is no potential for direct impact to any QIs associated with the site. No significant hydrological connectivity has been identified to the SAC. Given the location of the Proposed Development relative to the SAC, and the QIs for which it is designated, no viable source pathway receptor links have been identified.	Given no source pathway receptor link exists to the SAC, the potential for likely significant effects can be excluded.
Screen Hills SAC (000708)[32]	7.6km	• Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110]	Screen Hills SAC is located a significant distance from the proposed survey works (7.6km). There is no potential for direct	Given no source pathway receptor link exists to the SAC, the potential for likely significant effects can be excluded.

[31] NPWS (2011) Conservation Objectives: Raven Point Nature Reserve SAC 000710. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

[32] NPWS (2021) Conservation Objectives: Screen Hills SAC 000708. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
		• European dry heaths [4030]	impacts to QIs associated with the site. In addition, there is no hydrological connectivity between the survey area and the SAC. Given the location of the survey area relative to the SAC, and the QIs for which it is designated, no viable source pathway receptor links have been identified.	
Saltee Islands SAC (000707)[33]	9km	• 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]	Saltee Islands SAC is located a significant distance (9km) south west of the proposed survey works. No works are proposed within the boundaries of the SAC, there is no potential for direct impact to any habitat QIs associated with the site. There is no potential for impact to core haul out areas, or habitat for seals associated with the Saltee Islands SAC. There is potential, however, for grey seal to occur outside of the SAC boundaries. The species has been recorded within the proposed survey area, within the ZoI.	There is a potential for significant effects to the Saltee Islands SAC. This is identified via direct and indirect impacts to *ex situ* QI.
Ballyteige Burrow SAC (000696)[34]	10.6km	• Estuaries [1130]	Ballyteige Burrow SAC is located a significant distance (10.6km)	Given no source pathway receptor link exists to the SAC, the

[33] 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.

[34] NPWS (2014) Conservation Objectives: Ballyteige Burrow SAC 000696. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
		• Mudflats and sandflats not covered by seawater at low tide [1140] • Coastal lagoons [1150] • 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] • Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) [2150]	southwest of the proposed survey works. No works are proposed within the boundaries of the SAC, there is no potential for direct impact to any habitat QIs associated with the site. Given the location of the proposed survey works relative to the SAC, and the QIs for which it is designated, no viable source pathway receptor links have been identified.	potential for likely significant effects can be excluded.

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
		• Humid dune slacks [2190]		
Bannow Bay SAC (000697)[35]	14.8km	• 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]	Bannow Bay SAC is located a significant distance (14.8km) west of the proposed survey works. No works are proposed within the boundaries of the SAC, there is no potential for direct impact to any habitat QIs associated with the site. Given the location of the proposed survey works relative to the SAC, and the QIs for which it is designated, no viable source pathway receptor links have been identified.	Given no source pathway receptor link exists to the SAC, the potential for likely significant effects can be excluded.

[35] NPWS (2012) Conservation Objectives: Bannow Bay SAC 000697. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Site Name (Code), and Conservation Objectives	**Distance between the Proposed Survey Works and European site (straight line) at closest point**	**Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)**	**Source-Pathway-Receptor Assessment**	**Potential for Significant Effects**
Special Protection Area (SPA)				
Wexford Harbour and Slobs SPA (004076)[36]	Intersects with the proposed development	• Little grebe (*Tachybaptus ruficollis*) [A004] • Great crested grebe (*Podiceps cristatus*) [A005] • Cormorant (*Phalacrocorax carbo*) [A017] • Grey heron (*Ardea cinerea*) [A028] • 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]	The proposed survey works intersects with the boundary of the Wexford Harbour and Slobs SPA. There is the potential for direct impacts to SCI species through pollution, noise and vibration auditory disturbance, visual disturbance and increased human activity/vessel movements. As such, given the location of the SPA in relation to the proposed survey works, there is potential for both direct and indirect impacts to SCIs of the Wexford Harbour and Slobs SPA.	There is a potential for significant effects to the Wexford Harbour and Slobs SPA. This is identified via direct and indirect impacts to SCI.

[36] 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.

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
		• Red-breasted merganser (*Mergus serrator*) [A069] • Hen harrier (*Circus cyaneus*) [A082] • 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]		

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
		• Lesser black-backed gull (*Larus fuscus*) [A183] • Little tern (*Sterna albifrons*) [A195] • Greenland white-fronted goose (*Anser albifrons flavirostris*) [A395] • Wetland and Waterbirds [A999]		
Seas off Wexford SPA (004237)[37]	9.5km	• 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]	Seas off Wexford SPA is located a significant distance (9.5km) east of the proposed survey works. No works are proposed within the boundaries of the SPA, there is no potential for direct impact to any SCI species associated with the site. Given the location of the proposed survey works relative to the SPA, and the SCIs for which it is designated, no viable source pathway receptor links have been identified.	Given no source pathway receptor link exists to the SPA, the potential for likely significant effects can be excluded.

[37] NPWS (2024) Conservation Objectives: Seas off Wexford SPA 004237. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
		• 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] • Puffin (*Fratercula arctica*) [A204]		
Lady's Island Lake SPA (004009)[38]	17.1km	• Gadwall (*Anas strepera*) [A051]	Lady's Island Lake SPA is located a significant distance (17.1km) southeast of the proposed survey	Given no source pathway receptor link exists to the SPA, the potential

[38] NPWS (2022) Conservation objectives for Lady's Island Lake SPA [004009]. First Order Site Specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage.

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
		• Black-headed gull (*Chroicocephalus ridibundus*) [A179] • Sandwich tern (*Sterna sandvicensis*) [A191] • Roseate tern (*Sterna dougallii*) [A192] • Common tern (*Sterna hirundo*) [A193] • Arctic tern (*Sterna paradisaea*) [A194] • Wetland and waterbirds [A999]	works. No works are proposed within the boundaries of the SPA, there is no potential for direct impact to any SCI species associated with the site. Given the location of the proposed survey works relative to the SPA, and the SCIs for which it is designated, no viable source pathway receptor links have been identified.	for likely significant effects can be excluded.
Tacumshin Lake SPA (004092)[39]	16.5km	• 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]	Tacumshin Lake SPA is located a significant distance (16.5km) south of the proposed survey works. No works are proposed within the boundaries of the SPA, there is no potential for direct impact to any SCI species associated with the site. Given the location of the proposed survey works relative to the SPA, and the SCIs for which it is designated, no viable source pathway receptor links have been identified.	Given no source pathway receptor link exists to the SPA, the potential for likely significant effects can be excluded.

[39] NPWS (2025) Conservation Objectives: Tacumshin Lake SPA 004092. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
		• 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]		
The Raven SPA (004019)[40]	9.2km	• Red-throated diver (*Gavia stellata*) [A001] • Cormorant (*Phalacrocorax* carbo) [A017] • Common scoter (*Melanitta nigra*) [A065] • Grey plover (*Pluvialis squatarola*) [A141] • Sanderling (*Calidris alba*) [A144] • Greenland white-fronted goose (*Anser albifrons flavirostris*) [A395] • Wetland and waterbirds [A999]	The Raven SPA is located a significant distance (9.2km) east of the proposed survey works. No works are proposed within the boundaries of the SPA, there is no potential for direct impact to any SCI species associated with the site. Given the location of the proposed survey works relative to the SPA, and the SCIs for which it is designated, no viable source pathway receptor links have been identified.	Given no source pathway receptor link exists to the SPA, the potential for likely significant effects can be excluded.

[40] NPWS (2012) Conservation Objectives: The Raven SPA 004019. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

Site Name (Code), and Conservation Objectives	Distance between the Proposed Survey Works and European site (straight line) at closest point	Qualifying Interests / Special Conservation Interests (SCI) of the European site (* denotes priority habitat, breeding birds only noted otherwise wintering)	Source-Pathway-Receptor Assessment	Potential for Significant Effects
Ballyteige Burrow SPA (4020)[41]	16.9km	• 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]	Ballyteige Burrow SPA is located a significant distance (16.9km) southwest of the proposed survey works. No works are proposed within the boundaries of the SPA, there is no potential for direct impact to any SCI species associated with the site. Given the location of the proposed survey works relative to the SPA, and the SCIs for which it is designated, no viable source pathway receptor links have been identified.	Given no source pathway receptor link exists to the SPA, the potential for likely significant effects can be excluded.

[41] NPWS (2014) Conservation Objectives: Ballyteige Burrow SPA 004020. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

2.6 Plans and Projects which might Act In Combination

Article 6(3) of the Habitats Directive requires that:

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.

It is therefore required that the potential impacts of the proposed survey works are considered in combination with any other relevant plans or projects.

An assessment of plans and projects with the potential for in combination effects in association with the proposed survey works was undertaken.

A search of planning applications[42] submitted within the last 5 years including the proposed survey works area and up to a 15km buffer zone, was undertaken in March 2026 to examine projects with potential for in combination effects. Applications which were made typically consisted of extensions, demolitions and renovations to existing houses and agricultural buildings, and retention of existing developments.

The scale, nature, location, extent, duration and lack of overlap between the current proposed survey area and planning applications identified are such that the survey works do not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are no identified plans or consented projects which have the potential to act in-combination with the proposed development works in relation to any identified effects.

In addition, a search of MARA MAC and MUL determined applications[43] submitted within the last 5 years within 15km of the proposed survey works was undertaken in March 2026 to examine projects with potential for in combination effects, see Appendix D

The majority of MAC and MUL applications identified in Appendix D are located at a substantial distance from the Proposed Survey Works or relate to activities that are spatially, temporally, or functionally distinct. Having regard to their scale, nature and duration, and the absence of any credible source–pathway–receptor linkage, these applications have no potential to give rise to in-combination effects on any European site.

Two applications identified in Appendix D — MUL260005 and MAC260007, relate to separate the proposed Viking Village development. These applications are located within the boundaries of the Proposed Survey Works area. Owing to this spatial overlap, a precautionary consideration of potential in-combination effects is required.

MUL260005[44] relates to marine environmental surveys and ground investigation works within the Lower Slaney Estuary, including hydroacoustic surveys, sediment sampling, geophysical surveys and in-river boreholes. These activities are comparable in nature, scale and duration to the Proposed Survey Works assessed in this report.

The Supporting Information for Screening for Appropriate Assessment (SISAA) prepared for MUL260005 concluded that, applying the precautionary principle, the potential for likely significant effects on European sites could not be excluded at screening stage, principally due

[42] Planning Websites: Map Search | An Bord Pleanála (pleanala.ie), https://planning.agileapplications.ie/wexford/search-applications/

[44] Maritime Area Regulatory Authority (MARA) (n.d.) Maritime Usage Licence application: MUL260005. Available at: https://www.maritimeregulator.ie/application/mul260005/ (Accessed: 14 April 2026).

to the location of the works within the Slaney River Valley SAC and Wexford Harbour and Slobs SPA and the potential for anthropogenic underwater noise, physical disturbance and vessel activity. An Appropriate Assessment was therefore required. The subsequent Natura Impact Statement (NIS) concluded that, with the implementation of mitigation measures, the proposed works would not adversely affect the integrity of any European site, either alone or in-combination with other plans or projects, and that no reasonable scientific doubt remained as to the absence of such effects.

MAC260007[45] relates to a proposed marine infrastructure development associated with the Viking Village, for which a Maritime Area Consent has been sought. At the time of writing, limited detail was available in respect of MAC260007, particularly regarding construction methodologies, timing and mitigation. Accordingly, a precautionary approach has been adopted in considering whether overlap with the Proposed Survey Works could give rise to in-combination effects.

The assessment has therefore examined the potential for cumulative disturbance pressures, including increased vessel movements, underwater noise and human presence, where activities associated with the Proposed Survey Works and the Viking Village development (MUL260005 and MAC260007) may overlap temporarily. Given the spatial overlap with the Proposed Survey Works area, and the uncertainty regarding the timing and details of MAC260007 at the time of writing, these applications have been taken forward for further mitigation consideration on a precautionary basis.

For all other MAC and MUL applications listed in Appendix D, no spatial or temporal overlap is present, and no mechanism exists by which cumulative effects could arise. These applications are therefore excluded from further assessment.

There are therefore no potential effects identified from the proposed works which could act in-combination with any other plans or projects to result in any likely significant effects on any European site.

2.7 Summary of Potentially Significant Effects

The proposed survey works take place within the boundaries of two designated sites (Slaney River Valley SAC and Wexford Harbour and Slobs SPA) where there is a potential risk of impacts to effect specific QI habitats/ species in these designated sites. There is also the potential for indirect effects to Saltee Islands SAC, due to the presence of ex-situ QI marine mammal species (grey seal).

Potential in-combination disturbance effects may also arise due to the proposed Survey Works and the Viking Village development (MUL260005 and MAC260007).

Therefore, in the absence of avoidance or mitigation measures, the proposed surveys have potential to adversely affect qualifying features of the Natura 2000 designated sites. While the survey works occurring are relatively benign in nature, isolated to specific locations within the survey area and short in duration. Due to the proposed survey works occurring within the boundaries of the designated sites, it is considered that the potential impacts could be significant without suitable mitigation strategies and management systems in place.

[45] Maritime Area Regulatory Authority (MARA) (n.d.) Maritime Area Consent application: MAC260007. Available at: https://www.maritimeregulator.ie/application/mac260007/ (Accessed: 14 April 2026).

2.8 Appropriate Assessment Screening Conclusion

The current assessment investigates the potential for the proposed survey works to have significant effects on the following European sites within the Natura 2000 network:

- Slaney River Valley SAC (000781)
- Saltee Islands SAC (000707)
- Wexford Harbour and Slobs SPA (004076)
- Blackwater Bank SAC (002953)
- Carnsore Point SAC (002269)

This AA Screening report concludes that likely significant effects on these European sites cannot be excluded on the basis of objective evidence, from the proposed survey works alone.

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3 Natura Impact Statement

This Natura Impact Statement (NIS) has been produced in support of the Appropriate Assessment of the proposed surveys to be undertaken by the competent authority. The NIS considers the likely or possible significant effects of the proposed survey works. Mitigation measures are identified to avoid adverse effects on the integrity of European sites.

3.1 Description of Survey Works

The proposed surveys are described and detailed in Section 2.3 of this report as follows.

- Hydrographic survey activities are outlined in Section 2.3.1
- Archaeological wade and metal detector survey activities are outlined in Section 2.3.2
- Subtidal and intertidal survey activities are outlined in Section 2.3.3

3.2 Description of the Receiving Environment

3.2.1 Noise Levels in the aquatic Environment

Ambient noise in the marine environment is a combination of naturally occurring biological and physical sound sources. Anthropogenic noise sources from human activity are strongly influenced by ambient noise with the level of impact being affected by the level of ambient noise and how the two interact. In a noisy environment the impact is less, compared to a quieter environment. The intensity and frequency of the increased noise compared to the ambient levels is what defines its impact.

The exact manufacturer for the equipment to be used for the proposed works have yet to be determined and therefore proxy values have been provided for the equipment type (Table 3.1). Table 3.1 lists the operating frequency and typical source level (in dB re 1µPa (rms) @ 1m) for the proposed methodologies used in bathymetric surveys in the proposed survey works.

Table 3.1: Generic information on Underwater Noise Levels for Survey Techniques

Method	Operating Frequency	Typical Source Level (in dB re 1µPa (rms) @ 1m)
Sub-bottom Profiler	4kHz/100kHz	210-214
Side-scan Sonar	100kHz and 900kHz	210

The proposed survey area is approximately 1.5km upstream along the Slaney River outside of Wexford Harbour, it is considered that ambient noise would be relatively low in this area due to low levels of anthropogenic and environmental activity that would contribute to ambient noise. However, the survey methods used operate at high frequencies (typically in the range of approximately 100-600kHz). These frequencies are known to attenuate rapidly in the aquatic environment as high frequency sound is absorbed more rapidly over long distances than low frequencies. As such the zone of influence (ZoI) for underwater noise generated by survey vessel and the acoustic equipment is considered to be restricted to a relatively small area surrounding the survey vessel, not extending beyond a few hundred meters. NPWS guidance states that for multibeam. Single beam, side-scan sonar and sub-bottom profiler surveys a

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500m radial distance of the sound source is required[46]. Beyond the ZoI sound levels are not anticipated to be distinguishable from background conditions.

3.2.2 Habitats

The proposed survey area is restricted to the riverine corridor along the Slaney River bordered by agricultural fields, rural developments/residences, riparian woodland and a local road network. Majority of the field walkover surveys occurred throughout the wider area along the entire route of the proposed scheme, noting habitat types further inland which would not fall within or be affected by the proposed survey works. However, some habitats noted to occur within the proposed survey area from NPWS habitat mapping and field survey walkovers include:

- MW4 - Estuary
- CW2 – Tidal rivers
- CM2 – Upper saltmarsh
- LS3 – Muddy sand shores
- LS4 – Mud shores

NPWS mapping shows that specific QI habitats are present such as [1130] estuaries and [1140] Mudflats and sandflats not covered by sea water at low tide. Both of which contain habitats such as LS4 and LS3 as listed above.

The proposed survey works are restricted to the riverine corridor and as such do not contain any of the other terrestrial habitat types identified during walkover surveys. While these habitats may border the proposed survey area, they are not located within the boundaries of the survey area and will not be affected by the proposed survey works.

3.2.3 Otters

During the site walkover surveys evidence of otter presence and activity was observed within the proposed survey area. However, no holts or couches were identified within the proposed survey area. Potential holts were identified in the wider area as part of the site walkover surveys for the proposed scheme.

3.2.4 Birds

During the regular multiyear wintering bird surveys conducted (refer to Section 1.6.2.3), the following SCI species associated with Wexford Harbour and Slobs SPA were recorded within the proposed survey area:

- Little tern
- Little grebe
- Whooper swan
- Teal
- Mallard
- Cormorant
- Lapwing
- Redshank

[46] National Parks and Wildlife Service (NPWS) (2014). Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

- Curlew
- Lesser black backed gull
- Black headed gull
- Black-tailed godwit
- Bar-tailed godwit
- Grey heron
- Red breasted merganser

These species were primarily observed flying along the riverine corridor through/over the proposed survey area while some species such as black headed gull, little grebe, black tailed godwit were observed to be resting, roosting or feeding on the riverbank. An abundance of feeding agglomerations were also observed for teal, little tern, mallard, redshank, lesser black backed gull, black headed gull, black-tailed godwit, bar-tailed godwit, red breasted merganser, whooper swan, cormorant and curlew. These feeding agglomerations were observed on both banks of the River Slaney and throughout the proposed survey area.

3.2.5 Marine Mammals

While no specific surveys were carried out for marine mammal species sightings including grey and harbour seal were recorded by surveyors during the bird surveys. Both species were recorded with the proposed survey area. NBDC also provided historic records of both species being present within the proposed survey area.

No cetaceans i.e. harbour porpoise were recorded.

3.2.6 Aquatic Environment

The section of the River Slaney which falls within the proposed survey area is tidal and is approximately 120m wide. Substrate present here was observed to be mixed but dominated by mud. Estuary habitat generally (which forms the proposed survey area) are considered to be hostile environments for fish and invertebrate species as water levels, flows and salinity change significantly on an hourly basis; likely due to the tidal nature of the area. This also results in naturally high levels of siltation and turbidity, as a result estuaries are considered to have generalised communities of tolerant organisms.

Based on desk information the Slaney River estuary can be expected to have a typical macroinvertebrate community which is generally limited and impoverished. Species will include shore crabs, marine gammarids, brown shrimps and estuarine worms. The proposed survey area is influenced by saline intrusion and is an estuary rather than a tidal river.

The fish population within the proposed survey area will include typical estuary species, including European eel, Sea/Slob Trout, Three-spined sticklebacks, Flounder, Grey Mullet, and Sand Goby. Smelt are also known to occur in the estuary. Migratory species are also present including Atlantic salmon, Sea Trout, Sea Lamprey, River Lamprey, and eels (which are both migratory and resident at this site). These species will pass through the proposed survey area on migration up and down the Slaney River.

3.2.7 European Sites

Viable source pathway receptor links were identified to the following European sites:

- Slaney River Valley SAC (000781)
- Saltee Islands SAC (000707)
- Wexford Harbour and Slobs SPA (004076)

- Blackwater Bank SAC (002953)
- Carnsore Point SAC (002269)

3.2.7.1 Slaney River Valley SAC (000781)

The site synopsis for Slaney River Valley SAC[47] describes the site generally as comprising "…*the freshwater stretches of the River Slaney as far as the Wicklow Mountains; a number of tributaries, the larger of which include the Bann, Boro, Glasha, Clody, Derry, Derreen, Douglas and Carrigower Rivers; the estuary at Ferrycarrig; and Wexford Harbour. The site flows through the Counties of Wicklow, Wexford and Carlow. Towns along the site but not within it include Baltinglass, Hacketstown, Tinahely, Tullow, Bunclody, Camolin, Enniscorthy and Wexford. The river is up to 100 m wide in places and is tidal at the southern end from Edermine Bridge below Enniscorthy. In the upper and central regions almost as far as the confluence with the Derry River the geology consists of granite. Above Kilcarry Bridge, the Slaney has cut a gorge into the granite plain. The Derry and Bann Rivers are bounded by a narrow line of uplands which corresponds to schist outcrops. Where these tributaries cut through this belt of hard rocks they have carved deep gorges, more than two miles long at Tinahely and Shillelagh. South of Kildavin the Slaney flows through an area of Ordovician slates and grits."*

The Natura 2000 Standard Data Form for the Slaney River Valley SAC[48] identifies the following most important impacts and activities with high negative effect on the site:

- Cultivation
- Fertilisation
- Forest and Plantation management and use
- Diffuse pollution to surface waters due to agricultural and forestry activities
- Invasive non-native species
- Fishing harbours
- Storage of materials
- Irrigation
- Removal of hedges and copses or scrub
- Sand and gravel extraction
- Paths, tracks, cycling tracks
- Bridge, viaduct
- Discharges
- Bottom culture
- Bait digging / collection
- Purse seining
- Pollution to surface waters (limnic, terrestrial, marine & brackish)
- Pollution to surface waters by industrial plants
- Diffuse pollution to surface waters due to household sewage and waste waters
- Modifying structures of inland water courses
- Water abstractions from surface waters
- Surface water abstractions for agriculture
- Siltation rate changes, dumping, depositing of dredged deposits

[47] NPWS (2015) Site Synopsis Slaney River Valley SAC. 000781_Rev15

[48] NPWS (2025) Natura 2000 Standard Data Form Slaney River Valley SAC

- Dykes and flooding defense in inland water systems
- Erosion

The only impact and activity outlined above which is linked to the proposed surveys works is "*pollution to surface* waters". This isa potential risk of impact risk during the survey works due to the use of a vessel with an outboard motor which will require hydrocarbon fuel to power it. There is a risk of minor accidental pollution events such as fuel spills or hydraulic fluid leaks. Such events can negatively impact the aquatic environment by reducing water quality, poisoning fauna and flora species which can affect not just the mammal species directly but also indirectly by toxifying their food sources and causing a reduction in fish stock populations. However, any potential hydrocarbon spill or leak events would involve small volumes that would be restricted to the immediate water surface area around the survey vessel. Considering dilution ratios and the hydrodynamic conditions of the Slaney River it is considered that these would be rapidly dispersed. Due to the nature and scale of the proposed survey works it is not considered to be linked as an impact to the designated site.

The QIs for which the SAC is designated, the conservation objectives identified for the QIs, and their current national conservation status and trend are outlined in Table 3.2. The known extents of a number of the QIs of the Slaney River Valley SAC have been mapped in the Site-Specific Conservation objectives or referenced in the site synopsis. It is of note that some habitats and species may extend beyond and occur outside the European site boundary within the ZoI of the proposed survey works. The closest extents of these QIs inside of the SAC as mapped in the conservation objectives and during site visits are also outlined in Table 3.2.

Table 3.2: Qualifying Interests for Slaney River Valley SAC

Qualifying Interest (* indicates priority habitat)	Conservation Objective[25]	National Conservation Status and Trend[49] [50]	Known Location in Relation to the Proposed Survey Works
Estuaries [1130]	To **maintain** the favourable conservation condition of Estuaries in the Slaney River Valley SAC	The overall conservation status for the habitat is **inadequate** and the conservation status trend is **deteriorating**.	Estuaries have been mapped as part of the Site Specific Conservation Objectives (SSCOs) for the Slaney River Valley SAC. The habitat as mapped intersects with the proposed survey works area at the crossing of the Slaney River.
Mudflats and sandflats not covered by seawater at low tide [1140]	To **maintain** the favourable conservation condition of mudflats and sandflats not covered by seawater at low tide in the Slaney River Valley SAC	The overall conservation status for the habitat is i**nadequate** and the conservation status trend is **deteriorating**.	Mudflat and sandflat habitat has been mapped as part of SSCOs for the Slaney River Valley SAC. The closest extent of the habitat as mapped by the SSCOs is located approximately 1km to the east of the proposed crossing point of the Slaney River.
Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]	Not listed in the SSCO document	The overall conservation status for the habitat is **inadequate** and the conservation status trend is **deteriorating**.	Atlantic salt meadows have not been mapped as part of SSCOs for the Slaney River Valley SAC. The habitat has been mapped as part of the Saltmarsh Monitoring Project[51] 1.4km to the east of the proposed crossing point of the Slaney River. Additionally, saltmarsh was recorded at the crossing point for the Slaney River during field surveys.
Mediterranean salt meadows (*Juncetalia maritimi*) [1410]	Not listed in the SSCO document	The overall conservation status for the habitat is **inadequate** and the conservation status trend is **deteriorating**.	Mediterranean salt meadows have not been mapped as part of SSCOs for the Slaney River Valley SAC. The habitat has been mapped as part of the Saltmarsh Monitoring Project[52] 1.4km to the east of the proposed crossing point of the Slaney River. Additionally, saltmarsh was recorded at the crossing point for the Slaney River during field surveys.
Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation [3260]	To **maintain** the favourable conservation condition of Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation in the Slaney River Valley SAC	The overall conservation status for the habitat is **inadequate** and the conservation status trend is **deteriorating**.	Floating river vegetation has been mapped as part of SSCOs for the Slaney River Valley SAC. The closest extent is located in the main channel of the River Slaney approximately 1km west of the northern extent of the proposed survey works.

[49] NPWS (2019) Article 17 Habitats Conservation Assessments 2019 Volume 2

[50] NPWS (2019) Article 17 Species Conservation Assessments 2019 Volume 3

[51] McCorry, M., Ryle, T., (2009) Saltmarsh Monitoring Project 2007-2008. A report for Research Branch , National Parks and Wildlife Service.

[52] McCorry, M., Ryle, T., (2009) Saltmarsh Monitoring Project 2007-2008. A report for Research Branch , National Parks and Wildlife Service.

Qualifying Interest (* indicates priority habitat)	**Conservation Objective**[25]	**National Conservation Status and Trend**[49 50]	**Known Location in Relation to the Proposed Survey Works**
Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]	To **restore** the favourable conservation condition of old sessile oakwoods with *Ilex* and *Blechnum* in the Slaney River Valley SAC	The overall conservation status for the habitat is **bad** and the conservation status trend is **deteriorating**.	Old oak woodlands has been mapped as part of the SSCOs for the Slaney River Valley SAC. The closest extent of old oak woodlands is located approximately 6km north of the proposed survey works. This habitat was not encountered within the footprint of the development during site walkovers.
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]	To **restore** the favourable conservation condition of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*) in the Slaney River Valley SAC	The overall conservation status for the habitat is **bad** and the conservation status trend is **deteriorating**.	Alluvial woodland has been mapped as part of the SSCOs for the Slaney River Valley SAC. The closest extent of alluvial woodland is located approximately 2.9km west of the proposed survey works. No areas of QI alluvial woodland were recorded within the footprint of the proposed survey works.
Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]	The conservation objective notes in relation to freshwater pearl mussel "The status of the freshwater pearl mussel (Margaritifera margaritifera) as a qualifying Annex II species for the Slaney River Valley SAC is currently under review. The outcome of this review will determine whether a site-specific conservation objective is set for this species"	The overall conservation status for the habitat is **bad** and the conservation status trend is **deteriorating**.	The location of freshwater pearl mussels has not been mapped as part of the SSCOs for the Slaney River valley SAC. The proposed survey works is not located within any *Margaritifera* sensitive areas. The closest sensitive area to the proposed survey works is located 1km north of the proposed survey works.
Petromyzon marinus (sea lamprey) [1095]	To **restore** the favourable conservation condition of sea lamprey in the Slaney River Valley SAC	The overall conservation status for the species is **bad** and the conservation status trend is **deteriorating**.	The distribution of sea lamprey has not been mapped as part of the SSCOs for the Slaney River valley SAC. Sea lamprey ~~were recorded during aquatic surveys at the crossing point of the~~ potentially migrate up the River Slaney including the study area.
*Lampetra planer*i (brook lamprey) [1096]	To **restore** the favourable conservation condition of brook lamprey in the Slaney River Valley SAC	The overall conservation status for the species is **favourable** and the conservation status trend is **stable**.	The distribution of brook lamprey has not been mapped as part of the SSCOs for the Slaney River valley SAC. Brook lamprey were recorded during aquatic surveys on watercourses that are crossed by the Proposed Survey works.
Lampetra fluviatilis (river lamprey) [1099]	To **restore** the favourable conservation condition of river lamprey in the Slaney River Valley SAC	The overall conservation status for the species is **unknown** and the conservation status trend is not indicated.	The distribution of river lamprey has not been mapped as part of the SSCOs for the Slaney River Valley SAC. River lamprey ~~were recorded during aquatic surveys at the crossing point of the~~ migrate up the River Slaney including the study area

Qualifying Interest (* indicates priority habitat)	Conservation Objective[25]	National Conservation Status and Trend[49 50]	Known Location in Relation to the Proposed Survey Works
Alosa fallax fallax (twaite shad) [1103]	To **restore** the favourable conservation condition of twaite shad in the Slaney River Valley SAC	The overall conservation status for the species is **bad,** and the conservation status trend is **stable**	The distribution of river lamprey has not been mapped as part of the SSCOs for the Slaney River Valley SAC. Shad are known to occur within the River Slaney ~~and were recorded there during aquatic surveys~~.
Salmo salar (salmon) [1106]	To **restore** the favourable conservation condition of salmon in the Slaney River Valley SAC	The overall conservation status for the species is **inadequate,** and the conservation status trend is **stable**	Salmon have not been mapped as part of the SSCOs for the Slaney River Valley SAC. Salmon migrate up and down the River Slaney including the study area ~~No salmon were recorded during aquatic surveys.~~
Lutra lutra (otter) [1355]	To **restore** the favourable conservation condition of otter in the Slaney River Valley SAC	The overall conservation status for the species is **favourable,** and the conservation status trend is **improving**	Suitable otter habitat has been recorded within the footprint of the proposed survey works. Additionally, potential otter holts along with signs of activity were recorded outside of the proposed survey area in the wider surrounding area.
Phoca vitulina (harbour seal) [1365]	To **maintain** the favourable conservation condition of harbour seal in the Slaney River Valley SAC	The overall conservation status for the species is f**avourable,** and the conservation status trend is **stable**	The location of harbour seal haul-out locations has been mapped as part of the SSCOs for the Slaney. The closest haul out location is 4.3km east of the proposed survey works. Additionally, harbour seals were recorded at the proposed crossing of the River Slaney.

3.2.7.2 Saltee Islands SAC (000707)

The site synopsis for the Saltee Islands SAC[53] notes the following in relation to the site: "*This site comprises the Saltees Islands and a large area of the surrounding seas. There are two islands, Great Saltee and Little Saltee, and a constellation of islets and rocks."*

The Natura 2000 Standard Data Form for the Saltee Islands SAC[54] identifies the following most important impacts and activities with high negative effect on the site:

- Pollution to surface waters (limnic, terrestrial, marine & brackish)
- Sea defense or coast protection works, tidal barrages
- Bait digging / collection
- Nautical sports
- Pelagic trawling
- Utility and service lines

The impacts and activities as outlined above are not linked to the proposed survey works due to the nature, scale of the works and set back distance.

The QIs for which the SAC is designated, the conservation objectives identified for the QIs, and their current national conservation status and trend are outlined in Table 3.3. The known extents of a number of the QIs of the Saltee Island SAC have been mapped in the Site-Specific Conservation objectives or referenced in the site synopsis. It is of note that some habitats and species may extend beyond and occur outside the European site boundary within the ZoI of the proposed survey works. The closest extents of these QIs inside of the SAC as mapped in the conservation objectives and during site visits are also outlined in Table 3.3.

[53] NPWS (2013) Site Synopsis Saltee Islands SAC

[54] NPWS (2020) Natura 2000 Standard Data Form Saltee Island SAC

Table 3.3: Qualifying Interests for Saltee Islands SAC

Qualifying Interest (* indicates priority habitat)	Conservation Objective[25]	National Conservation Status and Trend[55] [56]	Known Location in Relation to the Proposed Survey Works
Mudflats and sandflats not covered by seawater at low tide [1140]	To **maintain** the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in the Saltee Islands SAC	The overall conservation status for the habitat is i**nadequate** and the conservation status trend is **deteriorating**.	The location of tidal mudflats and sandflats have been mapped as part of the SSCOs for the Saltee Islands SAC. The closest extent of this habitat is located approximately 9.2km to the southwest of the Proposed Development.
Large shallow inlets and bays [1160]	To **maintain** the favourable conservation condition of Large shallow inlets and bays in the Saltee Islands SAC	The overall conservation status for the habitat is **bad** and the conservation status trend is **deteriorating**	The location of large shallow inlets and bays have been mapped as part of the SSCOs for the Saltee Islands SAC. The closest extent of this habitat is located approximately 14km to the southwest of the Proposed Development.
Reefs [1170]	To **maintain** the favourable conservation condition of Reefs in the Saltee Islands SAC	The overall conservation status for the habitat is **inadequate** and the conservation status trend is **stable**	The location of reef habitat has been mapped as part of the SSCOs for the Saltee Islands SAC. The closest extent of this habitat is located approximately 14km to the southwest of the Proposed Development.
Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	To **maintain** the favourable conservation condition of Vegetated sea cliffs of the Atlantic and Baltic coasts in the Saltee Islands SAC	The overall conservation status for the habitat is **inadequate** and the conservation status trend is **stable**	The location of vegetated sea cliff habitat has been mapped as part of the SSCOs for the Saltee Islands SAC. The closest extent of this habitat is located approximately 15.9km to the southwest of the Proposed Development.
Submerged or partially submerged sea caves [8330]	To **maintain** the favourable conservation condition of submerged or partly submerged sea caves in the Saltee Islands SAC	The overall conservation status for the habitat is **favourable** and the conservation status trend is **stable**	The location of vegetated submerged sea cave habitat has been mapped as part of the SSCOs for the Saltee Islands SAC. The closest extent of this habitat is located approximately 19km to the southwest of the Proposed Development.
Halichoerus grypus (grey seal) [1364]	To **maintain** the favourable conservation condition of grey seal in the Saltee Islands SAC	The overall conservation status for the habitat is **favourable** and the conservation status trend is **improving**	The location of grey seal haul out sites have been mapped as part of the SSCOs for the Saltee Islands SAC. The closest of these has been mapped 16km to the south west of the propose development. Grey seals may occur outside of the SAC boundaries. The species has been recorded in close proximity to the proposed development during field surveys.

[55] NPWS (2019) Article 17 Habitats Conservation Assessments 2019 Volume 2

[56] NPWS (2019) Article 17 Species Conservation Assessments 2019 Volume 3

3.2.7.3 Wexford Harbour and Slobs SPA (004076)

The site synopsis for Wexford Harbour and Slobs SPA[57] notes the following about the SPA: "*Wexford Harbour is the lowermost part of the estuary of the River Slaney, a major river that drains much of the south-east region. The site is divided between the natural estuarine habitats of Wexford Harbour, the reclaimed polders known as the North and South 'Slobs', and the tidal section of the River Slaney. The seaward boundary extends from the Rosslare peninsula in the south to the area just west of The Raven Point in the north. Shallow marine water is a principal habitat, but at low tide extensive areas of intertidal flats are exposed*."

"*The Slobs are two flat areas of farmland, mainly arable and pasture grassland, empoldered behind 19th century sea-walls. The lands are drained by a network of channels which flow into two central channels, in parts several hundred metres in width. Water from the channels is pumped into the sea with electric pumps. The channels often support swamp vegetation. The river section of the site is extensive, extending to Enniscorthy, a distance of almost 20 km from Wexford town*."

The Natura 2000 Standard Data Form for the Wexford Harbour and Slobs SPA[58] identifies the following most important impacts and activities with negative effect on the site:

- Fertilisation
- Grazing
- Hunting
- Marine and Freshwater Aquaculture
- Grazing
- Roads, motorways
- Sylviculture, forestry
- Urbanised areas, human habitation
- Walking, horse riding and non-motorised vehicles

None of the above impacts and activities are linked to the proposed survey works due to the nature of the works.

The SCIs for which the SPA is designated, the conservation objectives identified for the QIs, and their current national conservation status and trend are outlined in Table 3.4.

[57] NPWS (2014) Site Synopsis Wexford Harbour and Slobs SPA

[58] NPWS (2020) Natura 2000 Standard Data Form. Wexford Harbour and Slobs SPA.

Table 3.4: Special Conservation Interests for Wexford Harbour and Slobs SPA

Special Conservation Interest	Conservation Objective[25]	Population Trends[59]
Little grebe (*Tachybaptus ruficollis*) [A004]	To **maintain** the favourable conservation condition of little grebe in Wexford Harbour and Slobs SPA	The long-term trend for the species is **stable or increasing**
Great crested grebe (*Podiceps cristatus*) [A005]	To **maintain** the favourable conservation condition of great crested grebe in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing an **intermediate decline**
Cormorant (*Phalacrocorax carbo*) [A017]	To **maintain** the favourable conservation condition of cormorant in Wexford Harbour and Slobs SPA	The long-term trend for the species is **stable or increasing**
Grey heron (*Ardea cinerea*) [A028]	To **maintain** the favourable conservation condition of grey heron in Wexford Harbour and Slobs SPA	The long-term trend for the species is **stable or increasing**
Bewick's swan (*Cygnus columbianus bewickii*) [A037]	To **maintain** the favourable conservation condition of Bewick's swan in Wexford Harbour and Slobs SPA	Not listed
Whooper swan (*Cygnus cygnus*) [A038]	To **maintain** the favourable conservation condition of whooper swan in Wexford Harbour and Slobs SPA	Not listed
Light-bellied brent goose (*Branta bernicla hrota*) [A046]	To **maintain** the favourable conservation condition of light-bellied Brent goose in Wexford Harbour and Slobs SPA	The long-term trend for the species is **stable or increasing**
Shelduck (*Tadorna tadorna*) [A048]	To **maintain** the favourable conservation condition of shelduck in Wexford Harbour and Slobs SPA	The long-term trend for the species is **stable or increasing**
Wigeon (*Anas penelope*) [A050]	To **maintain** the favourable conservation condition of wigeon in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing an **intermediate decline**
Teal (*Anas crecca*) [A052]	To **maintain** the favourable conservation condition of teal in Wexford Harbour and Slobs SPA	The long-term trend for the species is **stable or increasing**
Mallard (*Anas platyrhynchos*) [A053]	To **maintain** the favourable conservation condition of Mallard in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing an **intermediate decline**
Pintail (*Anas acuta*) [A054]	To **maintain** the favourable conservation condition of pintail in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing an **intermediate decline**
Scaup (*Aythya marila*) [A062]	To **maintain** the favourable conservation condition of scaup in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing a **large decline**
Goldeneye (*Bucephala clangula*) [A067]	To **maintain** the favourable conservation condition of goldeneye in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing a **large decline**

[59] Kennedy, J., Burke, B., Fitzgerald, N., Kelly, S.B.A., Walsh, A.J. & Lewis, L.J. 2023. Irish Wetland Bird Survey: I-WeBS National and Site Trends Report 1994/95 – 2019/20. BirdWatch Ireland Waterbird Report to the National Parks and Wildlife Service. BirdWatch Ireland, Wicklow.

Special Conservation Interest	Conservation Objective[25]	Population Trends[59]
Red-breasted merganser (*Mergus serrator*) [A069]	To **maintain** the favourable conservation condition of red-breasted merganser in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing an **intermediate decline**
Hen harrier (*Circus cyaneus*) [A082]	To **maintain** the favourable conservation condition of hen harrier in Wexford Harbour and Slobs SPA	Not listed
Coot (*Fulica atra*) [A125]	To **maintain** the favourable conservation condition of coot in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing an **intermediate decline**
Oystercatcher (*Haematopus ostralegus*) [A130]	To **maintain** the favourable conservation condition of oystercatcher in Wexford Harbour and Slobs SPA	The long-term trend for the species is **stable or increasing**
Golden plover (*Pluvialis apricaria*) [A140]	To **maintain** the favourable conservation condition of golden plover in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing a **large decline**
Grey plover (*Pluvialis squatarola*) [A141]	To **maintain** the favourable conservation condition of grey plover in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing a **large decline**
Lapwing (*Vanellus vanellus*) [A142]	To **maintain** the favourable conservation condition of lapwing in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing a **large decline**
Knot (*Calidris canutus*) [A143]	To **maintain** the favourable conservation condition of knot in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing an **intermediate decline**
Sanderling (*Calidris alba*) [A144]	To **maintain** the favourable conservation condition of sanderling in Wexford Harbour and Slobs SPA	The long-term trend for the species is **stable or increasing**
Dunlin (*Calidris alpina*) [A149]	To **maintain** the favourable conservation condition of dunlin in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing a **moderate decline**
Black-tailed godwit (*Limosa limosa*) [A156]	To **maintain** the favourable conservation condition of black-tailed godwit in Wexford Harbour and Slobs SPA	The long-term trend for the species is **stable or increasing**
Bar-tailed godwit (*Limosa lapponica*) [A157]	To **maintain** the favourable conservation condition of bar-tailed godwit in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing an **intermediate decline**
Curlew (*Numenius arquata*) [A160]	To **maintain** the favourable conservation condition of curlew in Wexford Harbour and Slobs SPA	The long-term trend for the species is undergoing a **moderate decline**
Redshank (*Tringa totanus*) [A162]	To **maintain** the favourable conservation condition of redshank in Wexford Harbour and Slobs SPA	The long-term trend for the species is **stable or increasing**
Black-headed gull (*Chroicocephalus ridibundus*) [A179]	To **maintain** the favourable conservation condition of black-headed gull in Wexford Harbour and Slobs SPA	Not listed
Lesser black-backed gull (*Larus fuscus*) [A183]	To **maintain** the favourable conservation condition of lesser black-backed gull in Wexford Harbour and Slobs SPA	Not listed

Special Conservation Interest	Conservation Objective[25]	Population Trends[59]
Little tern (*Sterna albifrons*) [A195]	To **maintain** the favourable conservation condition of little tern at Wexford Harbour and Slobs SPA	Not listed
Greenland white-fronted goose (*Anser albifrons flavirostris*) [A395]	To **maintain** the favourable conservation condition of Greenland white-fronted goose in Wexford Harbour and Slobs SPA	Not listed
Wetland and Waterbirds [A999]	To **maintain** the favourable conservation condition of the wetland habitat in Wexford Harbour and Slobs SPA as a resource for the regularly-occurring migratory waterbirds that utilise it	Not applicable

3.2.7.4 Blackwater Bank SAC (002953)

The site synopsis for the Black Water SAC[60] states that the SAC "*consists of a series of sandbanks running roughly parallel to the coastline of co. Wexford the total area of this site is approximately 12,407 ha. This designation includes the Lucifer Bank, Blackwater Bank and Moneyweights Bank. These features are at the southern end of a series of offshore sandbanks that run along the eastern seaboard of Ireland as far north as Co. Dublin.*"

The Natura 2000 Standard Data Form for the Blackwater Bank SAC[61] does not identify any impacts and activities with high negative effect on the site.

The QIs for which the SAC is designated, the conservation objectives identified for the QIs, and their current national conservation status and trend are outlined in Table 3.5. The known extents of a number of the QIs of the Blackwater Bank SAC have been mapped in the Site-Specific Conservation objectives or referenced in the site synopsis. It is of note that some habitats and species may extend beyond and occur outside the European site boundary within the ZoI of the proposed survey works. The closest extents of these QIs inside of the SAC as mapped in the conservation objectives and during site visits are also outlined in Table 3.5.

[60] NPWS (2024) Site Synopsis Blackwater Bank SAC

[61] NPWS (2024) Natura 2000 Standard Data Form Blackwater Bank SAC

Table 3.5: Qualifying Interests for Blackwater Bank SAC

Qualifying Interest (* indicates priority habitat)	Conservation Objective[62]	National Conservation Status and Trend[6364]	Known Location in Relation to the Proposed Survey Works
Sandbanks which are slightly covered by sea water all the time [1110]	To **maintain** the favourable conservation condition of Sandbanks which are slightly covered by sea water all the time in Blackwater Bank SAC	The overall conservation status for the habitat is **favourable** and the conservation status remains **favourable**.	Estuaries have been mapped as part of the Site Specific Conservation Objectives (SSCOs) for the Slaney River Valley SAC. The habitat as mapped intersects with the proposed survey works area at the crossing of the Slaney River.
Harbour porpoise (*Phocoena Phocoena*) [1351]	To **maintain** the favourable conservation condition of Harbour porpoise (Phocoena Phocoena) in the Blackwater Bank SAC	The overall conservation status for the species is **favourable** and the conservation status trend is **stable**.	This species has been mapped out all along the east, south east and southern coast of Ireland and within the Blackwater Bank SAC 23.6km east of the proposed survey area. As they are a highly mobile species harbour porpoise may occur outside the boundaries of this SAC with NBDC historic records demonstrating harbour porpoise approximately 1.5km from the proposed survey area within the Slaney River Valley SAC.

[62] NPWS (2024) Conservation Objectives: Blackwater Bank SAC 002953. Version 3. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.

[63] NPWS (2019) Article 17 Habitats Conservation Assessments 2019 Volume 2

[64] NPWS (2019) Article 17 Species Conservation Assessments 2019 Volume 3

3.2.7.5 Carnsore Point SAC (002269)

The site synopsis for the Carnsore Point SAC[65] states that the SAC "*comprises the area of sea and underlying bedrock and sediments off Carnsore Point. The coastal boundary follows the high water mark from just north of Greenore Point to Tacumshin Lake; the seaward boundary follows a line just to the west of Black Rock, south of the Barrels Rocks, east of the Bailies and as far north as South Long light. The bedrock of the site is of granite, felsite and other intrusive rocks rich in silica. The site is exposed to the prevailing wind and swells from the west. Tidal streams tend to be moderate but are strong in some areas. Offshore, Barrels Rocks are extremely exposed to the full force of Atlantic swells.*"

The Natura 2000 Standard Data Form for the Carnsore Point SAC[66] identifies the following most important impacts and activities with high negative effect on site:

- Removal of beach materials
- Piers/tourist harbours or recreational piers
- Discharges
- Fishing and harvesting aquatic resources
- Erosion

The impacts and activities as outlined above are not linked to the proposed survey works due to the nature, scale of the works and set back distance.

The QIs for which the SAC is designated, the conservation objectives identified for the QIs, and their current national conservation status and trend are outlined in Table 3.6. The known extents of a number of the QIs of the Carnsore Point SAC have been mapped in the Site-Specific Conservation objectives or referenced in the site synopsis. It is of note that some habitats and species may extend beyond and occur outside the European site boundary within the ZoI of the proposed survey works. The closest extents of these QIs inside of the SAC as mapped in the conservation objectives and during site visits are also outlined in Table 3.6.

[65] NPWS (2024) Site Synopsis Carnsore Point SAC

[66] NPWS (2024) Natura 2000 Standard Data Form Carnsore Point SAC

Table 3.6: Qualifying Interests for Carnsore Point SAC

Qualifying Interest (* indicates priority habitat)	Conservation Objective[67]	National Conservation Status and Trend63[6364]	Known Location in Relation to the Proposed Survey Works
Mudflats and sandflats not covered by seawater at low tide [1140]	To **maintain** the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Carnsore Point SAC	The overall conservation status for the habitat is **inadequate** and the conservation status trend is **deteriorating**.	Mudflats and sandflats not covered by seawater at low tide have been mapped as part of the Site Specific Conservation Objectives (SSCOs) for the Carnsore Point SAC. The habitat as mapped does not intersect with the proposed survey works area.
Reefs [1170]	To **maintain** the favourable conservation condition of reefs in Carnsore Point SAC	The overall conservation status for the habitat is **inadequate** and the conservation status remains **stable**.	Reefs have been mapped as part of the Site-Specific Conservation Objectives (SSCOs) for the Carnsore Point SAC. The habitat as mapped does not intersect with the proposed survey works area.
Harbour porpoise (*Phocoena Phocoena*) [1351]	To **maintain** the favourable conservation condition of Harbour porpoise (Phocoena Phocoena) in the Carnsore Point SAC	The overall conservation status for the species is **favourable** and the conservation status trend is **stable**.	This species has been mapped out all along the east, southeast and southern coast of Ireland and within the Blackwater Bank SAC 14.4km southeast of the proposed survey area. As they are a highly mobile species harbour porpoise may occur outside the boundaries of this SAC with NBDC historic records demonstrating harbour porpoise approximately 1.5km from the proposed survey area within the Slaney River Valley SAC.

[67] NPWS (2024) Conservation Objectives: Carnsore Point SAC 002269. Version 2. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage

3.3 Likely Significant Effects

The potential for likely significant effects on the QIs/SCIs of European sites screened in for Appropriate Assessment are discussed hereunder.

Site impacts to specific European sites that may affect integrity of the European site are outlined in Section 3.3.1 followed by consideration of potential adverse effects on relevant European sites screened in for Appropriate Assessment.

3.3.1 Potential Impact Types

3.3.1.1 Noise and Vibration

Marine Mammals

Generalised hearing ranges for cetaceans has been provided in Table 3.7. The NMFS (2024)[68] guidance identified the received levels and auditory weighing functions, or criteria, at which individual marine mammals are predicted to experience changes in their hearing sensitivity for acute (<24hrs) exposure to underwater anthropogenic sound sources.

The thresholds used are detailed in Table 3.8 for the onset of auditory injury[69] while Table 3.9 shows the onset for temporary threshold shift (TTS)[68].

Table 3.7: Generalised Hearing Range of the cetacean Hearing Groups

Hearing Group	Generalised Hearing Range (kHz)
Low Frequency Cetaceans	0.007 – 36
High Frequency Cetaceans	0.15 – 160
Very high Frequency Cetaceans	0.2-165

Table 3.8: Cetacean Auditory Injury Onset threshold

Hearing Group	Auditory Injury Onset Threshold (dB re. 1 µPa at 1 m)	
	Impulsive	Non-impulsive
Low Frequency Cetaceans	222	197
High Frequency Cetaceans	230	201
Very high Frequency Cetaceans	202	181

Table 3.9: Cetacean TTS Onset Thresholds

Hearing Group	TTS Onset Threshold (dB re. 1 µPa at 1 m)	
	Impulsive	Non-impulsive
Low Frequency Cetaceans	216	177
High Frequency Cetaceans	224	181
Very high Frequency Cetaceans	196	161

[68] Defined by NMFS (2024) as a temporary, reversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level

[69] Defined by NMFS (2024) as damage to the inner ear that can result in destruction of tissue. Auditory injury may or may not result in a Permanent Threshold Shift (PTS). PTS (as defined by NMFS, 2024) is a permanent, irreversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level.

Cetaceans being assessed in this report would include those that are considered to fall into the high and very high frequency category[70]. Within the immediate vicinity of the proposed survey works auditory injury onset and TTS could occur to very high and high frequency cetaceans with the risk of TTS extending up to 250m with behavioural disturbances can have a potentially greater range.

Due to the proposed survey works location (approximately 1.5km upstream) it is not considered that any cetaceans will be within the immediate vicinity of the proposed survey works or vessel. This is due to the tidal influence and depth of the Slaney River and the distribution of historic records from NBDC showing the nearest cetacean record being approximately 1.5km downstream from the survey area. As such there is no potential risk of significant auditory impact or injury from the proposed survey works as no cetaceans are expected to be within the ZoI of the survey works.

Annex II marine mammal species present in the region such as harbour porpoise, bottlenose dolphin and other marine mammals such as grey and harbour seals can exhibit temporary behavioural responses when in close proximity to activities similar to the proposed survey works. Such behaviours may include brief avoidance of areas or minor changes in dive patterns.

The proposed survey works will generate low-intensity underwater noise, primarily associated with a vessel or ROV movements and the use of geotechnical equipment such as multi-beam sonar, side-scan sonar and sub-bottom profiler. Due to how high frequency sounds travel through the aquatic environment and the distances involved, these devices produce sound levels that fall well below thresholds associated with injury or permanent hearing damage to marine mammals and are comparable to, or lower than, noise emitted by routine commercial and fishing vessel traffic which is present and active further downstream along with other recreational crafts/vessels used in Wexford harbour and on the Slaney River. As such, behavioural reactions (as noted above) are expected to be short-lived and non-injurious, reflecting normal behavioural plasticity rather than significant ecological disturbance; should marine mammal species come into close proximity to the proposed survey works.

It is considered that noise emissions will be intermittent, of short duration at each sampling location and restricted to the proposed survey area, limited to a small area surrounding the active vessel. Due to the relatively large area of alternative foraging habitat and shallow waters in which the survey will take place (approximately 1.5km inland upstream from Wexford Harbour on the Slaney River) and the short duration of the proposed survey works; there is no realistic mechanism by which the limited reversible responses could translate into reduced foraging success, displacement from important habitats or population-level impacts.

Migratory Fish

The proposed hydrographic survey works have the potential to generate underwater noise through the operation of acoustic survey equipment and associated vessel movements. The River Slaney provides an important migratory corridor for Atlantic salmon (*Salmo salar*), twaite shad (*Alosa fallax*), sea lamprey (*Petromyzon marinus*) and river lamprey (*Lampetra fluviatilis*), which are Qualifying Interests of Slaney River Valley SAC. Consequently, potential underwater noise effects on these species, including disturbance, displacement, injury and disruption to migration, require consideration.

Anthropogenic underwater noise can affect fish through a range of physiological and behavioural responses, depending on the acoustic characteristics of the sound source, the duration and intensity of exposure, and species-specific hearing capabilities. Potential effects include temporary changes in swimming behaviour, avoidance, displacement, auditory

[70] Kastelein, R.A., Schop, J., Hoek, L. and Covi, J. (2015). Hearing thresholds of harbour porpoise (*Phocoena phocoena*) for narrow-band sweeps. Journal of Acoustic Society America. 138(4): 2508-2512.

impairment and, under sufficiently intense exposure conditions, physical injury (Popper et al., 2014[71]; Popper and Hawkins, 2019[72]). Fish detect underwater sound through particle motion, while certain species possess specialised anatomical structures that enhance sensitivity to sound pressure. Accordingly, the potential effects of underwater noise vary between species and cannot be determined solely by reference to acoustic source levels.

Atlantic salmon possess relatively limited hearing sensitivity compared with species exhibiting specialised auditory adaptations, with hearing predominantly associated with lower-frequency sounds. Hawkins and Johnstone (1978)[73] identified auditory sensitivity principally below approximately 380 Hz, while Harding et al. (2016)[74] subsequently demonstrated responses to frequencies up to 800 Hz under experimental conditions. Sea lamprey also exhibit sensitivity to lower-frequency sound, with Mickle et al. (2019)[75] identifying detection between 50 and 300 Hz and behavioural responses to frequencies between 50 and 200 Hz. Experimental research has additionally demonstrated that low-frequency acoustic stimuli can influence the distribution of migrating sea lamprey within freshwater environments (Heath et al., 2021)[76]. Although equivalent species-specific evidence for river lamprey is more limited, potential sensitivity to low-frequency acoustic disturbance is considered relevant.

Twaite shad possess specialised auditory structures associated with increased sensitivity to sound pressure relative to hearing generalists such as Atlantic salmon. Lovell (2009)[77] demonstrated auditory responses across a broader frequency range, while additional research reviewed by the Scottish Government (2024)[78] identifies sensitivity to ultrasonic stimuli in juvenile twaite shad. These characteristics indicate that twaite shad warrant particular consideration when assessing potential behavioural responses to acoustic survey equipment.

[71] Popper, A.N., Hawkins, A.D., Fay, R.R., Mann, D.A., Bartol, S., Carlson, T.J., Coombs, S., Ellison, W.T., Gentry, R.L., Halvorsen, M.B., Løkkeborg, S., Rogers, P.H., Southall, B.L., Zeddies, D.G. and Tavolga, W.N. (2014) *Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report Prepared by ANSI-Accredited Standards Committee S3/SC1 and Registered with ANSI*. ASA S3/SC1.4 TR-2014. SpringerBriefs in Oceanography. Cham: Springer. Available at: https://doi.org/10.1007/978-3-319-06659-2.

[72] Popper, A.N. and Hawkins, A.D. (2019) 'An overview of fish bioacoustics and the impacts of anthropogenic sounds on fishes', *Journal of Fish Biology*, 94(5), pp. 692–713. Available at: https://doi.org/10.1111/jfb.13948.

[73] Hawkins, A.D. and Johnstone, A.D.F. (1978) 'The hearing of the Atlantic salmon, Salmo salar', *Journal of Fish Biology*, 13(6), pp. 655–673. Available at: https://doi.org/10.1111/j.1095-8649.1978.tb03480.x.

[74] Harding, H., Bruintjes, R., Radford, A.N. and Simpson, S.D. (2016) *Measurement of Hearing in the Atlantic Salmon (Salmo salar) Using Auditory Evoked Potentials, and Effects of Pile Driving Playback on Salmon Behaviour and Physiology*. Scottish Marine and Freshwater Science, 7(11). Edinburgh: Scottish Government. Available at: https://doi.org/10.7489/1701-1.

[75] Mickle, M.F., Miehls, S.M., Johnson, N.S. and Higgs, D.M. (2019) 'Hearing capabilities and behavioural response of sea lamprey (Petromyzon marinus) to low-frequency sounds', *Canadian Journal of Fisheries and Aquatic Sciences*, 76(9), pp. 1541–1548. Available at: https://doi.org/10.1139/cjfas-2018-0359.

[76] Heath, V.L.S., Miehls, S.M., Johnson, N.S. and Higgs, D.M. (2021) 'Behavioural response of sea lamprey (Petromyzon marinus) to acoustic stimuli in a small stream', *Canadian Journal of Fisheries and Aquatic Sciences*, 78(4), pp. 341–348. Available at: https://doi.org/10.1139/cjfas-2020-0301.

[77] Lovell, J.M. (2009) 'The inner ear morphology and hearing abilities of twaite shad and a selection of marine and freshwater fish', *Proceedings of the Institute of Acoustics*, 31(1), pp. 44–53. Available at: https://www.ioa.org.uk/system/files/proceedings/j_lovell_the_inner_ear_morphology_hearing_abilities_of_twaite_shad_a_selection_of_marine_freshwater_fish.pdf.

[78] Scottish Government (2024) *Diadromous Fish in the Context of Offshore Wind – Review of Current Knowledge and Future Research*. Edinburgh: Scottish Government. Available at: https://www.gov.scot/publications/diadromous-fish-context-offshore-wind-review-current-knowledge-future-research-14-january-2024/ (Accessed: 25 October 2026).

The proposed hydrographic investigations will involve multibeam or side-scan sonar and sub-bottom profiling, with indicative operating frequencies and source levels presented in Table 3.1. Side-scan sonar operates at relatively high frequencies, while the proposed sub-bottom profiler includes a lower-frequency component of approximately 4 kHz. These principal acoustic frequencies are generally above the documented low-frequency hearing ranges of Atlantic salmon and sea lamprey. However, the biological relevance of acoustic emissions also depends on their bandwidth, temporal characteristics and received exposure levels. Furthermore, survey vessels will generate lower-frequency underwater noise through engine and propeller operation, potentially within the hearing ranges of migratory fish.

Long et al. (2026)[79], in their review of the impacts of geophysical and geotechnical surveys on marine fish and shellfish in Irish waters, identified underwater noise as a principal impact pathway associated with marine site investigations. The review indicates that acoustic exposure can result in behavioural disturbance, avoidance, displacement and physiological responses, although the magnitude of such effects varies according to the sound source, species and exposure conditions. Evidence of direct injury is more strongly associated with high-energy impulsive sources, particularly seismic air guns, than with routine hydrographic survey activities. However, the evidence base for individual geophysical survey methods remains limited, and findings from higher-energy sources cannot be directly extrapolated to the equipment proposed for the River Slaney surveys.

The proposed surveys will be temporary and mobile in nature, with hydrographic investigations anticipated to take approximately four weeks. Acoustic equipment will be operated from a survey vessel or remotely operated vehicle, with survey activities progressing through the designated bathymetric survey area. Consequently, exposure at individual locations will depend on the duration and frequency of survey operations, the proximity of migrating fish to the acoustic sources and the prevailing environmental conditions.

Physical injury and auditory impairment in fish are generally associated with exposure to sufficiently intense underwater sound, particularly high-energy impulsive sources capable of generating injurious exposure conditions (Popper *et al*., 2014[71]; Popper and Hawkins, 2019[72]). Long *et al*. (2026)[79] identifies behavioural disturbance as a more consistently documented response to marine geophysical surveys, while recognising that the available evidence for individual survey techniques remains limited.

The proposed hydrographic surveys will utilise multibeam or side-scan sonar and sub-bottom profiling equipment, rather than high-energy seismic air guns, impact piling or explosive sources. Having regard to the nature and indicative acoustic characteristics of the proposed hydrographic survey equipment, the temporary and mobile nature of the activities, and the available scientific evidence concerning injury associated with underwater sound, physical injury and auditory impairment are not considered likely consequences of the proposed surveys. Although uncertainties remain regarding species-specific injury thresholds and responses to individual acoustic survey techniques, the proposed activities are not considered likely to generate the intense or sustained exposure conditions typically associated with physical injury. Accordingly, adverse effects on the relevant qualifying interests of Slaney River Valley SAC arising from physical injury or auditory impairment are not predicted.

Given the importance of the River Slaney as a migratory corridor, temporary behavioural responses, including avoidance or altered swimming behaviour, could potentially affect the

[79] Long, A., Rickard, E., Holding, P., Dickerson, B. and Hetherington, S. (2026) *Review of Impacts of Geophysical and Geotechnical Surveys on Marine Fish and Shellfish in Irish Waters*. Report P19244. AQUAFACT–APEM Group. Prepared on behalf of the Maritime Area Regulatory Authority (MARA).

passage of migratory fish where acoustic activities coincide with periods of migration. The potential for such responses to result in meaningful migration delays or temporary displacement must therefore be considered in the context of the proposed survey methodologies, acoustic characteristics and availability of passage through the affected river corridor.

The potential for physical injury and sudatory impairment has been considered above in relation to the proposed acoustic survey methodology and available scientific evidence. The potential for behavioural disturbance, displacement and disruption to migratory movements is assessed further for the relevant qualifying interests of the Slaney River Valley SAC in Section 3.3.2, having regard to the site's conservation objectives.

Otter

Otter is not expected to be affected by underwater noise generated during the proposed survey works. Otter hearing is not adapted to underwater with functional hearing in otters while underwater not being fully understood. However, are more likely to be affected by above water noise disturbances such as that generated from the vessels out board motor.

The above water hearing range is reported to be within the range of 200KHz to 32KHz[80], with lowest thresholds around 4KHz. however, behavioural changes have been noted in otters underwater at frequencies of both 1khz and 14khz[81]. In Ireland the territorial range of otters can be extensive with females occupying territories of 7.5 ± 1.5km in length along a riverine environment and 6.5 ± 1.0km in coastal environments, while male otter territory along rivers is approximately 13.2 ± 5.3km in length with a high degree of variability[82].

Temporary disturbance to otter may occur, should they be foraging or commuting along the riverine corridor near the survey works of along the riverbanks near the vessel launch sites. Significant impacts are not considered possible due to the short duration of the proposed survey works along with the wide availability of alternative suitable foraging and commuting habitat in the area along the riverine corridor. The proposed survey works are also noted to not have the potential to impact any otter holts or resting sites.

3.3.1.2 Pollution from Spills and Leakages

The proposed survey works will involve the operation of a vessel such as a RIB or solid hull boat as well as potentially a remote operated vehicle. In the case of the ROV's operation a support vessel will still be required. There is a risk of minor accidental pollution events such as fuel spills or hydraulic fluid leaks. Such events can negatively impact the aquatic environment by reducing water quality, poisoning fauna and flora species which can affect not just the mammal species directly but also indirectly by toxifying their food sources and causing a reduction in fish stock populations.

3.3.1.3 Physical Disturbance

Proposed survey works utilising a stainless steel 0.025m^2 van Veen grab sampler as well as core samples will result in disturbance from the direct removal or alteration of riverbed and bank sediments. This can lead to temporary habitat loss or modification and increased turbidity as sampling activities increase sediment resuspension. Such physical impacts may affect benthic

[80] Voigt MB, Hackenbroich C, Krüger HH, Liebau A, Esser KH. The in-air auditory thresholds of the eurasian otter (Lutra lutra, L. 1758) as determined by auditory brainstem responses. Hear Res. 2019 Sep 15; 381:107774. doi: 10.1016/j.heares.2019.107774. Epub 2019 Aug 2. PMID: 31408801.

[81] Stepien, E. N. (2020). Testing the Eurasian otter's (Lutra lutra) response to underwater frequencies used for acoustic seal deterration devices. The 16th Danish Marine Mammal Symposium, Denmark.

[82] Reid, N., Hayden, B., Lundy, M.G., Pietravalle, S., McDonald, R.A. & Montgomery, W.I. (2013) National Otter Survey of Ireland 2010/12. Irish Wildlife Manuals No. 76. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland

communities, particularly in areas supporting sensitive or slow recovering species. However, these represent a very small spatial footprint and are highly localised throughout the proposed survey area and are temporary in nature. No extraction or sample collection/sediment removal will occur at a scale to induce habitat modification, hydrological alteration, or physical restructuring of the habitat. As such, the works will not result in the permanent loss of habitat, fragmentation of habitat or changes to sediment dynamics and communities.

Disturbance is localised, short-term and rapidly reversible, with no mechanism for effects to extend beyond the immediate sampling point. However, there is potential for localised, short-term and rapidly reversible physical disturbances within the proposed survey area along the Slaney River due to vessel movements and increased human activity and presence during survey works.

3.3.1.4 Increased Human Presence

Otter using the riverine corridor and banks areas and shoreline may experience disturbances due to increased human presence and activity in the area which may result in avoidant behaviours or alternatively encourage otters to approach survey works due to their curious nature.

Waterfowl using the study area may be temporarily disturbed by survey activities.

3.3.1.5 Vessel Movements

While the River Slaney will experience a baseline level of vessel activity and traffic any additional vessel movements on the river will increase the risk of vessel strike should marine mammals be present in the survey area as well as trigger reactive behavioural responses. While the majority of marine mammal sightings and records are approximately 1.5km downstream in Wexford Harbour where vessel traffic and movement will occur at much higher rates.

This physical disturbance may involve temporary, low-level behavioural responses to the presence or movement of vessels, particularly in areas where vessel traffic would generally be considered low. However, any such responses are considered to be brief, non-injurious and similar to those elicited by more routine vessel traffic as experienced by marine mammals downstream in Wexford Harbour. It is also considered that due to marine mammals not venturing further upstream on a regular basis given the proposed survey areas restricted location approximately 1.5km upstream from Wexford Harbour; there is no plausible mechanism by which short-duration avoidance behaviour within the survey area could reduce foraging efficiency, alter movement patterns or result in significant disturbance. The absence of haul out and breeding points for pinniped species such as grey and harbour seal within the proposed survey area suggests that no disturbance of ecological function or protected features will occur.

3.3.1.6 Summary Impacts

A summary of potential impacts identified in Section 3.3.1 and 3.3.2, above, is outlined in Table 3.10.

Table 3.10: Potential for Impacts in the Absence of Mitigation

European Site	Impact to QIs/SCIs Identified
Slaney River Valley SAC	Potential for disturbance to otter
	Potential for disturbance to harbour seal
	Potential for degradation in water quality to impact QI sea lamprey, river lamprey, twaite shad and Atlantic salmon

European Site	Impact to QIs/SCIs Identified
	Potential for underwater noise to result in disturbance, displacement or injury to QI sea lamprey, river lamprey, twaite shad and Atlantic salmon, including potential disruption to migratory movements
	Potential for degradation in water quality to impact supporting habitat for otter and harbour seal
Saltee Islands SAC	Potential for disturbance to grey seal
Blackwater Bank SAC	Potential for disturbance to harbour porpoise
Carnsore Point SAC	Potential for disturbance to harbour porpoise
Wexford Harbour and Slobs SPA	Potential for degradation in water quality to impact SCI wetlands and supporting habitat for wintering birds
	Potential for disturbance to wintering bird species

3.3.2 Potential for Adverse Effects on Slaney River Valley SAC

Pathways for adverse effects on Slaney River Valley SAC have been identified. The potential for these pathways to result in adverse effects to the SAC in the absence of mitigation is now assessed. These potential impacts are identified as follows:

- Potential for degradation in water quality to impact:
  - Supporting habitat for otter
  - Sea lamprey
  - Brook lamprey
  - River lamprey
  - Twaite shad
  - Salmon
  - Supporting habitat Harbour seal
- Potential for disturbance impacts to:
  - Otter
  - Harbour seal
  - Sea lamprey
  - River lamprey
  - Twaite shad
  - Atlantic salmon

Conservation objectives have been developed for Slaney River Valley SAC. An assessment of the potential for adverse effects on the integrity of Slaney River Valley SAC is presented hereunder.

Table 3.11: Assessment of Potential for Adverse Effects on the Site Integrity of Slaney River Valley SAC – Otter (*Lutra lutra*)

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
Distribution	Percentage positive survey sites	No significant decline	The proposed survey works will not result in the loss of any holt or couching sites. However, there is a potential risk of disturbance impacts to local otters utilising the riverine corridor along the Slaney River from increased human presence/activity, vessel movements and noise/vibration disturbances. Temporary disturbance to otter may occur, should they be foraging or commuting along the riverine corridor near the survey works of along the riverbanks near the vessel launch sites. Significant impacts are not considered possible due to the short duration of the proposed survey works along with the wide availability of alternative suitable foraging and commuting habitat in the area along the riverine corridor. As such, there is potential for the works to cause localised, temporary disturbance resulting in avoidance of the proposed survey area by otter.	Localised disturbance to otter resulting in avoidance behaviours would be very temporary and would not constitute an adverse effect on the site's integrity. **On a precautionary basis Otter are screened in for AA as there is residual uncertainty regarding disturbance effects and precautionary mitigation is recommended.**
Extent of terrestrial habitat	Hectares	No significant decline. Area mapped and calculated as 64.7ha above high water mark (HWM); 453.4ha along river banks/ around ponds	While the proposed survey area is considered to include suitable terrestrial habitat along the banks of the Slaney River, the proposed survey works are non-intrusive and will not alter the existing boundaries or involve any land take. There is no potential for a reduction in habitat size as a result of the proposed survey works	No potential for Adverse Effects on Site Integrity have been identified.
Extent of marine habitat	Hectares	No significant decline. Area mapped and calculated as 534.7ha	The proposed survey works will not occur within the marine environment with the proposed survey area upstream on the Slaney River. There is no potential for a reduction in habitat size as a result of the proposed survey works	No potential for Adverse Effects on Site Integrity have been identified.
Extent of freshwater (river) habitat	Kilometres	No significant decline. Length mapped and calculated as 264.1km	While the proposed survey works will occur within freshwater (river) environment, they are non-intrusive and will not alter the existing boundaries or involve any land take.	No potential for Adverse Effects on Site Integrity have been identified.

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
			There is no potential for a reduction in habitat size as a result of the proposed survey works	
Extent of freshwater (lake/lagoon) habitat	Hectares	No significant decline. Area mapped and calculated as 0.4ha	While the proposed survey works will occur within the boundaries of the SAC, they are non-intrusive and will not alter the existing boundaries or involve any land take. There is no potential for a reduction in habitat size as a result of the proposed survey works	No potential for Adverse Effects on Site Integrity have been identified.
Couching sites and holts	Number	No significant decline	No otter holts or couches were recorded within the footprint of the works during field walkovers. A potential holt was recorded outside of the proposed survey area; however, this will not be removed as part of the proposed survey works. There is no potential for a reduction or loss of couching sites or holts as a result of the proposed survey works	No potential for Adverse Effects on Site Integrity have been identified.
Fish biomass available	Kilograms	No significant decline	The proposed survey works will involve the use of a vessel such as a RIB which carries localised risk of accidental pollution events. However, the small scale of proposed equipment, extensive nature of the study area and high dilution available mean no impacts are likely.	No impacts will arise on fish biomass available to otter. No potential for Adverse Effects on Site Integrity have been identified.
Barriers to connectivity	Number	No significant increase	While proposed survey works will occur within the riverine environment they are non-intrusive and temporary investigation works with no permanent or temporary barriers to connectivity put in place.	No potential for Adverse Effects on Site Integrity have been identified.

Table 3.12: Assessment of Potential for Adverse Effects on the Site Integrity of Slaney River Valley SAC – Sea lamprey (*Petromyzon marinus*), Brook lamprey (*Lampetra planeri*) and River lamprey (*Lampetra fluviatilis*)

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
Distribution: extent of anadromy	% of river accessible	**Sea lamprey:** Greater than 75% of main stem length of rivers accessible from estuary **River lamprey:** Greater than 75% of main stem and major tributaries down to second order accessible from estuary **Brook lamprey:** Access to all water courses down to first order streams	While proposed survey works will occur within the riverine environment, they are non-intrusive and temporary investigation works with no permanent or temporary barriers to connectivity put in place. Underwater noise generated by acoustic survey equipment and vessel movements may result in temporary behavioural disturbances or avoidance by migrating sea lamprey and river lamprey. Although the principal operating frequencies of the proposed acoustic equipment are above the documented hearing range of sea lamprey, lower frequency vessel noise remains a potential pathway for disturbance (Mickle *et al*., 2019[75]; Heath *et al*., 2021[76]). The potential for interruption of migratory passage is therefore considered.	~~No potential for Adverse Effects on Site Integrity have been identified.~~ Underwater noise associated with the proposed surveys may result in localised, temporary disturbance to migrating sea and river lamprey, potentially delaying or disrupting upstream passage, though adverse effect on populations are not possible as this is a temporary impact and fish will move upstream/ downstream when the temporary impact is removed or reduced. While no physical barriers to migration will be introduced, acoustic disturbance could temporarily impede access to upstream spawning habitats. Precautionary mitigation measures are therefore proposed to maintain migratory passage and minimise localised temporary disturbance effects to this species. Noting in particular that this species is at very unfavourable conservation status in the River Slaney.
Population structure of juveniles	Number of age/size groups	At least three age/size groups present	The proposed survey works comprise of non-intrusive and low-impact investigative activities which will involve physical interaction with the environment. This will involve the extraction of discrete sediment samples from the intertidal and subtidal zones which could potentially affect suitable or existing spawning and nursery habitat. However, these represent a very small spatial footprint and are highly localised throughout the proposed survey area and are temporary in nature. No extraction or sample collection/sediment removal will occur at a scale to induce habitat modification, hydrological alteration, or physical restructuring of the habitat.	~~No potential for Adverse Effects on Site Integrity have been identified.~~ Disturbance associated with the proposed surveys is expected to be temporary and localised. However, the potential for disruption to adult migration and subsequent juvenile recruitment cannot be excluded without mitigation. **On a precautionary basis, potential adverse effects on site integrity are identified for further assessment, and measures to safeguard migratory passage are recommended.**

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
			The works will not result in the permanent loss of habitat or fragmentation of habitat for juvenile lamprey. Natural sediment infill and ecological recovery is expected to occur rapidly through normal tidal and sedimentary processes. The proposed survey works will involve the use of a vessel such as a RIB which carries localised risk of accidental pollution events. However, the small scale of proposed equipment, extensive nature of the study area, infrequent presence of this species and high dilution available mean no impacts are likely. Standard pollution controls will be implemented. Underwater Nosie generated by the proposed acoustic surveys and associated vessel movements may cause temporary behavioural disturbance to migrating adult sea and river lamprey, potentially delaying passage to upstream spawning habitats where such disruption affects spawning success, there is an indirect pathway for effects on subsequent juvenile recruitment and population structure.	
Juvenile density in fine sediment	Juveniles/m²	**Sea lamprey:** Juvenile density at least 1/m² **Brook and River lamprey** Mean catchment juvenile density of brook/river lamprey at least 2/m²	The distribution of lamprey have not been mapped as part of the SSCOs for the Slaney River valley SAC. However, lamprey were recorded during aquatic surveys at the crossing point of the River Slaney. The proposed survey works comprise of non-intrusive and low-impact investigative activities which will involve physical interaction with the environment. This will involve the extraction of discrete sediment samples from the intertidal and	~~No potential for Adverse Effects on Site Integrity have been identified.~~ The proposed surveys will not result in permanent loss or significant alteration of juvenile habitat. However, potential disturbance to adult migration and associated effects on juvenile recruitment cannot be excluded in the absence of mitigation. **On a precautionary basis, measures to safeguard migratory passage are required to address potential adverse effects on site integrity.**

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
			subtidal zones which could potentially affect suitable or existing spawning and nursery habitat. However, these represent a very small spatial footprint and are highly localised throughout the proposed survey area and are temporary in nature. No extraction or sample collection/sediment removal will occur at a scale to induce habitat modification, hydrological alteration, or physical restructuring of the habitat. The works will not result in the permanent loss of habitat or fragmentation of habitat for juvenile lamprey. Natural sediment infill and ecological recovery is expected to occur rapidly through normal tidal and sedimentary processes. Underwater noise associated with the proposed acoustic surveys and vessel movements may cause temporary behavioural disturbance to migrating adult sea and river lamprey, potentially affecting access to upstream spawning habitats. Disruption to spawning migration could indirectly affect subsequent juvenile recruitment and abundance.	
Extent and distribution of spawning habitat	m² and occurrence	**Sea lamprey:** No decline in extent and distribution of spawning beds. Improved dispersal of spawning beds into areas upstream of barriers **Brook and River lamprey** No decline in extent and distribution of spawning beds	The distribution of lamprey have not been mapped as part of the SSCOs for the Slaney River valley SAC. However, lamprey were recorded during aquatic surveys at the crossing point of the River Slaney. The proposed survey works comprise of non-intrusive and low-impact investigative activities which will involve physical interaction with the environment. This will involve the extraction of	No potential for Adverse Effects on Site Integrity have been identified.

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Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
			discrete sediment samples from the intertidal and subtidal zones which could potentially affect suitable or existing spawning and nursery habitat. However, these represent a very small spatial footprint and are highly localised throughout the proposed survey area and are temporary in nature. No extraction or sample collection/sediment removal will occur at a scale to induce habitat modification, hydrological alteration, or physical restructuring of the habitat. The works will not result in the permanent loss of habitat or fragmentation of habitat for juvenile lamprey. Natural sediment infill and ecological recovery is expected to occur rapidly through normal tidal and sedimentary processes.	
Availability of juvenile habitat	~~Number of positive sites in 3rd order channels (and greater), downstream of spawning areas~~ **Sea lamprey:** Number of positive sites in 3rd order channels (and greater), downstream of spawning areas. **Brook and River lamprey:** Number of positive sites in 2nd order	More than 50% of sample sites positive	The distribution of lamprey have not been mapped as part of the SSCOs for the Slaney River valley SAC. However, lamprey were recorded during aquatic surveys at the crossing point of the River Slaney. The proposed survey works comprise of non-intrusive and low-impact investigative activities which will involve physical interaction with the environment. This will involve the extraction of discrete sediment samples from the intertidal and subtidal zones which could potentially affect suitable or existing spawning and nursery habitat. However, these represent a very small spatial footprint and are highly localised throughout the proposed survey area and are temporary in nature. No extraction or sample collection/sediment removal will occur at a scale to induce habitat	No potential for Adverse Effects on Site Integrity have been identified.

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Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
	channels (and greater), downstream of spawning areas.		modification, hydrological alteration, or physical restructuring of the habitat. The works will not result in the permanent loss of habitat or fragmentation of habitat for juvenile lamprey. Natural sediment infill and ecological recovery is expected to occur rapidly through normal tidal and sedimentary processes.	

Table 3.13: Assessment of Potential for Adverse Effects on the Site Integrity of Slaney River Valley SAC – Twaite Shad (*Alosa fallax*)

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
Distribution: extent of anadromy	% of river accessible	Greater than 75% of main stem length of rivers accessible from estuary	While proposed survey works will occur within the riverine environment, they are non-intrusive and temporary investigation works with no permanent or temporary barriers to connectivity put in place. Underwater noise generated by acoustic survey equipment and associated vessel movements may cause behavioural disturbance or avoidance responses in migrating twaite shad. As twaite shad are sensitive to underwater sound, acoustic disturbance within the river corridor could temporarily delay or impede upstream passage to spawning habitats (Lovell, 2009[77]; Popper *et al*., 2014[71]).	~~No potential for Adverse Effects on Site Integrity have been identified.~~ Underwater noise associated with the proposed surveys may result in localised, temporary disturbance to migrating twaite shad, potentially causing avoidance behaviours or delays in upstream passage. **While such disturbance would be temporary, the potential for interference with migration to upstream spawning habitats cannot be excluded.**
Population structure- age classes	Number of age classes	More than one age class present	The proposed survey works comprise of non-intrusive and low-impact investigative activities which will involve physical interaction with the environment. This will involve the extraction of discrete sediment samples from the intertidal and subtidal zones which could potentially affect suitable or existing spawning and nursery habitat.	~~No potential for Adverse Effects on Site Integrity have been identified.~~ Temporary disturbance to migrating twaite shad could

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
			However, these represent a very small spatial footprint and are highly localised throughout the proposed survey area and are temporary in nature. No extraction or sample collection/sediment removal will occur at a scale to induce habitat modification, hydrological alteration, or physical restructuring of the habitat. The works will not result in the permanent loss of habitat or fragmentation of habitat for shad. Natural sediment infill and ecological recovery is expected to occur rapidly through normal tidal and sedimentary processes. The proposed survey works will involve the use of a vessel such as a RIB which carries localised risk of accidental pollution events. However, the small scale of proposed equipment, extensive nature of the study area, infrequent presence of this species and high dilution available mean no impacts are likely. Standard pollution controls will be implemented. Underwater noise associated with the proposed acoustic surveys and vessel movements may result in temporary behavioural disturbance to migrating twaite shad. Disruption or delay to upstream passage could affect access to spawning habitats and subsequent recruitment, representing a potential indirect pathway for effects on population age structure.	indirectly affect spawning success and subsequent recruitment if access to upstream spawning habitats is disrupted. **Although no permanent loss or fragmentation of habitat will occur, potential effects on population age structure cannot be excluded.**
Extent and distribution of spawning habitat	m² and occurrence	No decline in extent and distribution of spawning habitats	The distribution of twaite shad have not been mapped as part of the SSCOs for the Slaney River valley SAC. However, shad are known to occur within the River Slaney and were recorded during aquatic surveys at the crossing point of the River Slaney. The proposed survey works comprise of non-intrusive and low-impact investigative activities which will involve	No potential for Adverse Effects on Site Integrity have been identified.

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
			physical interaction with the environment. This will involve the extraction of discrete sediment samples from the intertidal and subtidal zones which could potentially affect suitable or existing spawning and nursery habitat. However, these represent a very small spatial footprint and are highly localised throughout the proposed survey area and are temporary in nature. No extraction or sample collection/sediment removal will occur at a scale to induce habitat modification, hydrological alteration, or physical restructuring of the habitat. The works will not result in the permanent loss of habitat or fragmentation of habitat for spawning shad. Natural sediment infill and ecological recovery is expected to occur rapidly through normal tidal and sedimentary processes.	
Water quality-oxygen levels	Milligrammes per litre	No lower than 5mg/l	The proposed survey works comprise of non-intrusive and low-impact investigative activities which will involve physical interaction with the environment. This will involve the extraction of discrete sediment samples from the intertidal and subtidal zones which could potentially introduce increased levels of silt and sediment to the aquatic environment impacting water quality including oxygen levels. However, these represent a very small spatial footprint and are highly localised throughout the proposed survey area and are temporary in nature. No extraction or sample collection/sediment removal will occur at a scale to induce habitat modification, hydrological alteration, or physical restructuring of the habitat. The works will not produce significant plumes of silt or sediment to significantly impact water quality when factoring in dilution ratios and hydrological processes.	No potential for Adverse Effects on Site Integrity have been identified.

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
			The proposed survey works will involve the use of a vessel such as a RIB which carries localised risk of accidental pollution events. However, the small scale of proposed equipment, extensive nature of the study area and high dilution available mean no impacts are likely.	
Spawning habitat quality: Filamentous algae; macrophytes; sediment	Occurrence	Maintain stable gravel substrate with very little fine material, free of filamentous algal (macroalgae) growth and macrophyte (rooted higher plants) growth	The distribution of twaite shad have not been mapped as part of the SSCOs for the Slaney River valley SAC. However, shad are known to occur within the River Slaney and were recorded during aquatic surveys at the crossing point of the River Slaney. The proposed survey works comprise of non-intrusive and low-impact investigative activities which will involve physical interaction with the environment. This will involve the extraction of discrete sediment samples from the intertidal and subtidal zones which could potentially affect suitable or existing spawning and nursery habitat. However, these represent a very small spatial footprint and are highly localised throughout the proposed survey area and are temporary in nature. No extraction or sample collection/sediment removal will occur at a scale to induce habitat modification, hydrological alteration, or physical restructuring of the habitat. The works will not result in the permanent loss of habitat or fragmentation of habitat for spawning shad. Natural sediment infill and ecological recovery is expected to occur rapidly through normal tidal and sedimentary processes.	No potential for Adverse Effects on Site Integrity have been identified.

Table 3.14: Assessment of Potential for Adverse Effects on the Site Integrity of Slaney River Valley SAC – Atlantic salmon (*Salmo salar*)

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
Distribution: extent of anadromy	% of river accessible	100% of river channels down to second order accessible from estuary	While proposed survey works will occur within the riverine environment, they are non-intrusive and temporary investigation works with no permanent or temporary barriers to connectivity put in place. Underwater noise generated by the proposed acoustic surveys and vessel movements may result in temporary behavioural disturbances or avoidance responses in migrating Atlantic salmon. Although the surveys will not introduce physical barriers, acoustic disturbance within the river corridor could temporarily delay or disrupt upstream migration and access to spawning habitats. Atlantic salmon are capable of detecting low-frequency underwater sound, including frequencies associated with vessel activity (Hawkins and Johnstone, 1978[73]; Harding *et al.*, 2016[74]).	~~No potential for Adverse Effects on Site Integrity have been identified.~~ Underwater noise associated with the proposed surveys may result in localised, temporary disturbance to migrating Atlantic salmon, potentially delaying or disrupting upstream passage. **Although no physical barriers to migration will be introduced, the potential for acoustic disturbance to interfere with access to spawning habitats cannot be excluded.**
Adult spawning fish	Number	Conservation Limit (CL) for each system consistently exceeded	The proposed survey works will involve the use of a vessel such as a RIB which carries localised risk of accidental pollution events. However, the small scale of proposed equipment, extensive nature of the study area, infrequent presence of this species and high dilution available mean no impacts are likely. Underwater noise associated with the proposed acoustic surveys and vessel movements may cause temporary behavioural disturbance to migrating adult Atlantic salmon. Disturbance or avoidance responses could delay or disrupt upstream passage to spawning habitats, with potential implications for the number of adults contributing to the spawning population.	~~No potential for Adverse Effects on Site Integrity have been identified.~~ Underwater noise associated with the proposed surveys may result in localised, temporary disturbance to migrating adult Atlantic salmon. **Although no permanent physical barriers will be introduced, disruption to upstream passage could affect the number of fish reaching spawning habitats. Consequently, potential effects on attainment of the conservation limit cannot be excluded.**
Salmon fry abundance	Number of fry/5 minutes electrofishing	Maintain or exceed 0+ fry mean catchment-wide abundance threshold	The proposed survey works will involve the use of a vessel such as a RIB which carries localised risk of accidental pollution events. However, the small scale of proposed	~~No potential for Adverse Effects on Site Integrity have been identified.~~

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
		value. Currently set at 17 salmon fry/5 min sampling	equipment, extensive nature of the study area, infrequent presence of this species and high dilution available mean no impacts are likely. Underwater noise associated with the proposed acoustic surveys and vessel movements may cause temporary disturbance to migrating adult Atlantic salmon. Where such disturbance disrupts upstream passage and subsequent spawning success, there is a potential indirect pathway for effects on fry recruitment and abundance.	Localised, temporary disturbance to migrating adult Atlantic salmon could indirectly affect fry abundance where upstream passage and successful spawning are disrupted. **Although the proposed surveys will not directly alter freshwater nursery habitats, potential effects on subsequent fry recruitment cannot be excluded.**
Out-migrating smolt abundance	Number	No significant decline	The proposed survey works will involve the use of a vessel such as a RIB which carries localised risk of accidental pollution events. However, the small scale of proposed equipment, extensive nature of the study area, infrequent presence of this species and high dilution available mean no impacts are likely. Underwater noise generated by the proposed acoustic surveys and associated vessel movements may cause temporary behavioural disturbance or avoidance responses in out-migrating Atlantic salmon smolts. As the proposed survey area forms part of the downstream migratory route towards the estuary, acoustic disturbance could temporarily delay or disrupt seaward migration, with potential implications for smolt movement and successful passage.	~~No potential for Adverse Effects on Site Integrity have been identified.~~ Underwater noise associated with the proposed surveys may result in localised, temporary disturbance to out-migrating Atlantic salmon smolts, potentially delaying or disrupting downstream passage. **Although no physical barriers will be introduced, the potential for acoustic disturbance to interfere with seaward migration cannot be excluded, with possible implications for smolt abundance.**
Number and distribution of redds	Number and occurrence	No decline in number and distribution of spawning redds due to anthropogenic causes	The distribution of Atlantic salmon have not been mapped as part of the SSCOs for the Slaney River valley SAC. None were recorded during aquatic surveys at the crossing point of the River Slaney. The proposed survey works comprise of non-intrusive and low-impact investigative activities which will involve physical interaction with the environment. This will involve the extraction of discrete sediment samples from the intertidal and subtidal zones which could potentially affect	No potential for Adverse Effects on Site Integrity have been identified.

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Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
			suitable or existing spawning and nursery habitat. However, these represent a very small spatial footprint and are highly localised throughout the proposed survey area and are temporary in nature. No extraction or sample collection/sediment removal will occur at a scale to induce habitat modification, hydrological alteration, or physical restructuring of the habitat. The works will not result in the permanent loss of habitat or fragmentation of habitat (redds).	
Water quality	EPA Q value	At least Q4 at all sites sampled by EPA	The proposed survey works comprise of non-intrusive and low-impact investigative activities which will involve physical interaction with the environment. This will involve the extraction of discrete sediment samples from the intertidal and subtidal zones which could potentially introduce increased levels of silt and sediment to the aquatic environment impacting water quality such as oxygen levels. However, these represent a very small spatial footprint and are highly localised throughout the proposed survey area and are temporary in nature. No extraction or sample collection/sediment removal will occur at a scale to induce habitat modification, hydrological alteration, or physical restructuring of the habitat. The works will not produce significant plumes of silt or sediment to significantly impact water quality when factoring in dilution ratios and hydrological processes. The proposed survey works will involve the use of a vessel such as a RIB which carries localised risk of accidental pollution events. However, the small scale of proposed equipment, extensive nature of the study area and high dilution available mean no impacts are likely. Standard pollution controls will be implemented.	No potential for Adverse Effects on Site Integrity have been identified.

Table 3.15: Assessment of Potential for Adverse Effects on the Site Integrity of Slaney River Valley SAC – Harbour seal (*Phoca vitulina*)

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
Access to suitable habitat	Number of artificial barriers	Species range within the site should not be restricted by artificial barriers to site use.	While proposed survey works will occur within the boundaries of the SAC for which harbour seal are a QI for, they are non-intrusive and temporary investigation works with no permanent or temporary barriers to connectivity put in place.	No potential for Adverse Effects on Site Integrity have been identified.
Breeding behaviour	Breeding sites	The breeding sites should be maintained in a natural condition.	No recorded breeding sites are located within the proposed survey area	No potential for Adverse Effects on Site Integrity have been identified.
Moulting behaviour	Moult haul-out sites	The moult haul-out sites should be maintained in a natural condition	No recorded moult haul-out sites are located within the proposed survey area	No potential for Adverse Effects on Site Integrity have been identified.
Resting behaviour	Resting haul-out sites	The resting haul-out sites should be maintained in a natural condition	No recorded resting haul-out sites are located within the proposed survey area	No potential for Adverse Effects on Site Integrity have been identified.
Disturbance	Level of impact	Human activities should occur at levels that do not adversely affect the harbour seal population at the site	While no haul out sites have been recorded within the proposed survey area, harbour deal have been observed and recorded within the proposed survey area. As such, There is a potential risk of disturbance impacts to harbour seal utilising the riverine corridor along the Slaney River from increased human presence/activity, vessel movements and noise/vibration disturbances. Temporary disturbance to harbour seal may occur, should they be foraging or commuting along the riverine corridor near the survey works. Significant impacts are not considered possible due to the short duration of the proposed survey works along with the wide availability of alternative suitable foraging and commuting habitat in the area along the riverine corridor. There is potential for the works to cause localised temporary disturbance resulting in avoidance of the proposed survey works area by harbour seal.	Localised disturbance to common seal resulting in avoidance behaviours would be very temporary and would not constitute an adverse effect on the site's integrity. **On a precautionary basis harbour seal are screened in for AA as there is residual uncertainty regarding disturbance effects and precautionary mitigation is recommended.**

3.3.3 Potential for Adverse Effects on Saltee Island SAC

Pathways for adverse effects on Saltee Island SAC have been identified. The potential for these pathways to result in adverse effects to the SAC in the absence of mitigation is now assessed. These potential impacts are identified as follows:

- Potential for disturbance to *ex-situ* grey seal

Conservation objectives have been developed for Saltee Island SAC. An assessment of the potential for adverse effects on the integrity of Saltee Island SAC is presented hereunder.

Table 3.16: Assessment of Potential for Adverse Effects on the Site Integrity of Saltee Island SAC – Grey seal (*Halichoerus grypus*)

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
Access to suitable habitat	Number of artificial barriers	Species range within the site should not be restricted by artificial barriers to site use	The proposed survey works are not proposed to occur within the boundaries of this SAC.	No potential for Adverse Effects on Site Integrity have been identified.
Breeding behaviour	Breeding sites	The breeding sites should be maintained in a natural condition.	No recorded breeding sites are located within the proposed survey area	No potential for Adverse Effects on Site Integrity have been identified.
Moulting behaviour	Moult haul-out sites	The moult haul-out sites should be maintained in a natural condition	No recorded moult haul-out sites are located within the proposed survey area	No potential for Adverse Effects on Site Integrity have been identified.
Resting behaviour	Resting haul-out sites	The resting haul-out sites should be maintained in a natural condition	No recorded resting haul-out sites are located within the proposed survey area	No potential for Adverse Effects on Site Integrity have been identified.
Population composition	Number of cohorts	The grey seal population occurring within this site should contain adult, juvenile and pup cohorts annually	The proposed survey works are not proposed to occur within the boundaries of this SAC. There are no potential direct impact pathways to affect population composition.	No potential for Adverse Effects on Site Integrity have been identified.
Disturbance	Level of impact	Human activities should occur at levels that do not adversely affect the grey seal population	The proposed survey works are not proposed to occur within the boundaries of this SAC. There are no potential direct impact pathways to affect population composition. While no haul out sites have been recorded within the proposed survey area, grey seal have been observed and recorded within the proposed survey area. As such, there is a potential risk of disturbance impacts to ex-situ grey seal utilising the riverine corridor along the Slaney River from increased human presence/activity, vessel movements and noise/vibration disturbances. Temporary disturbance to grey seal may occur, should they be foraging or commuting along the riverine corridor near the survey works. Significant impacts are not considered possible due to the short duration of the proposed survey works along with the wide availability of alternative suitable foraging and commuting habitat in the area along the riverine corridor.	Localised disturbance to grey seal resulting in avoidance behaviours would be very temporary and would not constitute an adverse effect on the site's integrity. **On a precautionary basis grey seal are screened in for AA as there is residual uncertainty regarding disturbance effects and precautionary mitigation is recommended.**

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
			As such, there is potential for the works to cause disturbance resulting in the avoidance of the proposed survey works and survey area by grey seal.	

3.3.4 Potential for Adverse Effects on Wexford Harbour and Slobs SPA

Pathways for adverse effects on Wexford Harbour and Slobs SPA have been identified. The potential for these pathways to result in adverse effects to the SPA in the absence of mitigation is now assessed. These potential impacts are identified as follows:

- Potential for disturbance wintering bird species

Conservation objectives have been developed for Wexford Harbour and Slobs SPA. An assessment of the potential for adverse effects on the integrity of Wexford Harbour and Slobs SPA is presented hereunder.

Table 3.17: Assessment of Potential for Adverse Effects on the Site Integrity of Wexford Harbour and Slobs SPA – Wintering (SCI) Birds

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
Population trend	Percentage change	Long term population trend stable or increasing	There is potential for short term displacement for low numbers of wintering birds (waterfowl species) within the study area during the survey works. However, significant impacts are not considered possible due to the short duration of the proposed survey works along with the wide availability of alternative suitable foraging and commuting habitat in the area along the riverine corridor. The short-term disturbance does not have the potential to result in a reduction in the long-term winter population trend for SCI species.	No potential for Adverse Effects on Site Integrity have been identified.
Distribution	Number and range of areas used by waterbirds	There should be no significant decrease in the numbers or range of areas used by waterbird species, other than that occurring from natural patterns of variation	There is potential for short term displacement for low numbers of wintering birds within the survey area during the survey works. However, significant impacts are not considered possible due to the short duration of the proposed survey works along with the wide availability of alternative suitable foraging and commuting habitat in the area along the riverine corridor. The short-term disturbance does not have the potential to result in a reduction in the long-term winter population trend for SCI species.	No potential for Adverse Effects on Site Integrity have been identified.

Table 3.18: Assessment of Potential for Adverse Effects on the Site Integrity of Wexford Harbour and Slobs SPA – Potential Breeding birds – Little Grebe (*Tachybaptus ruficollis*), Cormorant (*Phalacrocorax carbo*), Grey Heron (*Ardea cinerea*), Shelduck (*Tadorna tadorna*), Coot (*Fulica atra*), Black-headed Gull (Chroicocephalus ridibundus), Lesser Black-backed Gull (Larus fuscus) and Little tern (*Sterna alifrons*).

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
Breeding population abundance: apparently occupied nests (AONs)	Number	No significant decline	No breeding/nesting sites for the above species (that breed in the wider local area) were identified or are likely in the proposed survey area. The proposed survey works are also non-intrusive and are investigative in nature restricted to the boundaries of the proposed survey area.	No potential for Adverse Effects on Site Integrity have been identified.

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
Productivity rate: fledged young per breeding pair	Mean number	No significant decline	No breeding/nesting sites for the above species (that breed in the wider local area) were identified or are likely in the proposed survey area. The proposed survey works are also non-intrusive and are investigative in nature restricted to the boundaries of the proposed survey area.	No potential for Adverse Effects on Site Integrity have been identified.
Distribution: breeding colonies	Number; location; area (Hectares)	No significant decline	No breeding/nesting sites for the above species (that breed in the wider local area) were identified or are likely in the proposed survey area. The proposed survey works are also non-intrusive and are investigative in nature restricted to the boundaries of the proposed survey area.	No potential for Adverse Effects on Site Integrity have been identified.
Prey biomass available	Kilogrammes	No significant decline	Feeding agglomerations for the above species (that breed in the wider local area) were observed and recorded upstream of the proposed N11/N25 Oilgate to Rosslare and Rosslare Europort access road bridge crossing point within the proposed survey area. The proposed survey works will involve the use of a vessel such as a RIB which carries localised risk of accidental pollution events. However, the small scale of proposed equipment, extensive nature of the study area and high dilution available mean no impacts are likely.	No potential for Adverse Effects on Site Integrity have been identified.
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	While proposed survey works will occur within the riverine environment they are non-intrusive and temporary investigation works with no permanent or temporary barriers to connectivity put in place.	No potential for Adverse Effects on Site Integrity have been identified.
Disturbance at the breeding site	Level of impact	Human activities should occur at levels that do not adversely affect the breeding little tern population	No breeding/nesting sites for the above species (that breed in the wider local area) were identified or are likely in the proposed survey area. The proposed survey works are also non-intrusive and are investigative in nature restricted to the boundaries of the proposed survey area.	No potential for Adverse Effects on Site Integrity have been identified.

While no adverse effects are likely, good practice measures are outlined in Section 3.5.5 to minimise temporary disturbance risks.

3.3.5 Potential for Adverse Effects on Blackwater Bank SAC

Pathways for adverse effects on Blackwater Bank SAC have been identified. The potential for these pathways to result in adverse effects to the SAC in the absence of mitigation is now assessed. These potential impacts are identified as follows:

- Potential for disturbance to *ex-situ* harbour porpoise

Conservation objectives have been developed for Blackwater Bank SAC. An assessment of the potential for adverse effects on the integrity of Blackwater Bank SAC is presented hereunder.

Table 3.19: Assessment of Potential for Adverse Effects on the Site Integrity of Blackwater Bank SAC – Harbour porpoise (*Phocoena phocoena*)

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
Access to suitable habitat	Number of artificial barriers	Species range within the site should not be restricted by artificial barriers to site use	The proposed survey works are not proposed to occur within the boundaries of this SAC.	No potential for Adverse Effects on Site Integrity has been identified.
Disturbance	Level of impact	Human activities should occur at levels that do not adversely affect the Harbour Porpoise community at the site	The proposed survey works are not proposed to occur within the boundaries of this SAC. There are no potential direct impact pathways to affect population composition. Historic NBDC records show harbour porpoise within relatively close proximity to the proposed survey area, within the Slaney River Valley SAC and Wexford Harbour and Slobs SPA, approximately 1.5km away from the proposed survey area. As such, there is a potential risk of disturbance impacts to ex-situ harbour porpoise utilising the estuarine habitat of the Slaney River from increased human presence/activity, vessel movements and noise/vibration disturbances. Temporary disturbance to harbour porpoise may occur, should they be foraging or active in the estuarine environment near the survey works. Significant impacts are not considered possible due to the short duration of the proposed survey works along with the wide availability of alternative suitable foraging and commuting habitat in the area along the riverine corridor. As such, there is potential for the works to cause disturbance resulting in the avoidance of the proposed survey works and survey area by harbour porpoise.	Disturbance to harbour porpoise resulting in avoidance behaviours and altering habitat is unlikely. **On a precautionary basis harbour porpoise are screened in for AA as there is residual uncertainty regarding disturbance effects and precautionary mitigation is recommended.**

3.3.6 Potential for Adverse Effects on Carnsore Point SAC

Pathways for adverse effects on Carnsore Point SAC have been identified. The potential for these pathways to result in adverse effects to the SAC in the absence of mitigation is now assessed. These potential impacts are identified as follows:

- Potential for disturbance to *ex-situ* harbour porpoise

Conservation objectives have been developed for Carnsore Point SAC. An assessment of the potential for adverse effects on the integrity of Carnsore Point SAC is presented hereunder.

Table 3.20: Assessment of Potential for Adverse Effects on the Site Integrity of Carnsore Point SAC – Harbour porpoise (*Phocoena phocoena*)

Attribute	Measures	Targets	Potential Impact	Potential for Adverse Effects on Site Integrity
Access to suitable habitat	Number of artificial barriers	Species range within the site should not be restricted by artificial barriers to site use	The proposed survey works are not proposed to occur within the boundaries of this SAC.	No potential for Adverse Effects on Site Integrity have been identified.
Disturbance	Level of impact	Human activities should occur at levels that do not adversely affect the Harbour Porpoise community at the site	The proposed survey works are not proposed to occur within the boundaries of this SAC. There are no potential direct impact pathways to affect population composition. Historic NBDC records show harbour porpoise within relatively close proximity to the proposed survey area, within the Slaney River Valley SAC and Wexford Harbour and Slobs SPA, approximately 1.5km away from the proposed survey area. As such, there is a potential risk of disturbance impacts to ex-situ harbour porpoise utilising the estuarine habitat of the Slaney River from increased human presence/activity, vessel movements and noise/vibration disturbances. Temporary disturbance to harbour porpoise may occur, should they be foraging or active in the estuarine environment near the survey works. Significant impacts are not considered possible due to the short duration of the proposed survey works along with the wide availability of alternative suitable foraging and commuting habitat in the area along the riverine corridor. As such, there is potential for the works to cause disturbance resulting in the avoidance of the proposed survey works and survey area by harbour porpoise.	Disturbance to harbour porpoise resulting in avoidance behaviours is unlikely. **On a precautionary basis harbour porpoise are screened in for AA as there is residual uncertainty regarding disturbance effects and precautionary mitigation is recommended.**

3.3.7 Plans and Projects which might Act In-Combination

Article 6(3) of the Habitats Directive requires that:

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.

It is therefore required that the potential impacts of the proposed survey works are considered in combination with any other relevant plans or projects. A search of plans and projects in the vicinity of the proposed survey works was undertaken in January 2026 to examine those with potential for in combination effects.

3.3.7.1 Plans

Wexford County Development Plan 2022-2028

An Appropriate Assessment Screening was carried out for the Wexford County Development plan. The Appropriate Assessment Screening Report concluded that the possibility of significant effects on European sites could not be ruled out and that an Appropriate Assessment is required.

An NIS presented potential impacts on European sites arising from the plan. These included:

- Habitat loss, fragmentation and degradation
- Species loss disturbance and displacement
- Changes in key indicators of conservation status
- A number of objectives have been identified as part of the NIS which set out strategies to ameliorate impacts to European sites as a result of the implementation of the development plan. Two key objectives in this regard are:
- Objective EM02 (Appropriate Assessment of development proposals)

  "To ensure that planning permission will only be granted for a development proposal that, either individually or in combination with existing and/or proposed plans or projects, will not have a significant effect on a European site, or where such a development proposal is likely or might have such a significant effect (either alone or in combination), the planning authority will, as required by law, carry out an appropriate assessment as per requirements of Article 6(3) of the Habitats Directive 92/43/EEC of the 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, as transposed into Irish legislation. Only after having ascertained that the development proposal will not adversely affect the integrity of any European site, will the planning authority agree to the development and impose appropriate mitigation measures in the form of planning conditions. A development proposal which could adversely affect the integrity of a European site may only be permitted in exceptional circumstances, as provided for in Article 6(4) of the Habitats Directive as transposed into Irish legislation."

- Objective EM04 (Appropriate Assessment of plans)
  - "*To ensure that plans, including land use plans, will only be adopted, if they either individually or in combination with existing and/or proposed plans or projects, will not have a significant effect on a European site, or where such a plan is likely or might have such a significant effect (either alone or in combination), Wexford County Council will, as required by law, carry out an appropriate assessment as per requirements of Article 6(3) of the Habitats Directive 92/43/EEC of the 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, as transposed into Irish legislation. Only after having*

ascertained that the plan will not adversely affect the integrity of any European site, will Wexford County Council adopt the plan, incorporating any necessary mitigation measures. A plan which could adversely affect the integrity of a European site may only be adopted in exceptional circumstances, as provided for in Article 6(4) of the Habitats Directive as transposed into Irish legislation."

3.3.7.2 Planned and Permitted Development

A search of planning applications[83] submitted within the last 5 years within 15km of the proposed survey works was undertaken in January 2026 to examine projects with potential for in combination effects. Applications which were made typically consisted of extensions, demolitions and renovations to existing houses and agricultural buildings, and retention of existing developments.

Following review of relevant applications, given the location of these works in relation to the European sites, and the nature of the proposed survey works, no recent plans or projects have the potential to act in-combination with the Proposed survey works. Therefore, there is no potential for in-combination effects.

Other, larger scale, projects, and electricity transmission projects which were identified are outlined in Appendix C.

3.3.7.3 MARA Maritime Area Consent (MAC) and Maritime Usage Licence (MUL) Determined Applications

A search of MARA MAC and MUL determined applications[84] submitted within the last 5 years within 15km of the proposed survey works was undertaken in January 2026 to examine projects with potential for in combination effects, see Appendix D

The majority of MAC and MUL applications identified in Appendix D are located at a substantial distance from the Proposed Survey Works or relate to activities that are spatially, temporally, or functionally distinct. Having regard to their scale, nature and duration, and the absence of any credible source–pathway–receptor linkage, these applications have no potential to give rise to in-combination effects on any European site.

Three applications identified in Appendix D — MUL240026, MUL260005 and MAC260007 are considered to require further consideration. MUL260005 and MUL260007, relate to separate the proposed Viking Village development. These applications are located within the boundaries of the Proposed Survey Works area. Owing to this spatial overlap, a precautionary consideration of potential in-combination effects is required. MUL240026 relates to Uisce Éireann's South East Coast Strategic Model and includes survey areas that partially overlap should survey activities be undertaken concurrently, further consideration of potential in-combination effects is required.

MUL260005[85] relates to marine environmental surveys and ground investigation works within the Lower Slaney Estuary, including hydroacoustic surveys, sediment sampling, geophysical surveys and in-river boreholes. These activities are comparable in nature, scale and duration to the Proposed Survey Works assessed in this report.

[83] Planning Websites: Map Search | An Bord Pleanála (pleanala.ie)
, https://maps.wexford.ie/planningportal/

[85] Maritime Area Regulatory Authority (MARA) (n.d.) Maritime Usage Licence application: MUL260005. Available at: https://www.maritimeregulator.ie/application/mul260005/ (Accessed: 14 April 2026).

The Supporting Information for Screening for Appropriate Assessment (SISAA) prepared for MUL260005 concluded that, applying the precautionary principle, the potential for likely significant effects on European sites could not be excluded at screening stage, principally due to the location of the works within the Slaney River Valley SAC and Wexford Harbour and Slobs SPA and the potential for anthropogenic underwater noise, physical disturbance and vessel activity. An Appropriate Assessment was therefore required. The subsequent Natura Impact Statement (NIS) concluded that, with the implementation of mitigation measures, the proposed works would not adversely affect the integrity of any European site, either alone or in-combination with other plans or projects, and that no reasonable scientific doubt remained as to the absence of such effects.

MAC260007[86] relates to a proposed marine infrastructure development associated with the Viking Village, for which a Maritime Area Consent has been sought. At the time of writing, limited detail was available in respect of MAC260007, particularly regarding construction methodologies, timing and mitigation. Accordingly, a precautionary approach has been adopted in considering whether overlap with the Proposed Survey Works could give rise to in-combination effects.

MUL240026[87] relates to marine environmental surveys associated with Uisce Éireann's South East Coast Strategic Model, including surveys to inform water current and bathymetric modelling along the south-east coast of Ireland. The MUL240026 license area includes areas within Wexford Harbour/the Lower Slaney Estuary that partially overlap with the Proposed Survey Works area. The application was subject to Appropriate Assessment, which concluded that, in absence of mitigation, the proposed activities had potential to give rise to significant effects on European sites, including potential disturbance related effects on marine mammals and wintering waterbirds. The subsequent NIS concluded that, with the implementation of appropriate mitigation measures, the proposed activities would not adversely affect the integrity of any European site, either alone or in combination with other pans or projects.

In accordance with Article 6(3) of the Habitats Directive, and applying the precautionary principle as articulated in the European Commission's 2021 methodological guidance[88], where uncertainty exists regarding the potential for likely significant effects — including where project detail or programme timing is not yet fully defined — such uncertainty must be addressed through appropriate and rigorous assessment rather than dismissed on the basis of incomplete information. In this context, a precautionary approach has been applied to the assessment of potential in-combination effects to ensure that any such effects are fully and robustly examined and that conclusions regarding adverse effects on site integrity are supported by sufficient and reliable evidence.

The assessment has therefore examined the potential for cumulative disturbance pressures, including increased vessel movements, underwater noise and human presence, where activities associated with the Proposed Survey Works, the Viking Village development (MUL260005 and MAC260007) and Uisce Éireann's South East Coast Strategic Model (MUL240026) may overlap spatially and temporally. Given the spatial overlap with the Proposed Survey Works area, and

[86] Maritime Area Regulatory Authority (MARA) (n.d.) Maritime Area Consent application: MAC260007. Available at: https://www.maritimeregulator.ie/application/mac260007/ (Accessed: 14 April 2026).

[87] Maritime Area Regulatory Authority (MARA) (n.d.) Maritime Usage Licence application: MUL240026. Available at: https://www.maritimeregulator.ie/application/mul240026/ (Accessed: 4 May 2026).

[88] European Commission (2021) Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC. Brussels: European Commission. Available at:
https://op.europa.eu/en/publication-detail/-/publication/a3a639e3-b943-11ec-b6f4-01aa75ed71a1
(Accessed: 14 April 2026).

the uncertainty regarding the timing overlap during implementation of survey works, these applications have been taken forward for further mitigation consideration.

For all other MAC and MUL applications listed in Appendix D, no spatial or temporal overlap is present, and no mechanism exists by which cumulative effects could arise. These applications are therefore excluded from further assessment.

3.3.7.4 Summary

The review of MAC and MUL applications identified MUL240026, MUL260005 and MAC260007 as the only applications requiring further consideration for potential in-combination effects with the Proposed Survey Works.

Potential for in-combination effects could arise only where activities associated with these applications overlap spatially and temporally with the Proposed survey Works, principally in relation to temporary disturbance pressures such as vessel movements, underwater noise, physical disturbance and human presence. These applications have therefore been taken forward for further mitigation considerations.

All other planning, MAC and MULL applications identified in Appendix C and D were excluded from further assessment, as no spatial, temporal or functional overlap was identified and no credible source-pathway-receptor linkage exists by which in-combination effects could arise.

3.4 Mitigation Measures

Mitigation is prescribed hereunder to address the impacts identified such that adverse effects on site integrity of the European site do not occur.

Mitigation measures are set out in accordance with the European Commission (2021) guidance on the 'Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC'.

Mitigation is described with respect to:

- How the measures will avoid / prevent / reduce the adverse impacts on the site to an acceptable level;
- The degree of confidence in their likely success;
- The timescale, relative to the Proposed Development, when they will be implemented;
- How and when the measures will be monitored.

All mitigation and good practise measures have been designed in line with Best Practice and constitute the Best Available techniques following scientific literature and field baseline verification. As such there is a very high degree of confidence in their likely success.

3.4.1 Pollution Controls (aquatic species, birds, marine mammals and otter)

Pollution control measures proposed are standard good practise and not specifically required to avoid significant adverse effects on relevant QI receptors in European sites.

The proposed survey works do not require the storage or use of bulk hazardous materials due to the nature of the equipment required (namely small outboard motors). Any potential hydrocarbon spill or leak events would involve small volumes that would be restricted to the immediate water surface area around the survey vessel.

Considering dilution ratios and the hydrodynamic conditions of the Slaney River it is considered that these would be rapidly dispersed, Annex IV cetaceans such as harbour porpoise and other

marine mammals such as grey and harbour seal are highly mobile, enabling ready avoidance of any localised contamination. Other species such as otter using the shoreline are similarly unlikely to interact with spills due to the limited scale of intertidal activities and routine control of fuels and lubricants.

However, the following standard best practice pollution prevention measures will be implemented on site during the survey works:

- Activities to be planned in advance with all vessels and ROVs to be thoroughly inspected and regular mandatory maintenance to be up to date.
- Vehicles and machinery used on site will have an emergency spill response plan in place and all staff are to be made aware of it.
- Spill kits, drip trays and plant nappies will be present on site with staff trained in their use.
- All hydrocarbons (oils, fuels and lubricants etc) will be stored in containers of up to 110% capacity to ensure there is a reduced risk of overflow spill and will be stored a minimum of 10m from the banks of the Slaney River.
- If possible biodegradable lubricants and hydraulic oil must be used, while less toxic that traditional synthetic oils they must be stored in the same way.
- Any solvent materials, such as sealants, coatings, adhesives or glazing's can be very toxic to flora and fauna when exposed to the environment. As such it is recommended that water-based or low-solvent products are used and stored in safe and secure containers.

3.4.2 Noise and Vibration (birds, marine mammals, migratory fish and otter)

The following mitigation concerns the hydrographic (bathymetric) surveys and subtidal benthic surveys which will require the implementation of sonar equipment and a vessel or ROV. NPWS[89] provides guidance to manage the risk to marine mammals from man-made sound sources in Irish waters. This document provides guidance and mitigation measures to address key potential sources of anthropogenic sound that may impact negatively on marine mammals in Irish waters. The mitigation methods should follow the guidance prescribed by the National Parks and Wildlife Service.

To minimise the potential impact on Annex IV species and other protected marine fauna, the following measures will be implemented as part of the survey activities:

- A suitably qualified Marine Mammal Observer (MMO) will be appointed for the duration of the survey works. The MMO will conduct a 30-miute pre-start watch within 500m of the survey vessel to monitor for marine mammals (including otter) and to log all relevant events using standardised data forms.
- Unless information specific to the location and/or plan/project is otherwise available to inform the mitigation process (e.g., specific sound propagation and/or attenuation data) and a distance modification has been agreed with the Regulatory Authority (in this case the Maritime Area Regulatory Authority (MARA)), acoustic (bathymetric) surveying using the above equipment shall not commence if marine mammals are detected within a 500m radial distance of the sound source intended for use, i.e., within the Monitored Zone.
- A 500m zone is considered appropriate as empirical evidence[90] demonstrates that seals do not abandon their haul out sites unless approached within less than 200m of the site.

[89] NPWS (2014). Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters. Department of Arts, Heritage and the Gaeltacht

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

3.4.2.1 Pre-Start Monitoring

- Sound-producing activities (such as bathymetric and subtidal benthic surveys utilising sonar equipment and vessels or ROVs) will only commence in daylight hours where effective visual monitoring, as performed and determined by the MMO, has been achieved. Where effective visual monitoring, as determined by the MMO, is not possible the sound-producing activities will be postponed until effective visual monitoring is possible.
- An agreed and clear on-site communication signal will be used between the MMO and the surveyors/supervisor as to whether the relevant activity may or may not proceed, or resume following a break. It shall only proceed on positive confirmation with the MMO.
- If cetaceans, pinnipeds or otter are observed within this zone, start-up will be delayed until the animals have dispersed or left the area or a 30-minute clearance period has elapsed.
- If the vessel is paused or stopped for more than 30 minutes, the pre-start monitoring followed by a “ramp up” or “soft-start” process will be repeated before recommencement.
- Once survey works have commenced, they may continue at night or during poor visibility as continuous activity is considered to be less disruptive than repeated start-ups.

3.4.2.2 Ramp Up or Soft Start Procedure

- In commencing an acoustic (bathymetric) survey operation using the proposed acoustic equipment, the following Ramp-up Procedure (i.e., “soft-start”) must be used, including during any testing of acoustic sources, where the output peak sound pressure level from any source exceeds 170 dB re: 1µPa @1m:
  - Where it is possible according to the operational parameters of the equipment concerned, the device’s acoustic energy output shall commence from a lower energy start-up (i.e., a peak sound pressure level not exceeding 170 dB re: 1µPa @1m) and thereafter be allowed to gradually build up to the necessary maximum output over a period of 20 minutes.
  - This controlled build-up of acoustic energy output shall occur in consistent stages to provide a steady and gradual increase over the ramp-up period.
  - Where the acoustic output measures outlined in steps (a) and (b) are not possible according to the operational parameters of any such equipment, the device shall be switched “on” and “off” in a consistent sequential manner over a period of 20 minutes prior to commencement of the full necessary output.
- In all cases where a Ramp-Up Procedure is employed the delay between the end of ramp-up and the necessary full output must be minimised to prevent unnecessary high-level sound introduction into the environment.

3.4.2.3 Break in Sound Output

- If there is a break in sound output for a period greater than 30 minutes (e.g., due to equipment failure, shut-down, survey line or station change) then all Pre-Start Monitoring and a subsequent Ramp-up Procedure (where appropriate following Pre-Start Monitoring) must be undertaken.
- For higher output survey operations which have the potential to produce injurious levels of underwater sound (see sections 3.3.2.1) as informed by the associated risk assessment, there is likely to be a regulatory requirement to adopt a shorter 5–10-minute break limit after which period all Pre-Start Monitoring and a subsequent Ramp-up Procedure (where appropriate following Pre-Start Monitoring) shall recommence as for start-up.

3.4.2.4 Migratory Fish

The proposed hydrographic surveys and associated vessel movements have the potential to generate underwater noise resulting in temporary behavioural disturbance to migratory fish, including sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*), twaite shad (*Alosa fallax*) and Atlantic salmon (*Salmo salar*). These species utilise the River Slaney as a migratory corridor, and acoustic disturbance could potentially temporarily interfere with upstream or downstream passage, access to spawning habitats and subsequent recruitment.

Long et al. (2026) identify avoidance of sensitive migratory periods, appropriate management of acoustic survey activities and coordination of overlapping marine works as key measures for reducing potential effects on fish. The following measures will therefore be implemented to minimise underwater noise disturbance during the proposed survey works.

Survey scheduling and seasonal sensitivity

Prior to commencement, the proposed survey programme will be reviewed against the recognised migratory periods of the relevant qualifying interest species. Indicative periods include upstream migration of sea lamprey during April - July, river lamprey principally during October – February, and twaite shad during April – June. Atlantic salmon may migrate upstream throughout much of the year, with downstream smolt migration occurring principally during April – May. These periods are indicative and subject to variation associated with river flows, temperature and annual migration patterns. As migratory activity occurs across much of the year, the identified periods will inform survey scheduling rather than establish fixed seasonal exclusion periods. The temporary and mobile nature of the proposed hydrographic surveys within the tidal River Slaney, together with the absence of physical barriers to migratory passage, supports the use of proportionate operational controls; rather than fixed seasonal exclusion periods.

The survey programme will be planned to minimise potential temporary acoustic disturbance to migratory fish, having regard to the seasonal sensitivities identified above and the available River Slaney fisheries information.

Where works are conducted at any time, concentrated or prolonged acoustic operations will be avoided during periods of increased migratory activity, particularly the upstream spawning migrations of lamprey and twaite shad and the downstream migration of Atlantic salmon smolts.

Where surveys are undertaken during recognised migratory periods, the acoustic equipment operating controls and survey sequencing measures specified under Section 3.4.2.4 will be implemented to minimise unnecessary or sustained underwater noise exposure. These measures will be implemented while maintaining the spatial coverage and tidal measurements required under Section 2.3.1. An ecologist with experience of aquatic ecology / freshwater fish species will be available on site to advise the contractor on this during works.

Acoustic equipment selection and operating parameters

The proposed hydrographic surveys will utilise multibeam or side-scan sonar and sub-bottom profiling equipment, as described in Section 2.3.1. The indicative acoustic characteristics presented in Table 3.1 include sub-bottom profiling frequencies of 4 kHz and 100 kHz, with source levels of approximately 210–214 dB re 1 µPa (rms) at 1 m, and side-scan sonar frequencies of 100 kHz and 900 kHz, with an indicative source level of 210 dB re 1 µPa (rms) at 1 m. These represent indicative equipment characteristics rather than confirmed manufacturer specifications.

To minimise potential acoustic disturbance to migratory fish, equipment will be operated at the lowest practicable acoustic output and using operational settings compatible with the required survey objectives and manufacturer specifications. Acoustic emissions will be limited to those

necessary for the proposed surveys, including the applicable start-up procedures detailed in Sections 3.4.2.1–3.4.2.3. Unnecessary acoustic emissions, prolonged stationary operation and avoidable repetition of survey lines will be minimised, while maintaining the required spatial coverage and measurements across the necessary tidal conditions.

Particular consideration will be given to minimising lower-frequency acoustic emissions and unnecessary vessel-generated noise, recognising the potential sensitivity of migratory fish to these sound components. The appointed survey contractor will be required to confirm that the selected equipment and operating arrangements are consistent with the acoustic characteristics and survey methodology assessed within the NIS. Equipment or operating arrangements that could result in materially greater underwater noise exposure than that assessed will not be permitted under the proposed survey methodology.

Survey sequencing and maintenance of migratory passage

The sequencing of acoustic survey activities will be co-ordinated, where practicable, to minimise prolonged or repeated underwater noise exposure within individual sections of the River Slaney, while accommodating the spatial coverage and tidal measurement requirements of the proposed hydrographic surveys.

Survey operations will be organised to avoid unnecessary concentration of acoustic activity within confined sections of the river corridor, particularly where disturbance could interfere with the upstream migration of sea lamprey, river lamprey, twaite shad and Atlantic salmon, or the downstream migration of Atlantic salmon smolts.

Where practicable, simultaneous operation of multiple acoustic sources within the same survey area will be avoided, and survey lines will be planned to minimise unnecessary repetition and prolonged stationary acoustic emissions. These measures will be implemented while maintaining the spatial coverage and repeated measurements across different tidal conditions required under Section 2.3.1.

Survey operations will not introduce physical barriers to migratory passage, and the sequencing of acoustic activities will be managed to reduce the potential for sustained disturbance within individual sections of the river corridor. An ecologist with experience of aquatic ecology / freshwater fish species will be available on site to advise the contractor on this during works.

Acoustic start-up and operational controls

The pre-start monitoring, ramp-up and break-in-sound procedures detailed in Sections 3.4.2.1–3.4.2.3 will be implemented during the relevant acoustic survey activities. These procedures will regulate the commencement and recommencement of sound-producing operations, including the gradual introduction of acoustic emissions where required and supported by the operating characteristics of the equipment.

The existing procedures will be implemented in accordance with the requirements established for marine mammals, including the applicable monitoring periods, ramp-up arrangements and procedures following interruptions in sound output. These operational controls will also limit unnecessary or abrupt commencement of acoustic emissions; however, they will not be relied upon independently to demonstrate the avoidance of disturbance to migratory fish.

Marine Mammal Observer (MMO) monitoring and the associated 500 m monitored zone will remain applicable to marine mammals and will not be treated as fish-specific monitoring or exclusion measures. Potential disturbance to migratory fish will be minimised through the survey scheduling, acoustic equipment operation and survey sequencing measures specified within Section 3.4.2.4.

Vessel movements

Survey vessels will operate in a controlled manner to minimise avoidable underwater noise and physical disturbance within the River Slaney migratory corridor. Vessel speeds, manoeuvring and operating arrangements will be managed to avoid unnecessary acceleration, prolonged idling and repeated movements within individual sections of the survey area.

Vessel movements will be coordinated with the required acoustic survey operations, including bathymetric profiling, current measurements and benthic sampling, to minimise unnecessary vessel activity while maintaining safe navigation and the survey coverage required under Section 2.3.

These measures will complement the existing vessel movement controls outlined in Section 3.4.4 and will be implemented throughout the proposed survey activities.

Coordination with other marine activities

The scheduling and coordination measures outlined in Section 3.4.6 will be implemented to minimise potential in-combination underwater noise and vessel disturbance associated with other marine survey or construction activities.

Potential spatial and temporal overlap with activities associated with MUL240026, MUL260005 and MAC260007 will be considered when establishing the survey programme. Coordination with the relevant developers, contractors and consenting authorities will be undertaken in accordance with Section 3.4.6, with the objective of avoiding concurrent noise-generating activities within the same sections of the Lower Slaney Estuary.

Where concurrent activities could result in concentrated or prolonged acoustic disturbance within the migratory corridor, the Proposed Survey Works will be programmed to minimise such overlap, including through temporal separation or sequencing of acoustic operations. Particular consideration will be given to periods of increased migratory sensitivity for sea lamprey, river lamprey, twaite shad and Atlantic salmon.

Implementation and verification

The mitigation measures specified within Section 3.4.2.4 will be incorporated into the survey methodology and the appointed contractor's method statement prior to mobilisation. The contractor will be required to demonstrate that the selected acoustic equipment, operating parameters, survey programme and vessel arrangements are consistent with the activities assessed within the NIS and the mitigation measures prescribed herein.

A suitably qualified aquatic ecologist will verify compliance with the specified mitigation requirements, including seasonal scheduling considerations, acoustic equipment operation, survey sequencing and coordination of potentially overlapping marine activities. This verification will be limited to confirming implementation of the assessed methodology and mitigation measures and will not constitute a deferred assessment of potential ecological effects.

The mitigation requirements will be communicated to all relevant survey personnel before commencement and implemented under the supervision of the appointed survey supervisor. Records of acoustic equipment operation, survey activities and any deviations from the agreed methodology will be maintained.

Equipment or operating arrangements that could result in materially greater underwater noise exposure than that assessed within the NIS will not be permitted under the proposed survey methodology.

3.4.3 Physical Disturbance (benthic marine habitats)

No specific mitigation is required to avoid significant effects arising from physical disturbance, as the characteristics of the surveys inherently limit effects to small, localised and transient interactions with the riverbed and fauna species. However, the following mitigation will be implemented in accordance with best practice.

3.4.4 Vessel Movements (birds, marine mammals and otter)

Physical disturbance associated with the surveys will be controlled through standard best-practice operational procedures, including careful vessel manoeuvring, minimisation of unnecessary seabed contact and adherence to normal marine environmental protection measures. These practices further reduce the already low magnitude of disturbance but are not required to avoid significant effects. Based on the temporary, localised and fully reversible nature of all potential interactions, the survey works will not cause injury, significant disturbance or deterioration of resting/breeding sites for any Annex IV species.

3.4.5 Good Practice: Avoid temporary disturbance to birds

To minimise disturbance to wintering birds and waterfowl and species foraging along the banks of the riverine corridor, the surveys will be undertaken outside of the peak wintering bird season (December – February). Where large feeding flocks are present within the survey path, these will be approached under 5 knots or avoided, where possible.

3.4.6 Scheduling and Coordination of Marine Works

In order to avoid or reduce potential in-combination effects associated with overlapping marine survey and construction activities, a coordinated approach to the scheduling of marine works will be adopted where practicable in addition to the other mitigation measures outlined above in Section 3.4.

Where marine works associated with the Proposed Survey Works have the potential to occur concurrently with works from other relevant plans or projects, including MUL240026, MUL260005 and MAC260007, the Applicant will seek to engage with the relevant developers, contractors and consenting authorities to implement appropriate coordination measures.

Such measures will include, where reasonably practicable:

- Avoidance of concurrent high-impact activities, particularly those with the potential to contribute cumulatively to underwater noise, vessel movements, or seabed disturbance.
- Temporal separation of works during sensitive periods for marine receptors, where overlapping activities could give rise to elevated in-combination effects.
- Phasing or rescheduling of activities to ensure that peak construction periods do not coincide where this would materially reduce cumulative effects.
- Information sharing, including indicative construction programmes, to allow potential overlaps to be identified and managed proactively.

4 Conclusion

The potential for adverse effects on European site integrity arising from the Proposed Survey Works has been assessed, both alone and in combination with other plans and projects. This assessment has included consideration of the overlapping Viking Village applications (MUL260005 and MAC260007) and Uisce Éireann's South East Coast Strategic Model (MUL240026), where there is potential for spatial and/or temporal overlap with the Proposed Survey Works.

The assessment has identified potential pathways for adverse effects in the absence of mitigation, including disturbance from vessel movements and human presence, underwater noise, physical disturbance of benthic habitats, and potential pollution or sediment effects. However, having regard to the nature, scale, duration and temporary character of the Proposed Survey Works, and taking into account the implementation of the mitigation measures set out in Section 3.4, it can be concluded that the Proposed Survey Works will not adversely affect the integrity of any European site, either alone or in combination with other plans or projects.

This conclusion applies to all European sites screened in for Stage Two Appropriate Assessment, namely:

- Slaney River Valley SAC [000781]
- Saltee Islands SAC [000707]
- Wexford Harbour and Slobs SPA [004076]
- Blackwater Bank SAC [002953]
- Carnsore Point SAC [002269]

No reasonable scientific doubt remains as to the absence of adverse effects on the integrity of these European sites, in view of their conservation objectives, subject to the implementation of the mitigation measures identified in this Natura Impact Statement.

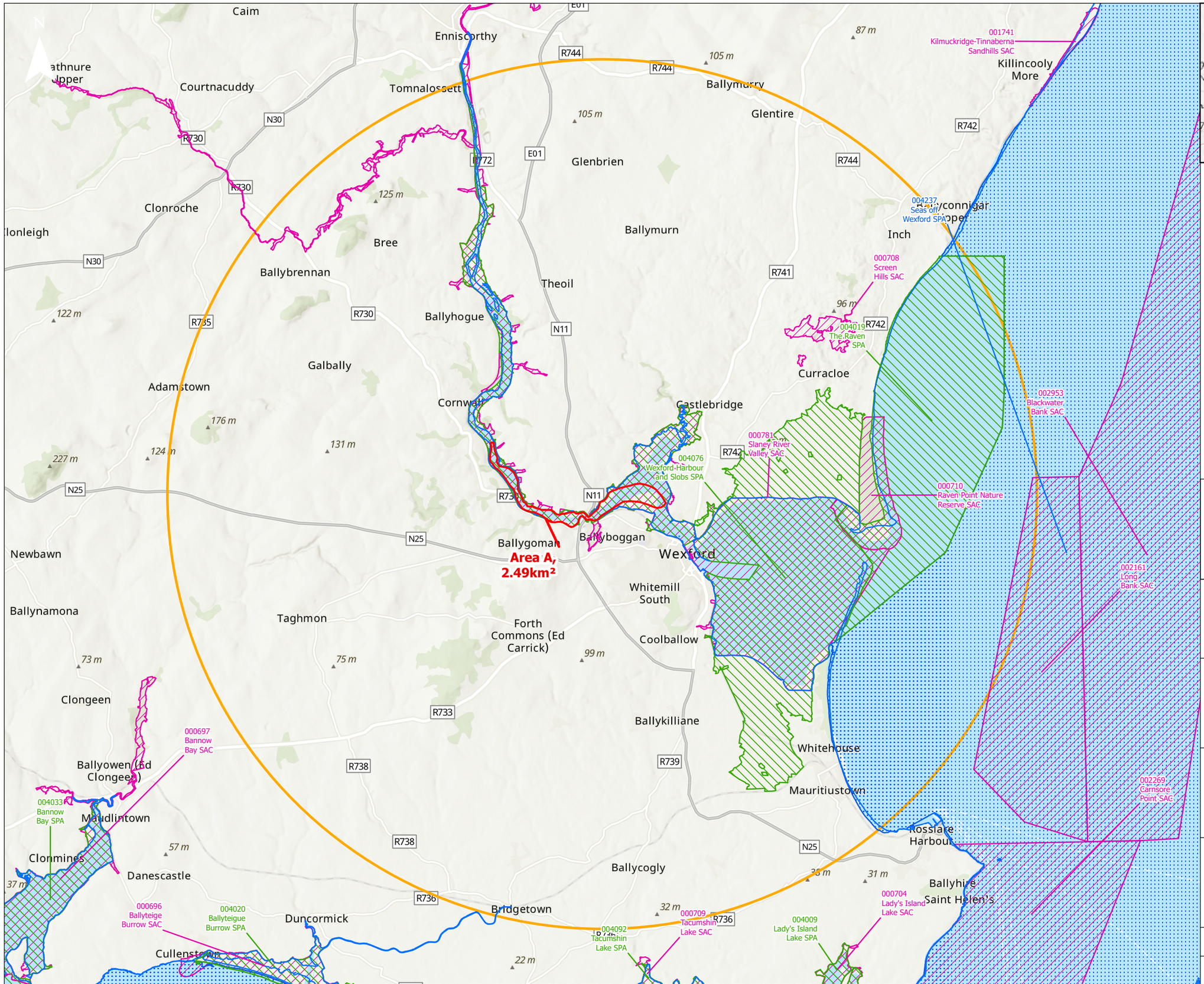
Appendices

A. Location of the Proposed Surveys in relation to European sites 99
B. Location of the Proposed Surveys 100
C. Planning Applications 101
D. MARA MAC and MUL Determined Applications 121

Mott MacDonald Public

A. Location of the Proposed Surveys in relation to European sites

Mott MacDonald Public



NOTES:
1. Co-ordinates to Irish Transverse Mercator (ITM)

2. Where the MAC/MUL area abuts the land, the boundary of the MAC/MUL area should coincide with and follow exactly the High Water Mark as defined by the Chief Boundary Surveyor

3. This map is prepared by a suitably qualified person (Xinyi Wan, GIS Analyst at Mott MacDonald).

Projection: Transverse Mercator; Datum: IRENET95

Data sources: © Tailte Éireann, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, Intermap, NASA, NGA, USGS, Esri, CGIAR, USGS

MOTT MACDONALD

Mott MacDonald
South Block, Rockfield
Dundrum
Dublin 16
D16 R6V0
T +353 (0) 1 2916 700
W mottmac.com

Wexford County Council

European Sites within 15km of Maritime Usage Licence Area

MUL Ref: MUL240027

Drawn	GIS Checked	Checked	Approved
X Wan	**E Tiri**	**A Sethi**	**C Lew**
Scale at A3	Status	Revision	Security
1:125,000	**INF**	**02**	**STD**

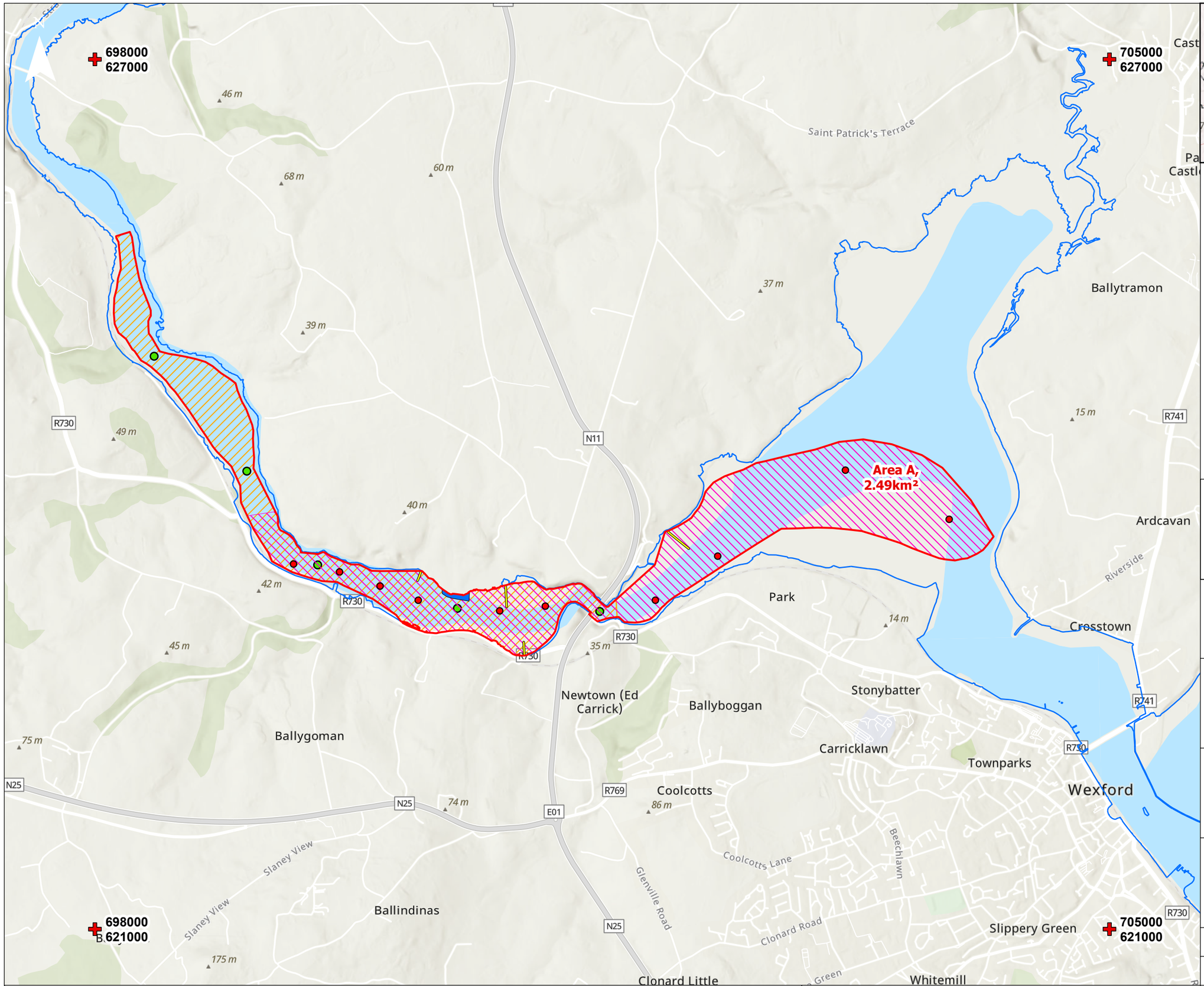
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0 1 2 3 4 5 6 7 8 9 10 11 km

B. Location of the Proposed Surveys

Mott MacDonald Public





- Proposed Maritime Usage Licence Area
- High Water Mark
- Coordinate Intersects
- Archaeological Wade and Metal Detector Survey Area

Benthic Surveys

- Points for Survey
- Intertidal transects
- Benthic Survey Area

Bathymetric Surveys

- Indicative Current Measurement Locations
- Bathymetric Survey Area

NOTES:
1. Co-ordinates to Irish Transverse Mercator (ITM)

2. Where the MAC/MUL area abuts the land, the boundary of the MAC/MUL area should coincide with and follow exactly the High Water Mark as defined by the Chief Boundary Surveyor

3. This map is prepared by a suitably qualified person (Xinyi Wan, GIS Analyst at Mott MacDonald).

Projection: Transverse Mercator; Datum: IRENET95

Data sources: © Tailte Éireann, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, Intermap, NASA, NGA, USGS, Esri, CGIAR, USGS

MOTT MACDONALD
Mott MacDonald
South Block, Rockfield
Dundrum
Dublin 16
D16 R6V0
T +353 (0) 1 2916 700
W mottmac.com

Wexford County Council

Location of Proposed Maritime Usage

MUL Ref: MUL240027

Drawn	GIS Checked	Checked	Approved
X Wan	E Tiri	A Sethi	C Lew
Scale at A3	Status	Revision	Security
1:25,000	INF	02	STD

229100548-MMD-00-GIS-DR-N204-0006

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C. Planning Applications

Mott MacDonald Public

Table C.1: In-Combination Effects Assessment

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
20210552	Permission for development which will consist of A) an approx. 300 metres (m) extension of the existing access road from the R733 Duncannon Road roundabout (Pembrokehill roundabout) to the north of the Loreto secondary school. The access road extension will include dedicated pedestrian cycling routes and surface water management swale area. This extension will join the access road permitted under Reg. Ref. 20200243. B) An access off the existing access road to the development already permitted under Reg. Ref. 20200243. C) 45 new residential units intended to contribute to the social housing requirements of the local authority as follows: - 8 no. 3 bed semi-detached 2 storey townhouses, type A1; 4 no.1 second floor apartments, type A2; 4 no.3 bed terraced 2 storey houses, type B; 22 no.3 bed 2 storey semi-detached and terraced houses type C and; 7 no. 2 bed 2 storey semi-detached and terraced houses type D. D) all associated site development works to include: roads, paths, car parking, services and connections, boundary treatments and landscaping all over a total application site area of 2.3 hectares	30/03/2022	4km southeast	An appropriate assessment screening report was prepared in support of this application. This report concludes: “no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure or function of the site. On the basis of the information set out above the impacts are not likely to be significant.” The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20211154	permission to erect a steel framed building for the storage of dry sands and aggregates	13/10/2021	16.5km north	An appropriate assessment screening report was prepared in support of this application. This report concludes: “no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure or function of the site. On the basis of the information set out above the impacts are not likely to be significant.”

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
				The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20221113	Permission for erecting 2,786 m2 or 547.86 kWp of photovoltaic panels on the existing two roofs, Betha building and Alpha building, with all associated site works	09/11/2022	18.9km north	An appropriate assessment screening report was prepared in support of this application. This report concludes: "no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure or function of the site. On the basis of the information set out above the impacts are not likely to be significant." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20220281	Permission for the proposed green energy initiative development consisting of the installation of Photovoltaic Panels on the existing roof structures together with all associated site works	01/06/2022	4.5km southeast	An appropriate assessment screening report was prepared in support of this application. This report concludes: "no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
				or function of the site. On the basis of the information set out above the impacts are not likely to be significant." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20221589	Permission for a solar farm development which consists of the following:	24/05/2023	7.1km south	An appropriate assessment screening report was prepared in support of this application. This report concludes: "no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure or function of the site. On the basis of the information set out above the impacts are not likely to be significant." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20211322	Permission for the construction of Rosslare Europort Terminal 7, a new Border Control Post (BCP) at Rosslare Europort. The development will consist of: Demolition of 1 no. existing concrete	09/11/2021	14.6km southeast	An appropriate assessment screening report was prepared in support of this application. This report concludes: "It has been objectively concluded by Moore Group Environmental services that:

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
	vehicle hall and associated steel frame structures (total area 1600m2), 6 no. single storey structures (783m2 total), 3 no. booths (11m2 total) with 1 no. canopy overhead and 11 no. street lights. Construction of Rosslare Europort Terminal 7, a new Border Control Post (BCP) with a total gross floor area for development of 10,645m2 on a site with an area of 44,895m2, consisting of the following: Block 1: 5 no. single storey Immigration Booths (47m2 total) with canopy overhead, Block 2: 5 no. single storey Enforcement Booths (47m2 total) with canopy overhead, Block 3A: 1 no. single Live Animal BCP building for unloading and physical inspections, with administrative offices (952m2), Block 3B: 1 no. single storey Live Animal BCP building for unloading and physical inspections, with administrative offices (609m2), Block 4: 3 no. single storey Seal Check Booths (17m2 total) with canopy overhead, Block 5: 1 no. single storey Truck Scanning building (585m2), Item 6: 4 no. High Mast Light fittings on poles 20m high, Block 7: 1 no. single storey Documentary Check building (146m2), Block 8: 1 no single storey Electrical Substation Switchroom Building (38m2), Block 9: 1 no. single storey Pet Inspection and Trade Facilitation Building (154m2), Block 10: 1 no single storey Car Inspection building (277m2), Block 11:1 no. two storey building for unloading and physical inspections of cargo, with administrative offices(2465m2), Block 12: 1 no two storey building for unloading and physical inspection of cargo, with administrative offices (2408m2), Block 13: 1 no. three storey building for unloading and physical inspections of cargo, with administrative offices (1640m2), Block 14:1 no. single storey Electrical Substation Switchroom Building (38m2), Block 15: 1 no. four storey building for immigration, processing, with administrative offices (721m2), Block 16: 1 no.			The Proposed Development is not directly connected with, or necessary to the conservation management of the European sites considered in this assessment. The Proposed Development is unlikely to either directly or indirectly significantly affect he Qualifying Interests or Conservation Objectives of the European sites considered in this assessment. The Proposed Development, alone or in combination with other projects, is not likely to have significant effects on the European sites considered in this assessment in view of their conservation objectives. It is possible to conclude that significant effects can be excluded at the screening stage. It can be excluded, on the basis of objective information, that the Proposed Development, individually or in combination with other plans or projects, will have a significant effect on a European site." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
	single storey Facilities Management building (83m2), Block 17: 1 no. single storey Garage building (66m2), Block 18: 1 no. single storey Driver Welfare building(59m2), Block 19: 1 no. single storey Enclosed Truck Examination building (239m2), and Block 20: 1 single storey Administrative Support Facility building (54m2). External site infrastructure will include: 43 no. truck parking spaces, 12 no. car parking spaces, hard and soft landscaping, new internal roads to connect to port road network footpaths, perimeter fencing and gates, street lighting to entire site, new foul and storm water drainage systems, water connection, site services and all other associated and ancillary works.			
20220792	Permission for (a) the proposed erection of 11 no. light industrial units on site together with (b) new boundary wall to northern boundary of site with a new vehicular and pedestrian entrance gates and (c) all associated site works and ancillary services on site	05/04/2023	3.6km southeast	An appropriate assessment screening report was prepared in support of this application. This report concludes: "no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure or function of the site. On the basis of the information set out above the impacts are not likely to be significant." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20221726	Permission for development at this site of approx. 4.9 hectares located in the townslands of	29/03/2023	10.32km northeast	An appropriate assessment screening report was prepared in support of this application. This report concludes:

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
	Ballykelly, Ballymurn Upper, and Ballynabrigadane. The development will consist of i. A westerly extension to an existing sand pit (permitted under WCC Reg 20161081) into adjoining greenfield land (approx 1.97 hectares) to allow for further extraction of the sand reserve. Ancillary development will include site preparatory works including soil stripping and storage and the construction of temporary screening berms. ii. Continued use of approx 2.93 hectares of the permitted development site (WCC Reg 20161081) to facilitate ancillary activities associated with the extraction of material from the proposed extension area, including; access from the existing vehicular entrance and internal access road, screening plant, temporary storage of extracted product and vehicle manoeuvring. An Environmental Impact Assessment Report (EIAR) has been prepared in respect of the proposed development			"Having examined the qualifying interest of the two Natura 2000 sites with a link to the project area and their conservation objectives, it can be said that there is no likelihood that this development will have significant impacts on the integrity and functioning of the Natura 2000 site network. This is so by itself or in combination with the other adjacent developments and is a finding of no significant effect. No specific mitigation is necessary for ecology. The further, more detailed, stages of appropriate assessment are not required." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20220383	Permission for the construction of Solar PV energy development to the west of the attendant grounds of Monart Destination Spa comprising the installation of solar photovoltaic (PV) panels on ground mounted frames/ support structures within existing field boundaries, underground cabling and ducting, inverters, client kiosk, security fencing, pole mounted CCTV cameras, landscaping, upgraded entrance off the hotel service road, temporary construction compound and all associated works on a c4 ha site. The operational lifespan of the solar PV development will be 35 years and a 10 year planning permission is being sought.	12/09/2022	18.4km northwest	An appropriate assessment screening report was prepared in support of this application. This report concludes: "no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure or function of the site. On the basis of the information set out above the impacts are not likely to be significant." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
				such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20221230	Permission for modifications to the existing Water Treatment Plant	01/02/2023	16.9km north	An appropriate assessment screening report was prepared in support of this application. This report concludes: "no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure or function of the site. On the basis of the information set out above the impacts are not likely to be significant." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20221652	A 10-year permission for a Large-scale Residential Development (LRD) with a gross application site area of c. 5.67 ha, (developable area of c. 4.31 ha), on lands at Clonard Little, Wexford Town. The proposed development will include construction of a new link road between Clonard village at the south of the application site and Clonard Road at the north including cycle lanes, bus stop and the erection of 167 no. residential units and ancillary facilities comprising: 28 no. single bedroom maisonettes, 10 no. two-bedroom two-storey	20/03/2023	3km southeast	An appropriate assessment screening and natura impact statement report was prepared in support of this application. This report concludes: "The overall conclusion of this Natura Impact Statement report is that with the implementation of the mitigation measures included in Section 9 of this report there will be no significant direct, indirect or cumulative negative effects on the conservation objectives or site integrity of the Slaney River Valley SAC, the Raven Point Nature Reserve, the Wexford Harbour and Slobs SPA or the Raven SPA.

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
	houses, 75 no. three-bedroom two storey houses, 18 no. four-bedroom two-storey houses, 8 no. four-bedroom three-storey houses, 28 no. apartments in two separate blocks; Block 1 comprising 16 no. apartments in 4 storeys with 5 no. one-bedroom and 11 no. two-bedroom apartments; Block 2 comprising 12 no. apartments in 3 storeys with 4 no. one-bedroom and 8 no. two-bedroom apartments. A 292sq.m Creche (40 Child Spaces) with ancillary outdoor play area. A total of 289 residential car parking spaces are proposed with 18 dedicated for use by the creche, 9 cycle spaces. Realignment of boundary wall, provision of a pedestrian footpath and left turning lane at Clonard Road North. The proposed development includes provision of private, communal, and public open space; internal roads and pathways; pedestrian access points; hard and soft landscaping; boundary treatments; refuse storage, two no. ESB substations; public lighting; and all associated ancillary site development and drainage works. The application is accompanied by a Natura Impact Statement (NIS). The application may be inspected at the following website www.clonardlrd.com			It is determined that the proposed development is not likely to have significant direct, indirect or cumulative negative effect on the integrity of the Slaney River Valley SAC, the Raven Point Nature Reserve, the Wexford Harbour and Slobs SPA of the Raven SPA or any other European site." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20230152	Permission for development which will consist of 250kWp (610 No.) of roof mounted Solar PV Panels and all associated works	03/05/2023	3.5km southeast	An appropriate assessment screening report was prepared in support of this application. This report concludes: "no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure or function of the site. On the basis of the information set out above the impacts are not likely to be significant." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
				capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20240452	Permission for the development of an 88kW ground mounted solar PV array and associated site works and services	11/11/2024	6.4km southeast	An appropriate assessment screening report was prepared in support of this application. This report concludes: "no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure or function of the site. On the basis of the information set out above the impacts are not likely to be significant." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20230773	Permission to develop a synchronous condenser grid support facility on a site of c.1.3 ha. to the west and north of the existing ESB 110kV substation. The development will consist of the following elements: A building (c.494 sqm., c.10m high) to house plant and equipment including 2 no. synchronous condensers with a storage room and a control and switchgear room; Plant and equipment to be located outside of the building but within a fenced compound which will include 2 no.	27/09/2023	1.6km southwest	An appropriate assessment screening and natura impact statement report was prepared in support of this application. This report concludes: "Following an examination, analysis and evaluation of the relevant information, including the nature of the predicted impacts from the Proposed Development and all associated works, it has been objectively concluded that with the implementation of the proposed mitigation measures, the Proposed Development will not, either alone or in combination with other plans or projects, adversely affect the integrity or

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
	Coolers surrounded by timber acoustic fencing, 2 no. Gas Circuit Breakers and a Switchgear Compound. The Switchgear Compound will have a galvanised palisade security fence and include a transformer, a Low-Level Disconnector with Earth Switch, 2 no. High Level Disconnectors, a Circuit Breaker. The Switchgear Compound will connect the facility to the adjoining ESB substation by over fence cable. The proposed development will also include site clearance, landscaping, the enhancement of an existing agricultural access point, the construction of a hardcore access lane, temporary surfacing works to facilitate construction access, and drainage works to include a soakaway located to the north of the proposed building. A Natura Impact Statement (NIS) will be submitted to the planning authority with the application.			conservation status of any of the qualifying interests of the Slaney River Valley SAC and the Wexford Harbour and Slobs SPA or any other European site in light of best scientific knowledge. No reasonable scientific doubt exists in relation to this conclusion." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20231538	Permission for development at this site: Enniscorthy Railway Station, protected structure E169. The development will consist of: 1) change of use of the former goods shed to staff offices, 2) refurbishment works to the existing structure including racking and repointing of the external fabric, repairs to the north elevations, installation of windows within original opes, 3) installation of new internal fitout including office spaces, canteen, changing rooms, plant room and storage spaces, 4) and all other associated site works.	21/03/2024	17.3km north	An appropriate assessment screening report was prepared in support of this application. This report concludes: "no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure or function of the site. On the basis of the information set out above the impacts are not likely to be significant." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
20231548	Permission for a six storey 97 bed ward block including rooftop plant rooms. The accommodation is to include: 3 no. general wards, 1 no. specialist ward, Occupational Therapy/ Physiotherapy rooms, staff change and other ancillary accommodation. Associated site works include a new multi-storey car park, changes to internal campus road, links to the existing hospital, generator compound, upgrades to pedestrian entrance on the Old Hospital Road, changes of location of pedestrian entrance on Newtown Road and service connections.	06/03/2024	2	An appropriate assessment screening report was prepared in support of this application. This report concludes: "given the localised nature of the Proposed Development, and the lack of impact pathways between the Site and European designated sites, as described in Section 4 and Section 5, it can be concluded that the Proposed Development will not result in any significant impacts either directly or indirectly on the conservation objectives or status of the listed European sites and will not result in the direct loss or disturbance of any Annex I Habitats and/or Annex II species for which the European sites are designated. In conclusion, activities associated with the Proposed Development either alone, or in-combination with other projects or land uses, will not have any direct or indirect significant effects on the conservation objectives of any European sites." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20230978	Permission for the restoration of a quarry void. The application area will be ca. 13.95 hectares and is located within the existing Brownswood Quarry Complex which covers an area of ca. 95.25 ha. The development will consist of the restoration of the void within registered quarry Q001 with either: 1) Inert soil and stone waste (imported inert greenfield and non-greenfield soils and stone, and river dredge spoil) which will result in the proposed development operating as a soil recovery facility that requires a waste management licence and	21/02/2024	13km north	An appropriate assessment screening and natura impact statement report was prepared in support of this application. This report concludes: **"**Following an examination, analysis and evaluation of the relevant information, including the nature of the predicted impacts from the Proposed Development and all associated works, it has been objectively concluded that with the implementation of the proposed mitigation measures, the Proposed Development will not, either alone or in combination with other plans or projects, adversely affect the integrity or conservation status of any of the qualifying interests of Slaney

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
	would be regulated by the EPA; or 2) Soil and stone by-product (i.e. essentially virgin soil or equivalent to virgin soil and stone) which will be notified to the EPA as an Article 27 by-product at its source of origin and transported as a by-product material to enable the site to be restored. In this scenario the site would operate under conditions of planning. The restored land will provide agricultural land use, the re-instatement of semi-historic field boundaries, woodland planting and a mixed species sward. A second wheel wash, inspection shed, and a refuelling plinth along with ancillary internal road improvements, drainage and landscaping also form part of this development. A planning permission of 25 years is being sought for the proposed development. The application is accompanied by an Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) which will be available for inspection. The development comprises an activity that may require a waste licence.			River Valley SAC, Wexford Harbour and Slobs SPA or any other Designated European Site in light of best scientific knowledge. No reasonable scientific doubt exists in relation to this conclusion." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20240029	Permission for the erection of a solar photovoltaic array and all associated site works	10/04/2024	3.9km southeast	An appropriate assessment screening report was prepared in support of this application. This report concludes: "no element of the proposed development is likely to give rise to impacts to the Natura 2000 network. No likely direct, indirect or secondary impacts of the proposed development identified. No likely changes to the Natura 2000 network as a result of the proposed extension identified. No likely impacts identified that will interfere with the key relationships that define the structure or function of the site. On the basis of the information set out above the impacts are not likely to be significant." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution.

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
				There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20230670	Permission for a 10-year planning permission for construction of 34 no. dwellings consisting of a 15 no. Unit Duplex Block (S01), 8 no. 3-bedroom dwellings (unit type H01), 4 no. 2-bedroom dwellings (unit type P01), 2 no. 4-bedroom dwellings (unit type A01), 2 no. 4-bedroom dwellings (unit type C01), 1 no. 4-bedroom detached dwelling (unit type B01), 1 no. 4-bedroom detached dwelling (unit type M01), 1 no. 4-bedroom dwelling (unit type N01), bin and bike stores and associated site ancillary works. There is currently an existing access road off Newtown Road that will grant access to the proposed new development, provision has also been made for vehicular access links to 'neighbouring lands' northeasterly of the proposed development.	19/03/2024	1.7km southeast	An appropriate assessment screening report was prepared in support of this application. This report concludes: "It has been concluded that the Proposed Development will not lead to significant adverse impacts upon any Natura 2000 sites. Thus, no likely significant effect upon a Natura 2000 site is foreseen as a result of the proposals, either alone or in combination with any other development. This screening report, based on the best available scientific information, finds that there is no reasonable scientific doubt that the development does not pose any risk of significant adverse effects on Natura 2000 sites, and that the development does not require progression to a Stage 2 Appropriate Assessment." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
20241090	Permission for amendments to the approved synchronous condenser grid support facility (approved under planning reg. no. 20230773) at Ballygoman, Barntown, Co. Wexford. The proposed development will include amendments to the permitted barn enclosure, to include an increase in the floor area from 494sqm to 516sqm and an increase in overall height by 2.5m. The amended barn enclosure will contain additional fire doors and will facilitate a revised internal layout. A	04/12/2024	1.5km southwest	An appropriate assessment screening report was prepared in support of this application. This report concludes: "following an examination, analysis and evaluation of the proposed amendments, relevant information, including the nature of the predicted impacts and all associated works, it has been objectively concluded that with the implementation of the proposed mitigation measures, the Proposed Development will not, either alone or in-combination with other plans or projects, adversely affect the integrity or conservation status of any of the qualifying interests of the Slaney Valley River SAC and the

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
	new control room structure (85.75sqm) will be added, adjoining the consented switchgear compound, along with a new connection bay adjoining the existing substation. The route of the permitted hardcore access lane will be altered to facilitate the inclusion of the new connection bay. The proposed development will also include associated site clearance and landscaping. An addendum to the previously submitted Natura Impact Statement (NIS) will be submitted to the planning authority with the application			Wexford Harbour and Slobs SPA or any other European site in light of best scientific knowledge. No reasonable scientific doubt exists in relation to this conclusion." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
318332	Demolition of existing building and construction of family entertainment centre, together with associated site works. A Natura Impact Statement (NIS) accompanies this application.	07/01/2025	5.1km southeast	An appropriate assessment screening and natura impact statement report was prepared in support of this application. This report concludes: "Following an examination, analysis and evaluation of the relevant information, including the nature of the predicted effects from the proposed development, and mitigation measures to avoid such effects, that the proposed development will not adversely affect the integrity of any European site, either alone or in combination with other plans and projects." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
318528	10-year planning permission for the proposed 110kV AIS Single Bay Tail-Fed electricity substation (with 33kV customer compound) and associated grid connection and site works	04/06/2024	22km north	An appropriate assessment screening and natura impact statement report was prepared in support of this application. This report concludes:

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
				"that the proposed development, individually or in combination with other plans and projects, would not adversely affect the integrity of the Wexford Harbour and Slobs SPA European Site no.004076,in view of the sites' conservation objectives, subject to the implementation of mitigation measures outlined above. In my view, the mitigation measures are appropriate to the risks identified and would, if implemented correctly, be sufficient to avoid any adverse effect on site integrity." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
318914	110kV substation and 110kV underground grid connection	05/06/2024	32.3km southwest	An appropriate assessment screening report was prepared in support of this application. This report concludes: "Having regard to the nature of the proposed development that is before the Board (i.e. the substation development and grid connection), the separation distance from the designated sites and the absence of any tangible pathways, I consider that there is no potential for likely significant effects on any designated site. With regard to the potential for in-combination effects, permitted developments in the wider area have been identified. As no residual impacts have been identified, no in combination issues arise. I conclude that the proposed development would have no likely direct or indirect significant effects alone or in combination with other plans and projects on the qualifying features of any European site(s). No further assessment is required for the project."

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
				The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
318996	Solar PV farm with all associated works, consisting of 44,172.66 m2 of photovoltaic panels on a ground mounted system and carport system, 2 cabins and ancillary cabling and electrical infrastructure. A Natura Impact Statement (NIS) was submitted with the application.	02/09/2024	8.2km southeast	An appropriate assessment screening and natura impact statement report was prepared in support of this application. This report concludes: "the conclusions reached in the NIS that the proposed solar farm will have no adverse effects (direct, indirect or in-combination) on the Conservation Objectives or Qualifying Interests for any European Sites within the Zone of Influence of the project." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
319317	Constriction of 92 residential units comprising 71 apartments and 21 houses and all associated site works. A Natura Impact Statement (NIS) was submitted with the application.		4.4km southeast	An appropriate assessment screening and natura impact statement report was prepared in support of this application. This report concludes: "On the basis of the information provided with the application and appeal, including the Natura Impact Statement, and in light of the assessment carried out above, I am not satisfied that the proposed development individually, or in combination with other plans or projects, would not adversely affect the integrity

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
				of European site(s) Nos. 000781 Slaney River Valley SAC and 004076 Wexford Harbour and Slobs SPA, in view of the sites' Conservation Objectives. In such circumstances the Board is precluded from granting approval/permission." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
319499	Proposed 110kV substation to facilitate connection of the permitted Solar Energy Development	29/08/2024	19.6km north	An appropriate assessment screening was prepared in support of this application. This report concludes: "In conclusion, having regard to the nature and scale of the proposed development, the proximity of the project to the European sites, to the nature of the qualifying interest habitats and species, and the special conservation interest species, and the conservation objectives of the European sites, and to the available information as presented in the supporting documents regarding ground and surface water pathways and mobile connections between the project and the European sites, and other information available, it is my opinion that the proposed development does not have the potential to affect any European sites having regard to the conservation objectives of the relevant sites, and that progression to a Stage 2 AA is not required." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution.

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
				There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
320019	To extend the area of infilling and to increase the volume of material to be imported from that previously granted under planning registration number 20170177.	27/01/2025	16km southwest	An appropriate assessment screening was prepared in support of this application. This report concludes: "Having regard to the separation distance, no requirements for wastewater facilities and the lack of surface water connections to the SAC, it is considered that no Appropriate Assessment issues arise as the proposed development would not be likely to have a significant impact individually or in combination with other plans or projects on a European site." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
320058	Construction of a 88kw ground mounted solar PV array and all associated site works.	11/11/2024	6.3km south	An appropriate assessment screening was prepared in support of this application. This report concludes: "Having carried out Screening for Appropriate Assessment of the project, it has been concluded that the project individually or in combination with other plans or projects would not be likely to give rise to significant effects on European Sites No. 004076 or 000781, or any other European site, in view of the site's Conservation Objectives, an Appropriate Assessment (submission of a NIS) is not therefore required." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution.

Planning Reference	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
				There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
321942	Construction of 99 residential units, a childcare facility and all associated site works. A Natura Impact Statement (NIS) was submitted with this application.	26/06/2025	2km southeast	An appropriate assessment screening and natura impact statement report was prepared in support of this application. This report concludes: "Following an examination, analysis and evaluation of the NIS and all associated material submitted, I consider that in light of the mitigation measures proposed, that adverse effects on site integrity of the Slaney River Valley SAC (site code 00781); Wexford Harbour and Slobs SPA (site code 004076); The Raven Point Nature Reserve SAC (site code 000710); and the Raven SPA (site code 004019) can be excluded in view of the conservation objectives of these sites and that no reasonable scientific doubt remains as to the absence of such effects." The scale, nature, locations, extent, time elapsed and duration of the survey works are such that the project does not have the capacity to act in-combination with any other plan or project such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.

D. MARA MAC and MUL Determined Applications

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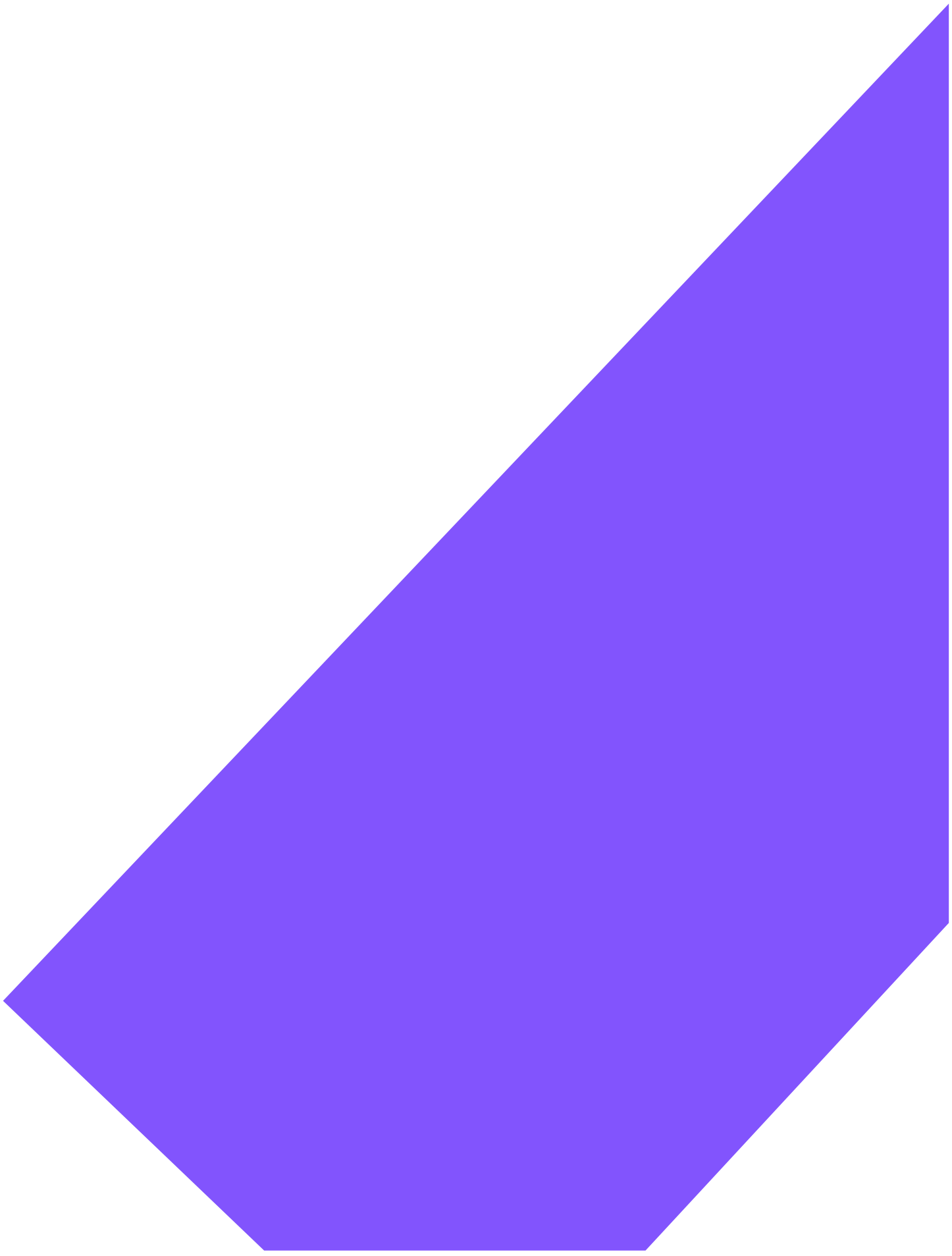
Table D.1: In-Combination Effects Assessment

Reference Number	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
MUL260005	To undertake environmental surveys and ground investigation works within the River Slaney adjacent to the Irish National Heritage Park, Ferrycarrig, Wexford. The proposed works are located to the west of the N11 and Ferrycarrig Bridge, and are required to inform the design, Environmental Impact Assessment (EIA) and Appropriate Assessment (AA) of works associated with the proposed Irish National Heritage Park (INHP) Viking Village "Vykingar" Project which will be subject to a separate maritime area consent application.	Not yet granted Applied for on the 19/02/2026	0km Located within the Proposed Survey Works survey area	The application MUL260005 was subject to an AA screening assessment which concluded that the proposed works, either individually or in combination with other plans or projects, in the absence of appropriate mitigation, have the potential to give rise to impacts which would constitute significant effects on the European sites designated for the Qualifying Interests harbour porpoise, bottlenose dolphin, harbour seal, grey seal, twaite shad and Atlantic Salmon. A subsequent Natura Impact Statement (NIS), including appropriate mitigation measures, concluded that any residual effects, either alone or in combination with other plans or projects, would not adversely affect the integrity of any European site. Due to the proposed MUL260005 occurring within the Proposed Survey Works area for the N11 Oilgate to Rosslare Harbour Scheme River Slaney MUL application. The precautionary principle has been applied to conclude that, while unlikely, should works be carried out concurrently, there is a potential for in-combination effects.
MAC260007	Proposed Activity - the construction, operation and maintenance of 3 three jetties in the River Slaney including a proposed new longboat experience and an artificial beach area as part of the proposed new Viking Village	Not yet granted Applied for on the 25/02/2026	0km Located within the Proposed Survey Works survey area	MAC260007 and MUL260005 both relate to different components of the same overarching 'Viking Village' project. Currently there is not enough information regarding the MAC26007 application to adequately assess the potential for in-combination effects. Therefore, the precautionary principle has been applied to conclude that due to the proposed MAC260007 occurring within the Proposed Survey Works area for the N11 Oilgate to Rosslare Harbour Scheme River Slaney MUL application, while unlikely, should works be carried out concurrently, there is likely potential for in-combination effects.

Reference Number	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
MUL240026	Marine environmental surveys for the purposes of site investigation or in support of an application under Part XXI of the Act of 2000. The purpose of the proposed marine site investigation works is to conduct a strategic modelling study of water currents and bathymetry along the Southeast coast of Ireland. The modelling study shall be used to establish compliance of existing and future Uisce Éireann assets with relevant legislation and inform future investment decisions.	08/04/2026	0km Located within the Proposed Survey Works survey area	The application MUL240026 was subject to an AA Screening assessment which concluded that the proposed activities, either individually or in combination with other plans or projects, in the absence of appropriate mitigation, have the potential to give rise to significant effects on European sites, including effects relating to marine mammals and wintering waterbirds. A subsequent Natura Impact Statement (NIS), including appropriate mitigation measures, concluded that any residual effects, either alone or in combination with other plans or projects, would not adversely affect the integrity of any European site. Due to part of the MUL240026 study area overlapping with the Proposed Survey Works area for the N11/N25 Oilgate to Rosslare Harbour Scheme River Slaney MUL application. Having regard to this spatial overlap, and the potential for temporal overlap should both sets of survey works be undertaken concurrently, there is potential for in-combination effects. However, such effects are considered unlikely to be significant, subject to coordination of survey timing and implementation of the mitigation measures identified in the respective assessments/licenses.
MUL260034	Marine site investigations (SI) and environmental surveys within two areas adjacent to the townlands of Burrow and Hopeland, and adjacent to the townlands of Warren Lower, Warren Middle, Doogans Warren, Rosehill and Hill of Sea in the vicinity of Rosslare. The purpose of the proposed marine site investigation works is to support the Rosslare Coastal Erosion and Flood Relief Scheme (CEFRS). These investigations are required to provide high-quality baseline data that can contribute to project design and development, and the environmental impact assessment.	Not yet granted Applied for on the 12/05/2026	7.8km southeast	The scale, nature, locations, extent and duration of the survey works are such that the application does not have the capacity to act in-combination with any other applications such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.

Reference Number	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
MAC20230005	ORE Operation and Maintenance facility, which includes reclamation of approximately 20 hectares for assembly/storage, relocation of small boat harbour, capital dredging, quay walls, road access and rock armour boundary.	02/07/2025	15.3km southeast	The scale, nature, locations, extent and duration of the survey works are such that the application does not have the capacity to act in-combination with any other applications such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
MUL240036	The maritime usage proposed is for marine site investigation (SI) works to inform the engineering design and environmental assessments for two offshore substations (OSS) in the Tonn Nua Area A (as identified in the South Coast Designated Maritime Area Plan), potential offshore transmission cable corridors, approaches to seven potential landfall zones, and seven landfall zones.	10/07/2025	19.3km southwest	The scale, nature, locations, extent and duration of the survey works are such that the application does not have the capacity to act in-combination with any other applications such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
LIC230017	Geophysical survey and site investigations for a proposed subsea fibre optic cable having a landfall in Kilmore Quay, County Wexford and to evaluate options for the route traversing Ballyteige Bay, across the Celtic Sea and St Georges Channel to Pembrokeshire, Wales.	01/07/2024	20.4km south	The scale, nature, locations, extent and duration of the survey works are such that the application does not have the capacity to act in-combination with any other applications such as to cause likely significant effects as a direct consequence of its contribution. There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.
LIC230006	The proposed maritime usage is to deploy passive acoustic monitoring devices to describe seasonal and diurnal occurrence of whales, dolphins and porpoises (cetaceans) in the Irish Sea and the Celtic Sea. The work is being carried out as part of a larger multidisciplinary research project called	18/12/2023	38.6km northeast	The scale, nature, locations, extent and duration of the survey works are such that the application does not have the capacity to act in-combination with any other applications such as to cause likely significant effects as a direct consequence of its contribution.

Reference Number	Details	Date Granted	Approximate Distance	Potential for In-Combination Effects
	CETUS. The CETUS project: Cetacean, Elasmobranch, Turtle, and Seabird distribution modelling platform will provide scientific data that can be used to support the sustainable development of offshore renewable energy and is funded by Sustainable Energy Authority of Ireland (SEAI).			There are, therefore, no potential effects identified from the proposed survey works which could act in-combination to result in any likely significant effects on any European Site.



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