

Marina Quarter Ltd

Marine Environmental Surveys for Haggardstown and Marshes Upper Large-scale Residential Development

Attachment 4.3 Supporting Information for Screening for
Appropriate Assessment

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1. Introduction

1.1. Overview

This Supporting Information for Screening for Appropriate Assessment (SISAA) has been prepared by AQUAFAC – APEM Group (AQUAFAC) to provide relevant information to enable the competent authority, the Maritime Area Regulatory Authority (MARA), to carry out a Stage 1: Screening for Appropriate Assessment (AA) of the proposed marine and intertidal surveys being undertaken in connection with the proposed Large-scale Residential Development at Haggardstown and Marshes Upper, Dundalk, Co. Louth, ('the Project'), as required under Article 6(3) of the Habitats Directive. MARA's functions and decision-making in this context are guided by the Maritime Area Planning Act 2021 and related statutory instruments, which establish its responsibility for assessing licence applications in line with European and national environmental law. This report considers the potential effects of the Project on European sites.

The purpose of the surveys is to characterise current intertidal and subtidal ecological conditions in the receiving environment before wastewater flows from the Proposed Development become operational. The surveys will establish a robust and repeatable baseline against which potential future changes in benthic communities, sediment conditions and the relevant attributes of the Qualifying Interests of Dundalk Bay Special Area of Conservation may be assessed. The resulting data will also provide objective ecological evidence for wider environmental assessment and for separate consideration of WWTP performance and compliance alongside operational, effluent and water-quality information.

The proposed maritime usage is strictly limited to marine ecological survey activities, including vessel-based benthic sampling and intertidal assessment. The survey area lies within a sensitive receiving environment that includes Dundalk Bay Special Area of Conservation, Special Protection Area, Ramsar site and proposed Natural Heritage Area. The SAC Qualifying Interests of particular relevance to the surveys are Estuaries [1130] and Mudflats and sandflats not covered by seawater at low tide [1140]. These habitats support benthic communities that contribute to the ecological functioning of Dundalk Bay and provide important feeding resources for protected waterbird populations.

The survey programme will comprise an intertidal Phase I walkover survey and biotope mapping at four locations, a Phase II quantitative intertidal survey along four transects, and subtidal benthic investigations at five stations. The Phase I survey will identify and classify intertidal biotopes and record dominant species, substrate type, exposure, sediment characteristics, anthropogenic influences and features of conservation interest, with habitat boundaries subsequently digitised using Geographic Information Systems (GIS). The Phase II survey will comprise quantitative sampling at upper, middle and lower shore levels along each transect, with vessel-based grab sampling undertaken where fine soft mudflat conditions prevent safe shore-based sampling. Subtidal investigations will comprise non-intrusive drop-down video (DDV) and/or Remotely

Operated Vehicle (ROV) survey followed by targeted grab sampling at five pre-agreed stations. Two replicate faunal samples and one additional sediment sample for Particle Size Analysis (PSA) and organic carbon analysis will be collected at each applicable sampling station. Sampling locations may be adjusted where necessary to avoid sensitive or unsuitable habitats identified during the underwater imagery survey.

The surveys are temporary and small in scale and will be undertaken using established marine ecological survey techniques designed to minimise disturbance to the marine and intertidal environment. The proposed maritime usage is limited to marine survey activities, including vessel-based sampling and foreshore assessment within Inner Dundalk Bay and the Castletown Estuary. The survey programme will comprise four approximately 500 m Phase I intertidal walkover survey areas, four Phase II intertidal transects and five subtidal benthic stations. The proposed survey locations are shown in **Figure 1-1**, with the coordinates of the Phase II intertidal sampling locations and subtidal sampling stations provided in **Table 1-1** and **Table 1-2**

Table 1-1: Coordinates for Intertidal survey

Transect	Easting ITM	Northing ITM	Level
1	707967	807781	Upper
1	707953	807839	Lower
1	707960	807811	Mid
2	708330	807722	Upper
2	708375	807822	Lower
2	708354	807774	Mid
3	708176	808201	Upper
3	708165	808051	Lower
3	708170	808127	Mid
4	707401	808401	Upper
4	707587	808226	Lower
4	707484	808313	Mid

Table 1-2: Coordinates for subtidal grab stations.

ID	Easting (ITM)	Northing (ITM)
1	707914	808017
2	707864	807842
3	708101	807869
4	708382	807874
5	708619	807854

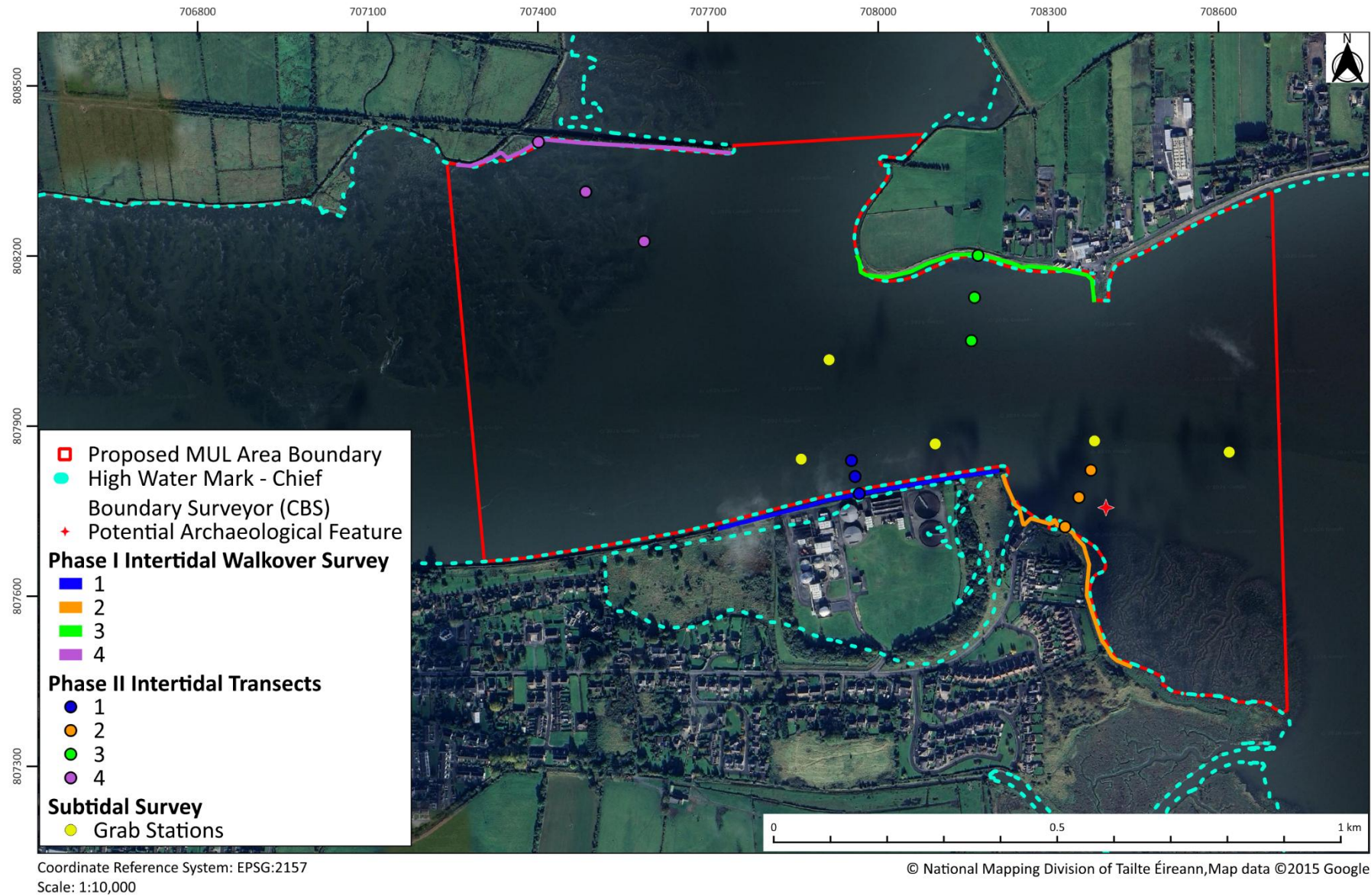


Figure 1-1: Map of survey area in Dundalk, Co. Louth

1.2. Appropriate Assessment Process

Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive) provides the legal framework for biodiversity conservation across the European Union. Together with the Birds Directive (2009/147/EC), it establishes a network of protected sites designated as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). In Ireland, these are collectively referred to as European sites, which form part of the pan-European Natura 2000 network (OPR, 2021).

Each European site is designated for specific habitats and/or species. For SACs, these are referred to as the site's Qualifying Interests (QIs), while for SPAs they are referred to as Special Conservation Interests (SCIs) (OPR, 2021). In this report, these are collectively described as the site's conservation features.

Site-specific conservation objectives are published for each European site and set out the conditions necessary to maintain or restore these features at favourable conservation condition. These objectives provide the benchmark against which likely significant effects are assessed in the AA process.

The Habitats Directive was first transposed into Irish law by the European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94 of 1997). These Regulations were subsequently revoked and replaced by the European Communities (Birds and Natural Habitats) Regulations 2011, as amended (hereafter referred to as the *2011 Birds and Natural Habitats Regulations*). In addition, the Habitats Directive (92/43/EEC) and the Birds Directive (2009/147/EC) are transposed into Irish legislation through Part XAB of the Planning and Development Act 2000, as amended (the 2000 Act), and the 2011 Regulations. The legislative provisions governing AA screening of planning applications are set out in Section 177U of the 2000 Act.

Articles 6(3) and 6(4) of the Habitats Directive establish the decision-making framework for plans and projects that may affect a Natura 2000 site. National guidance published by the Department of the Environment, Heritage and Local Government (DEHLG, 2009; revised 2010) promotes a four-stage process for AA and outlines the key tests at each stage (Figure 1-2).

- **Stage 1:** Screening for Appropriate Assessment
- **Stage 2:** Appropriate Assessment
- **Stage 3:** Assessment of alternative solutions (if required)
- **Stage 4:** Derogation under Article 6(4) (Imperative Reasons of Overriding Public Interest)

Stages 1 and 2 encompass the core requirements of Article 6(3). Stage 3 may form part of Article 6(3) or, where alternatives exist, act as a necessary precursor to Stage 4. Stage 4 represents the derogation process under Article 6(4).

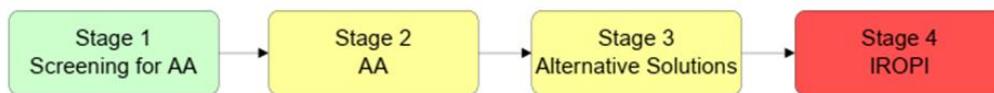


Figure 1-2: Four stages of the Appropriate Assessment Process.

An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

1.3. Guidance/Legislation

This report has been prepared in accordance with the following guidance:

- European Commission (2018) Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC Commission notice.
- Office of Planning Regulator (2021) Practice Note PN01 Appropriate Assessment screening for development management (revised September 2022).
- Department of Environment, Housing and Local Government (2009) Appropriate Assessment of plans and projects in Ireland guidance for planning authorities (Revised 2010).
- European Commission (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 Commission notice.
- Habitats Directive (Council Directive 92/43/EEC) 1992.
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (Birds Directive), as amended.
- European Communities (Birds and Natural Habitats) Regulations 2011–2025 (S.I. No. 477/2011, as amended).
- Department of Arts, Heritage and the Gaeltacht – National Parks and Wildlife Service (DAHG - NPWS) (2012) Marine Natura Impact Statements in Ireland Special Areas of Conservation, a working document.
- NPWS (2014) Guidance to Manage the Risk to Marine Mammals from Man-Made Sound Sources in Irish Waters.
- Maritime Area Planning Act 2021 (No. 50 of 2021), as amended, including provisions relating to Appropriate Assessment (AA) and Environmental Impact Assessment (EIA).
- Maritime Area Regulatory Authority (MARA) (2025). Guidance Note for Applicants Applying for a Maritime Usage Licence (MUL).

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

-
- Conservation status assessment reports, backing documents and maps prepared to inform national reporting required under Article 17 of the Habitats Directive¹.
 - Site synopsis, conservation objective reports and Natura 2000 forms available from NPWS.
 - Published and unpublished NPWS reports on protected habitats and species including Irish Wildlife Manual reports, species action plans and conservation management plans.
 - Existing relevant mapping and databases *e.g.* waterbody status, species and habitat distribution, *etc.* (sourced from the Environmental Protection Agency (EPA) - <http://gis.epa.ie/>, the National Biodiversity Data Centre (NBDC) - <http://maps.biodiversityireland.ie> and the NPWS - <http://www.npws.ie/mapsanddata/>).

1.4. Statement of Authority

Anastasiia Khokhlova BSc (Hons) – Graduate Marine Consultant

Anastasiia is a graduate consultant with AQUAFAC and holds a First-Class honours degree in Applied Freshwater and Marine Biology (B.Sc.) from Atlantic Technological University (ATU), Galway, where she completed research testing the effectiveness of environmental DNA (eDNA) tools for harbour porpoise bycatch monitoring. She also holds an honours degree in Physics (B.Sc.) from the National University of Kyiv-Mohyla Academy (NaUKMA), which provides her with a strong foundation in analytical thinking, quantitative data handling, statistical analysis, and scientific reporting. Anastasiia joined AQUAFAC in March 2025 and, since then, has been working on a range of environmental assessment projects, including hydrological assessments for abstractions for EPA licensing, attachments for Marine usage licensing (MUL), Appropriate Assessments (AA), Natura Impact Statements (NIS), Environmental Impact Assessment Reports (EIAR), and baseline desktop assessments. Her work has included drafting sections of technical reports, GIS mapping and spatial data analysis, reviewing conservation objectives, assisting with the assessment of potential project impacts in relation to relevant Irish and EU environmental legislation, and analysing ecological datasets in R, including data visualisation and graph production for technical reporting.

Aisling Hearty MSC, MCIEEM – Principal Ecologist

The report has been reviewed by Aisling Hearty. Aisling is a Principal ecologist with over 8 years of experience in consultancy and marine ecology. She is a graduate of B.Sc Science from University of Galway (UG, formerly National University of Ireland, Galway) and a First-Class Honours M.Sc in Marine Biology from UCC (University College Cork) where she completed her thesis on habitat distribution modelling of odontocetes using bioacoustics analysis. She then went on to co-author a published paper on the findings of this thesis which supported the designation of the Southeastern Rockall Slope and Canyons as an Important Marine Mammal Area (IMMA). Aisling has a wide range of experience in the preparation and review of AA Screening reports, Natura Impact Statements, Ecological Impact Assessments, Environmental Impact Assessment Reports and supporting documents for an IROPI designated project. Aisling's project history includes working on aquaculture licencing, renewable energy projects (solar farms and onshore and offshore wind) and water quality projects and she has extensive experience in project management including several MUL applications.

2. Stage 1: Screening for Appropriate Assessment

Stage 1 AA Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3):

- i. whether a plan or project is directly connected to or necessary for the management of European site, and
- ii. whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a European site in view of its conservation objectives.

If likely significant effects cannot be excluded on the basis of objective information – including cases where effects are significant, uncertain, or where the screening process becomes overly complex – the assessment must proceed to Stage 2 AA. Screening must be carried out without reliance on mitigation measures. Where potential impacts can clearly be avoided through modification or redesign of the plan or project, the screening process should be repeated on the revised proposal. The highest level of evidence and justification is required where a conclusion is reached at screening stage that no likely significant effects will occur.

2.1. Description of the Project

The purpose of the surveys is to characterise current intertidal and subtidal ecological conditions in the receiving environment before wastewater flows from the Proposed Development become operational. The surveys will establish a robust and repeatable baseline against which potential future changes in benthic communities, sediment conditions and the relevant attributes of the Qualifying Interests of Dundalk Bay Special Area of Conservation may be assessed. The resulting data will also provide objective ecological evidence for wider environmental assessment and for separate consideration of WWTP performance and compliance alongside operational, effluent and water-quality information.

The proposed maritime usage is strictly limited to marine ecological survey activities, including vessel-based benthic sampling and intertidal assessment. The survey area lies within a sensitive receiving environment that includes Dundalk Bay Special Area of Conservation, Special Protection Area, Ramsar site and proposed Natural Heritage Area. The SAC Qualifying Interests of particular relevance to the surveys are Estuaries [1130] and Mudflats and sandflats not covered by seawater at low tide [1140]. These habitats support benthic communities that contribute to the ecological functioning of Dundalk Bay and provide important feeding resources for protected waterbird populations.

The proposed area where surveys will be required can be seen below in **Figure 2-1**.

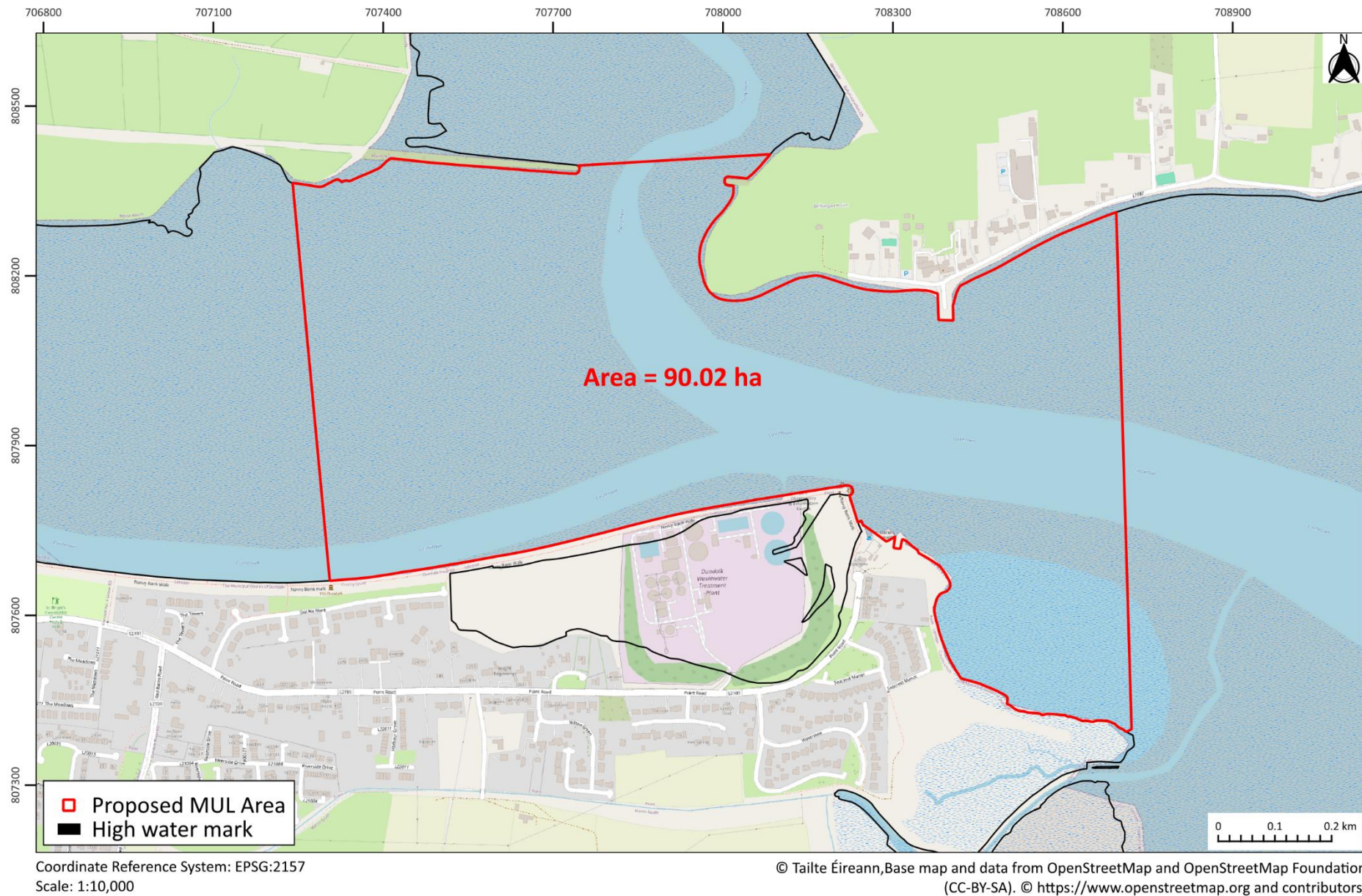


Figure 2-1: Proposed Survey Area in Dundalk Bay, Co. Louth.

2.2. Description of the Survey Works

This section provides further detail on the SI works described in **Section 2.1**, including survey methodologies, equipment and survey logistics.

2.2.1. Intertidal Surveys

The intertidal survey programme will comprise a Phase I walkover survey and a Phase II quantitative intertidal survey.

The Phase I walkover survey will be undertaken along approximately 500 m stretches of coastline at four separate locations. The survey will follow the Marine Nature Conservation Review (MNCR) Phase I methodology and will identify and classify intertidal biotopes in accordance with the EUNIS and JNCC Marine Habitat Classification systems. Dominant species, substrate type, exposure, sediment characteristics and anthropogenic influences will be recorded. Particular attention will be given to features of conservation interest, including eelgrass beds, blue mussel beds and Sabellaria spp. reefs, where present. Survey observations and habitat boundaries will be georeferenced and subsequently digitised using GIS

The Phase II quantitative intertidal survey will be undertaken along four transects, with sampling at the upper, middle and lower shore levels of each transect. Ecological features will be recorded along each transect, with photographs and shore-level observations taken as appropriate. Quadrats may be used to record the abundance of lugworms (*Arenicola marina*), and in situ investigations will be undertaken where habitat variation occurs.

Where fine soft mudflat conditions prevent safe shore-based sampling, sampling will instead be undertaken from a vessel at high water using a 0.025 m² grab sampler. Two replicate faunal samples will be collected at each sampling station for macrofaunal analysis, together with one additional sediment sample for Particle Size Analysis (PSA) and organic carbon analysis.

2.2.2. Subtidal Benthic Surveys

Subtidal investigations will be undertaken at five pre-agreed survey stations. Initial seabed habitat characterisation will be undertaken using a compact observation-class Remotely Operated Vehicle (ROV) and/or drop-down video (DDV) system deployed from a suitably equipped survey vessel.

The imagery will be used to characterise seabed habitats, substrate conditions and benthic communities and to identify any notable ecological features. The suitability of each station for subsequent grab sampling will

also be assessed, and sampling locations may be adjusted where necessary to avoid sensitive or unsuitable habitats identified during the underwater imagery survey.

A 0.025 m² grab sampler will subsequently be deployed at each suitable subtidal station. Two replicate faunal samples will be collected at each station for benthic community analysis, together with one additional sediment sample for PSA and organic carbon analysis. Where grab sampling is considered unsuitable, underwater imagery will be used to characterise the seabed habitat.

Faunal samples will be sieved over a 1 mm mesh and preserved in 4% buffered formalin for subsequent laboratory processing and benthic faunal identification. Sediment samples will be retained for PSA and organic carbon analysis. Photographs and field observations describing sediment characteristics and associated fauna will also be recorded.

2.2.3. Survey Logistics and equipment

Marine survey activities will be undertaken using a suitably equipped survey vessel. Survey equipment will be secured during transit and deployed at the pre-selected survey locations. Sampling locations will be recorded using differential Global Positioning System (dGPS).

The subtidal survey will involve deployment of DDV and/or ROV equipment followed, where appropriate, by deployment of a 0.025 m² grab sampler. Intertidal survey areas will be accessed on foot where conditions allow. Where fine soft sediment prevents safe shore-based sampling, Phase II sampling will be undertaken from a vessel at high water.

All survey activities will be temporary and localised. Following completion of the surveys, equipment will be removed from the survey area. Survey equipment will be cleaned and decontaminated in accordance with APEM biosecurity procedures, including the principles of the Check, Clean, Dry approach.

The overall Maritime Usage Licence duration requested is 4 months. This duration is necessary to provide sufficient temporal flexibility to complete all marine environmental surveys required.

The field surveys are expected to take between 1 and 2 weeks to complete. However, intertidal access is constrained by tidal windows, with surveys required during Mean Low Water Springs (MLWS) for lower-shore exposure and at high water for sampling of soft mud substrates where safe access on foot is not feasible. Survey timing must therefore remain adaptive to daily tidal cycles, suitable weather, and safe sea-state conditions for RIB operations.

Additional schedule contingency is required to accommodate potential remobilisation or splitting of survey effort arising from unforeseen circumstances such as temporary equipment failure, personnel illness or injury, or adverse weather windows preventing safe sampling. A 4-month licence period ensures the survey scope can be delivered safely and to completion without repeated MUL applications, providing the flexibility needed to overcome any logistical obstacles. The proposed durations are reasonable and proportionate to the scale of the proposed Maritime Usage.

All activities will be temporary, short-term and highly localised in extent, and will not result in any permanent alteration of the foreshore, seabed or marine environment.

2.2.4. Survey Summary

A list of survey types, coverage, equipment and operations can be seen in **Table 2-1**.

The surveys will provide baseline ecological information on intertidal and subtidal habitats, benthic communities and sediment characteristics within the survey area to inform the assessment of potential effects on European sites.

Table 2-1: Site investigation methodology.

Investigation Type	Location Focus	Max Quantity / Spacing	Worst-Case Equipment & Justification	Vessel Operations (Length, Width, Duration)
Seabed Sediment Sampling	Subtidal	5 stations; duplicates per station + 1 sediment sample	0.025 m ² grab for benthic fauna; sediment sample for PSA and organic carbon analysis. DDV/ROV prior to sampling	Approx. 8–12 m length, 3–4 m beam. ~15–20 min
Walkover Survey	Intertidal shore	4 shorelines, ~500 m each	Handheld GPS, camera and field recording for biotope mapping	Access on foot or RIB at high water. Duration per transect: ~30–45 min
Quantitative intertidal sampling	Upper/mid/lower shore	4 transects; 3 shore levels per transect; duplicates per station; 1 sediment sample	0.025 m ² grab and sediment containers	RIB operations near shore; duration per station: ~15 min

2.3. Assessment Methodology: Source-Pathway-Receptor

The assessment of impact mechanisms considers all relevant aspects of the Project that have potential direct or indirect and effects on conservation features. In order to establish the Zone of Influence (Zol) of the Project, the assessment of likely significant effects will be based on the Source-Pathway-Receptor (S-P-R) Model (OPR, 2021):

- **Source** - Identification of the characteristics of the Project based on the nature, size, location and type of impacts.
- **Pathway** – Identification of pathways that could link European sites and their conservation features to the Project.
- **Receptor** – Identification of the location, nature and sensitivities of the conservation features and the ecological conditions supporting their survival and the conservation objectives specified to maintain or restore favourable conservation condition .

To establish the Zol of the project, the assessment of connectivity between impact mechanisms (sources) and conservation features (*i.e.*, the QIs of SACs and SCIs of SPAs) considers the location of the project relative to designated habitats and non-mobile species, species' foraging ranges and migration routes, proximity to foraging and breeding areas, potential behavioural responses to disturbance, hydrological connectivity with conservation features, and indirect effects on prey species that could alter ecological interactions.

To inform the screening exercise, available data on protected habitats and species were mapped and interrogated in a GIS to identify potential S-P-R connections. Sources (impact mechanisms), pathways (hydrological, physical or ecological connectivity), and receptors (conservation features) were identified with reference to ecological surveys undertaken in the area. Where no ecological pathway or functional link exists between the project and the conservation features of a European site, there is no potential for likely significant effects, and those features can be screened out.

Section 2.6 considers the likely significant effects from the impact mechanisms from the Project alone, while **section 2.7** considers potential in-combination effects with other plans or projects.

2.4. Potential Impact Mechanisms

A detailed description of the project is provided above (see **Section 2.1**). Based on the characteristics of the proposed survey operations, and in line with the requirements of Article 6(3) of the Habitats Directive, this section identifies and evaluates potential impact mechanisms that could give rise to effects on nearby European sites. These mechanisms are assessed using a S-P-R framework, considering both the spatial extent

of potential effects (the ZoI) and the sensitivity of the relevant QIs and SCIs. The following are the potential sources of impact considered in this assessment.

2.4.1. Potential Impact Mechanism 1: Visual disturbance from survey vessels

The proposed survey works will involve short-duration vessel movements using a suitably equipped survey vessel operating at low speed to access survey stations, together with DDV/ROV deployment and intertidal walkover surveys undertaken by personnel on foot. These activities have the potential to cause visual disturbance to mobile fauna, principally SPA bird species, through short-term behavioural responses such as alertness, temporary avoidance, or localised displacement within the immediate vicinity of the survey activity.

The magnitude and spatial extent of disturbance is constrained by the small scale, short duration and intermittent nature of the works, and the absence of any construction activity, piling, dredging, or prolonged vessel operations. Any disturbance effect would be temporary and reversible, with birds able to redistribute within adjacent suitable habitat within Dundalk Bay.

Marine mammals may also transit the wider area; however, Dundalk Bay does not support core seal haul-out sites or key resting/breeding areas, and there are no designated SACs for marine mammals within or adjacent to the ZoI. Any behavioural response by transient individuals to vessel presence would be limited to brief, localised avoidance, with no plausible pathway for population-level effects or effects on the integrity of any European site.

Accordingly, visual disturbance associated with survey vessel presence and intertidal personnel is assessed further in **Section 2.6** for the relevant SPA conservation features.

2.4.2. Potential Impact Mechanism 2: Physical disturbance

The proposed maritime usage will involve limited, short-term physical interaction with intertidal and subtidal sediments during quantitative intertidal sampling and subtidal benthic grab sampling. Physical disturbance will be confined to discrete sampling locations, with no excavation, dredging, or modification of seabed morphology.

Intertidal Phase II and subtidal benthic surveys will utilise a 0.025 m² Van Veen grab sampler deployed from a vessel. Based on the agreed survey design:

- **Intertidal Phase II survey:** quantitative intertidal sampling will be undertaken across the intertidal survey area, with up to 24 faunal grab samples and 12 sediment samples collected resulting in 36 grab samples in total.

- **Subtidal benthic survey:** 5 stations will be surveyed, with duplicate faunal samples and one additional sediment sample collected at each suitable station, resulting in 15 grab samples in total.

In total, 51 Van Veen grab samples will be collected across the intertidal and subtidal environments. Each grab sample disturbs a seabed footprint of 0.025 m², resulting in a maximum cumulative disturbed area of approximately 1.3 m² (51 × 0.025 m²). Disturbance at each station will be of very short duration confined to the immediate grab footprint.

The volume of sediment removed per grab is small and localised, with no redistribution of material beyond the sampling point.

As shown on **Figure 2-2** subtidal grab stations are located within the fine sand community complex associated with the Estuaries (1130) QI. Intertidal transects are located within habitats mapped as Mudflats and sandflats not covered by seawater at low tide (1140). Transect 2 Phase I (walkover survey) overlaps areas mapped as Atlantic salt meadows (1330) and Salicornia and other annuals colonising mud and sand (1310), however Transect 2 Phase II (grab samples) will not be undertaken within these habitats and will occur within the Annex I habitat mudflats and sandflats not covered by seawater at low tide (1140).

Transect lines extend across the intertidal zone to capture upper, mid and lower shore levels; however, physical interaction is limited to discrete grab sampling points and short-duration foot access by survey personnel. Where Transect 2 Phase I (walkover survey) passes through vegetated saltmarsh and Salicornia habitat, potential disturbance would be limited to minor, localised trampling in the immediate vicinity of surveyors. There will be no excavation, removal of vegetation, vehicle access, or repeated heavy footfall.

The cumulative intertidal grab sampling footprint of approximately 0.9 m² represents an extremely small proportion of the designated habitat resource within Dundalk Bay SAC. For example, the Mudflats and sandflats (1140) habitat extends to approximately 4,375 ha (43,750,000 m²) within the SAC. The proposed intertidal grab sampling disturbance therefore equates to approximately 0.0000021% of this habitat area and is negligible in scale.

Any minor and temporary increase in suspended sediment arising from grab deployment would be highly localised and is expected to dissipate rapidly under prevailing tidal conditions. Dundalk Bay is a naturally dynamic estuarine environment subject to regular tidal reworking and sediment redistribution. The scale of disturbance associated with the proposed surveys is substantially below natural background variability, and recovery of benthic communities from such small-scale disturbance is expected to occur rapidly.

Given the very limited spatial extent, short duration and low intensity of disturbance, and the absence of any excavation, dredging or habitat modification, physical disturbance effects are expected to be localised, temporary and reversible. The proposed surveys are not of a scale capable of affecting the structure, function or conservation objectives of Annex I habitats within Dundalk Bay SAC, and no credible S-P-R linkage to likely significant effects on mapped saltmarsh habitats is identified.

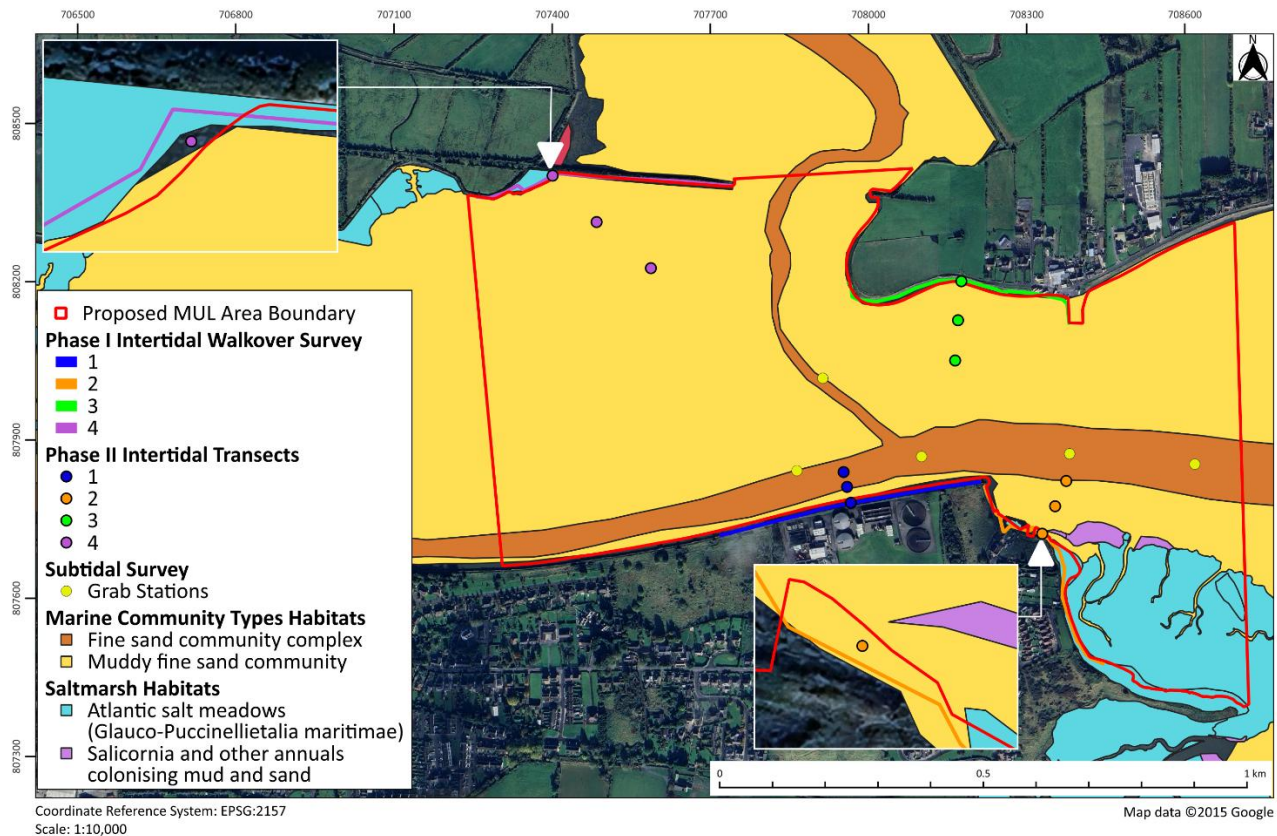


Figure 2-2: Benthic habitats within Dundalk MUL survey boundary.

2.5. European sites in the Zone of Influence (Zoi)

The Zoi was defined based on the spatial extent over which the proposed activities could reasonably result in effects, namely the immediate footprint of intertidal walkover surveys and the localised area of seabed disturbance and short-lived sediment suspension associated with discrete Van Veen grab deployments. These factors informed a precautionary delineation of the Zoi, ensuring that all relevant Natura 2000 sites and receptors with a reasonable likelihood of interaction were included in the screening and subsequent impact assessment. **Table 2-2** and **Table 2-3** below show the conservation features for which the European sites are designated, their conservation objectives and the distance of the SAC(s) and SPA(s) to the Project. All site synopsis and conservation objectives for the European sites can be accessed through the NPWS website².

A map of all SACs and SPAs within the Zoi of the project can be seen below in (**Figure 2-3**).

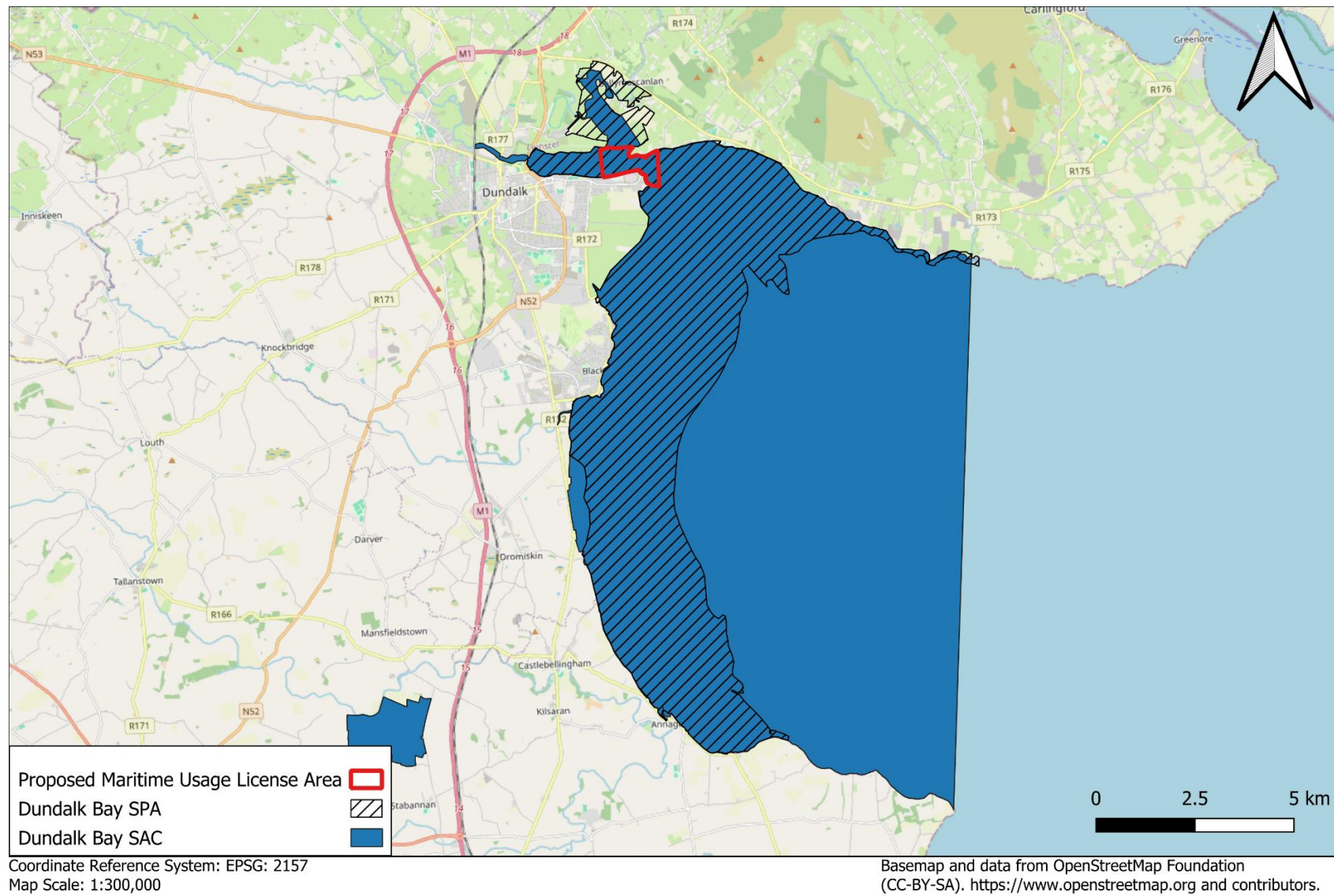


Figure 2-3: Dundalk Bay SAC and SPA.

2.5.1. Special Areas of Conservation (SAC)

In accordance with Article 6(3) of the Habitats Directive, this assessment considers whether the proposed survey operations, including intertidal and subtidal sampling, could lead to likely significant effects on SACs within the project's defined Zol. The Zol encompasses the spatial extent where direct, indirect, or in-combination impacts from the works may reasonably occur, including effects related to sediment disturbance, water quality alteration, visual disturbance, underwater noise, and habitat modification. All SACs with confirmed or potential hydrological or ecological connectivity to the survey area have been included in the screening assessment.

The QIs and site-specific conservation objectives of each relevant SAC have been reviewed to determine whether the proposed activities could undermine the conservation objectives of these sites, either alone or in-combination with other plans or projects.

The nearest SAC within the Zol of the proposed works is Dundalk Bay SAC [000455]

Dundalk Bay SAC QIs:

- Estuaries [1130]
- Mudflats and sandflats not covered by seawater at low tide [1140]
- Perennial vegetation of stony banks [1220]
- Salicornia and other annuals colonising mud and sand [1310]
- Atlantic salt meadows (*Glauco-Puccinellietalia maritima*) [1330]
- Mediterranean salt meadows (*Juncetalia maritimi*) [1410]

A full list of relevant SACs and their QIs can be found in (Table 2-2).

Table 2-2: Qualifying Interests (QIs) for SACs in the Zone of Influence (Zoi) of the proposed project.

SAC code)	(site	Distance from Project (km)	Qualifying Interest	Ecological Group	Conservation objectives		
Dundalk Bay SAC (000455)	0 km		Estuaries [1130]	Annex I estuarine/ coastal habitat	Maintain condition	favourable	conservation
			Mudflats and sandflats not covered by seawater at low tide [1140]	Annex I intertidal sediment habitat	Maintain condition	favourable	conservation
			Perennial vegetation of stony banks [1220]	Annex I coastal habitat	Maintain condition	favourable	conservation
			Salicornia and other annuals colonising mud and sand [1310]	Annex I coastal habitat	Restore condition	favourable	conservation
			Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330]	Annex I saltmarsh habitat	Maintain condition	favourable	conservation
			Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]	Annex I saltmarsh habitat	Maintain condition	favourable	conservation

2.5.2. Special Protection Areas (SPA)

In accordance with Article 6(3) of the Habitats Directive, this assessment evaluates the potential for the proposed survey activities to result in significant effects on any SPAs located within the identified ZOI of the project. This zone encompasses the area within which direct, indirect, or cumulative impacts could plausibly arise, including those associated with disturbance to bird species, changes in water quality, sediment dispersion, and alteration of foraging or roosting habitats. All SPAs that are ecologically connected to the project site, either through hydrological linkage or functional habitat use by listed bird species, have been included in the screening process. The SCIs and site-specific conservation objectives of each SPA have been examined to determine whether the proposed works could adversely affect the integrity of these sites, either individually or in combination with other relevant plans or projects.

The nearest SPA within the ZOI of the proposed works is the Dundalk Bay SPA [004026]. The SCIs for all SPAs within the ZOI can be seen in **Table 2-3** which also contains their site-specific conservation objectives.

SCIs:

- Great Crested Grebe (*Podiceps cristatus*) [A005]
- Greylag Goose (*Anser anser*) [A043]
- Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]
- Shelduck (*Tadorna tadorna*) [A048]
- Teal (*Anas crecca*) [A052]
- Mallard (*Anas platyrhynchos*) [A053]
- Pintail (*Anas acuta*) [A054]
- Common Scoter (*Melanitta nigra*) [A065]
- Red-breasted Merganser (*Mergus serrator*) [A069]
- Oystercatcher (*Haematopus ostralegus*) [A130]
- Ringed Plover (*Charadrius hiaticula*) [A137]
- Golden Plover (*Pluvialis apricaria*) [A140]
- Grey Plover (*Pluvialis squatarola*) [A141]
- Lapwing (*Vanellus vanellus*) [A142]
- Knot (*Calidris canutus*) [A143]
- Dunlin (*Calidris alpina*) [A149]
- Black-tailed Godwit (*Limosa limosa*) [A156]
- Bar-tailed Godwit (*Limosa lapponica*) [A157]
- Curlew (*Numenius arquata*) [A160]
- Redshank (*Tringa totanus*) [A162]

- Black-headed Gull (*Chroicocephalus ridibundus*) [A179]
- Common Gull (*Larus canus*) [A182]
- Herring Gull (*Larus argentatus*) [A184]
- Wetlands & Waterbirds [A999]

Table 2-3: SPAs and their SCIs within the Zone of Influence (Zol) of the proposed project.

SPA (site code)	Distance from Project (km)	Special Conservation Interest (SCI)	Conservation objectives
Dundalk Bay SPA [004026]	0 km from proposed site.	Great Crested Grebe (<i>Podiceps cristatus</i>) [A005]	Maintain favourable conservation condition
		Greylag Goose (<i>Anser anser</i>) [A043]	Maintain favourable conservation condition
		Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]	Maintain favourable conservation condition
		Shelduck (<i>Tadorna tadorna</i>) [A048]	Maintain favourable conservation condition
		Teal (<i>Anas crecca</i>) [A052]	Maintain favourable conservation condition
		Mallard (<i>Anas platyrhynchos</i>) [A053]	Maintain favourable conservation condition
		Pintail (<i>Anas acuta</i>) [A054]	Maintain favourable conservation condition
		Common Scoter (<i>Melanitta nigra</i>) [A065]	Maintain favourable conservation condition
		Red-breasted Merganser (<i>Mergus serrator</i>) [A069]	Maintain favourable conservation condition
		Oystercatcher (<i>Haematopus ostralegus</i>) [A130]	Maintain favourable conservation condition
		Ringed Plover (<i>Charadrius hiaticula</i>) [A137]	Maintain favourable conservation condition
		Golden Plover (<i>Pluvialis apricaria</i>) [A140]	Maintain favourable conservation condition
		Grey Plover (<i>Pluvialis squatarola</i>) [A141]	Maintain favourable conservation condition
		Lapwing (<i>Vanellus vanellus</i>) [A142]	Maintain favourable conservation condition
		Knot (<i>Calidris canutus</i>) [A143]	Maintain favourable conservation condition
		Dunlin (<i>Calidris alpina</i>) [A149]	Maintain favourable conservation condition
		Black-tailed Godwit (<i>Limosa limosa</i>) [A156]	Maintain favourable conservation condition
		Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]	Maintain favourable conservation condition
		Curlew (<i>Numenius arquata</i>) [A160]	Maintain favourable conservation condition
		Redshank (<i>Tringa totanus</i>) [A162]	Maintain favourable conservation condition
		Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]	Maintain favourable conservation condition
		Common Gull (<i>Larus canus</i>) [A182]	Maintain favourable conservation condition
		Herring Gull (<i>Larus argentatus</i>) [A184]	Maintain favourable conservation condition
		Wetlands & Waterbirds [A999]	Maintain favourable conservation condition

2.6. Assessment of Likely Significant Effects

This screening exercise considers the potential for the proposed works to result in significant *in situ* or *ex situ* effects on European sites, that is, effects on conservation features occurring within or functionally connected to the site. Where it is not possible, based on objective information, to exclude the likelihood of significant effects arising from the proposed works, either alone or in combination with other plans or projects, a Stage 2 AA (Natura Impact Statement) is required.

A detailed description of the proposed Project has been provided in the preceding sections. Based on the nature, scale and location of the proposed works - specifically the short-duration intertidal walkover surveys, limited vessel-based Van Veen grab sampling at discrete stations, and the absence of any construction, dredging, piling, or long-term maritime activity - the potential for significant effects is limited to localised, temporary disturbances within the immediate survey footprint. The assessment therefore focuses on whether the proposed survey activities could give rise to likely significant effects through (i) visual disturbance and (ii) small-scale, short-term physical disturbance of intertidal and subtidal sediments at sampling stations. Given the nature, scale, duration and methods of the surveys, including short-duration vessel operations, DDV/ROV survey, discrete grab deployments, and the absence of excavation, dredging, piling or discharge, the likelihood of significant effects on the conservation objectives of European sites can be objectively excluded at Stage 1.

Potential Impact Mechanism 1: Visual disturbance (vessel presence/ operations)

Potential Impact Mechanism 2: Physical disturbance (sediment disturbance from grab sampling/ foot access)

Table 2-4: Assessment of potential significant effects from the impact mechanisms to the conservation features.

Site	Conservation Feature	Impact Mechanism	S-P-R Assessment	Brought to Stage 2 (Y/N)
Dundalk Bay SAC [000455]	Estuaries [1130]	Impact Mechanism 2: Physical Disturbance	The proposed intertidal and subtidal grab sampling will overlap spatially with estuarine habitats. However, sampling stations are limited in area, highly localised, and temporary, involving small footprint grab deployment with rapid natural recovery of sediments. No pathway exists for effects that could alter the structure or function of the estuarine habitat or undermine conservation objectives.	N - No credible pathway, screened out at Stage 1
	Mudflats and Sandflats not covered by seawater at low tide [1140]		There is spatial overlap between the Mudflats and sandflats QI and the Phase I and Phase II intertidal survey transects. Intertidal grab sampling will occur within unvegetated mudflat sediments across upper, mid and lower shore levels. A total of 36 intertidal grab samples will be collected during Phase II, resulting in a maximum cumulative disturbance of approximately 0.9 m ² (36 × 0.025 m ²). The Mudflats and sandflats (1140) habitat extend to approximately 4,375 ha within Dundalk Bay SAC, equivalent to 43,750,000 m ² . The proposed intertidal disturbance therefore represents approximately 0.0000021% of the total 1140 habitat area. Physical interaction is limited to discrete grab sampling points. No excavation, dredging, alteration of sediment transport processes, or modification of tidal channels will occur. Disturbance will be temporary, highly localised and spatially dispersed. Intertidal mudflat sediments in Dundalk Bay are naturally dynamic and subject to regular tidal reworking, and recovery from small-scale grab disturbance is expected to occur rapidly. Given the extremely small spatial footprint relative to the extent of the 1140 habitat, the temporary and reversible nature of disturbance, and the absence of any mechanism for alteration of habitat area, structure or function, there is no credible pathway for significant adverse effects on the conservation objectives of Mudflats and sandflats (1140).	N - No credible pathway, screened out at Stage 1
	Perennial vegetation of stony banks [1220]		There is no direct overlap between proposed survey works and this habitat. No hydrological or physical connectivity exists that would facilitate impact.	N - No credible pathway, screened out at Stage 1
	<i>Salicornia</i> and other annuals colonising mud and sand [1310]		Mapped Annex I habitat data (NPWS SSCO (site-specific conservation objective) spatial data) indicate that the proposed sampling locations do not overlap with the mapped extent of <i>Salicornia and other annuals colonising mud and sand</i> (1310). The nearest extent of this habitat is located adjacent to, but not intersecting, the proposed sampling locations. Accordingly, no direct disturbance to this habitat will occur. Given the small spatial scale, short duration and low intensity of the proposed survey works, there is no credible source-pathway-receptor linkage by which the activity could result in adverse effects on this QI.	N - No credible pathway, screened out at Stage 1

Site	Conservation Feature	Impact Mechanism	S-P-R Assessment	Brought to Stage 2 (Y/N)
	Atlantic salt meadows [1330]		Mapped Annex I habitat data (NPWS SSCO spatial data) indicate that the proposed sampling locations do not overlap with the mapped extent of Atlantic Salt meadows [1330]. The nearest extent of this habitat is located adjacent to, but not intersecting, the proposed sampling locations. Accordingly, no direct disturbance to this habitat will occur. Given the small spatial scale, short duration and low intensity of the proposed survey works, there is no credible source-pathway-receptor linkage by which the activity could result in adverse effects on this QI.	N - No credible pathway, screened out at Stage 1
	Mediterranean salt meadows [1410]		There is no spatial overlap or functional connectivity between the proposed survey works and Mediterranean salt meadows.	N - No credible pathway, screened out at Stage 1
Dundalk Bay SPA [004026]	Great Crested Grebe (<i>Podiceps cristatus</i>) [A005]	Impact Mechanism 1: Visual Disturbance	Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Greylag Goose (<i>Anser anser</i>) [A043]	Impact Mechanism 2: Physical Disturbance	Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Shelduck (<i>Tadorna tadorna</i>) [A048]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Teal (<i>Anas crecca</i>) [A052]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Mallard (<i>Anas platyrhynchos</i>) [A053]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1

Site	Conservation Feature	Impact Mechanism	S-P-R Assessment	Brought to Stage 2 (Y/N)
	Pintail (<i>Anas acuta</i>) [A054]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Common Scoter (<i>Melanitta nigra</i>) [A065]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Red-breasted Merganser (<i>Mergus serrator</i>) [A069]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Oystercatcher (<i>Haematopus ostralegus</i>) [A130]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Ringed Plover (<i>Charadrius hiaticula</i>) [A137]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Golden Plover (<i>Pluvialis apricaria</i>) [A140]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Grey Plover (<i>Pluvialis squatarola</i>) [A141]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Lapwing (<i>Vanellus vanellus</i>) [A142]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Knot (<i>Calidris canutus</i>) [A143]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1

Site	Conservation Feature	Impact Mechanism	S-P-R Assessment	Brought to Stage 2 (Y/N)
	Dunlin (<i>Calidris alpina</i>) [A149]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Black-tailed Godwit (<i>Limosa limosa</i>) [A156]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Curlew (<i>Numenius arquata</i>) [A160]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Redshank (<i>Tringa totanus</i>) [A162]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Common Gull (<i>Larus canus</i>) [A182]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Herring Gull (<i>Larus argentatus</i>) [A184]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1
	Wetlands & Waterbirds [A999]		Survey activities are temporary, localised, and low intensity, involving slow-moving vessels and pedestrian intertidal surveys. Any disturbance would be minor, short-term, and reversible, with birds able to relocate to adjacent suitable habitat. No pathway exists for population-level effects, displacement, or impacts on supporting habitats.	N - No credible pathway, screened out at Stage 1

2.6.1. Assessment of Mobile Annex II Marine Species

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:

- Harbour seal (*Phoca vitulina*)
- Grey seal (*Halichoerus grypus*)
- Harbour porpoise (*Phocoena phocoena*)
- Bottlenose dolphin (*Tursiops truncatus*)
- Otter (*Lutra lutra*)

Two species of pinniped, the grey seal (*Halichoerus grypus*) and harbour seal (*Phoca vitulina*), inhabit Irish waters year-round and are recorded along the east Irish coast. Both are listed as species of Least Concern on the IUCN Red List (Bowen, 2016; Lowry, 2016).

Both species have established haul-out sites along all coastlines of Ireland for resting, breeding, and engaging in social activity (Ó Cadhla *et al.*, 2007). The largest proportion of the grey seal population is hauled out ashore during the annual moult which begins in November and continues until April. Grey seals also aggregate in large colonies during the breeding season between August and December (Ó Cadhla *et al.*, 2007), with peak pup production during October and November. Grey seals tend to breed on exposed rocky shores, on sandbars or in sea caves with ready access to deeper water.

The nearest designated sites for Grey Seal (*Halichoerus grypus*) and Harbour Seal (*Phoca vitulina*) is Lambay Island SAC (71.43 km from the works area).

There are no established haul-out sites or core resting areas for either species within Dundalk Bay. Any interaction is therefore expected to involve occasional transient individuals. On this basis, the risk of likely significant effects on seal species arising from the proposed survey activities is considered to be very low.

More than 25 species of cetaceans have been recorded in Irish waters (NBDC, 2023).

The harbour porpoise is the most widespread and frequently recorded species in Irish waters, sighted largely in inshore waters in the Celtic Sea throughout the entire year (Ó Cadhla *et al.*, 2004; Berrow *et al.*, 2010; Wall *et al.*, 2013; Rogan *et al.*, 2018). Porpoise sightings tend to differ by season, with densities peaking in summer (Berrow *et al.*, 2010). They are listed as a species of Least Concern on the International Union for Conservation of Nature (IUCN) Red List (Braulik *et al.*, 2020).

Bottlenose dolphins are one of the most frequently recorded cetaceans in Ireland (NPWS, 2019) and have been observed throughout Irish waters year-round. They are listed as a species of Least Concern on the IUCN Red List (Wells *et al.*, 2019).

Otter is listed as an Annex II species under the Habitats Directive and is designated as a QI in a number of SACs in Ireland. However, Dundalk Bay SAC is not designated for otter, and no SAC designated for otter lies within the Zone of Influence of the proposed survey works.

The proposed activities are confined to short-duration intertidal walkover surveys and discrete vessel-based grab sampling within open intertidal and subtidal areas. No freshwater channels, riparian habitats, or bank-side environments are subject to disturbance, and no hydrological pathways exist by which effects could propagate to any SAC designated for Otter.

Accordingly, there is no credible S-P-R linkage, and likely significant effects on otter can be excluded at Stage 1.

The relevant SACs designated for Annex II marine mammal species are detailed in **Table 2-5**.

Table 2-5: Special Area of Conservation (SAC) and designated Annex II marine mammal species distance to the proposed project area.

Special Area of Conservation (SAC)	Grey Seal (<i>Halichoerus grypus</i>) [1364]	Harbour Seal (<i>Phoca vitulina</i>) [1365]	Common bottlenose dolphin (<i>Tursiops truncatus</i>) [1349]	Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	Distance from Proposed Site
Ballysadare Bay SAC [000622]		√			479.55 km
Belgica Mound Province SAC [002327]			√	√	626.31 km
Blackwater Bank SAC [002953]				√	201.46 km
Blasket Islands SAC [002172]	√			√	594.52 km
Bunduff Lough and Machair/Trawalua/Mullaghmore SAC [000625]				√	459.73 km
Carnsore Point SAC [002269]				√	227.62 km
Clew Bay Complex SAC [001482]		√			585.34 km
Codling Fault Zone SAC [003015]				√	100.51 km
Cummeen Strand/Drumcliff Bay (Sligo Bay) SAC [000627]		√			471.55 km
Donegal Bay (Murvagh) SAC [000133]		√			472.15 km
Duvillaun Islands SAC [000495]	√		√		534.33 km
Galway Bay Complex SAC [000268]		√			700.19
Glengarriff Harbour and Woodland SAC [000090]		ü			540.78 km
Gweedore Bay and Islands SAC [001141]				√	364.71 km
Hook Head SAC [000764]			√	√	267.57 km
Horn Head and Rinclevan SAC [000147]	√				332.66 km
Inishbofin and Inishshark SAC [000278]	√				592.61 km
Inishkea Islands SAC [000507]	√				530.59 km
Inishmore Island SAC [000213]				√	661.92 km
Kenmare River SAC [002158]		√		√	542.34 km
Kilkieran Bay and Islands SAC [002111]		√		√	650.06 km
Killala Bay/Moy Estuary SAC [000458]		√			490.26
Lambay island SAC [000204]	√	√		√	71.43 km

Special Area of Conservation (SAC)	Grey Seal (<i>Halichoerus grypus</i>) [1364]	Harbour Seal (<i>Phoca vitulina</i>) [1365]	Common bottlenose dolphin (<i>Tursiops truncatus</i>) [1349]	Harbour Porpoise (<i>Phocoena phocoena</i>) [1351]	Distance from Proposed Site
Lough Swilly SAC [002287]				√	330.66 km
Lower River Shannon SAC [002165]			√		688.46 km
Porcupine Bank Canyon SAC [003001]			√		879.00 km
Roaringwater Bay and Islands SAC [000101]	√			√	472.47 km
Rockabill to Dalkey Island SAC [003000]				√	76.81 km
Rutland Island and Sound SAC [002283]		√			380.84 km
Saltee Islands SAC [000707]	√				248 km
Slaney River Valley SAC [000781]		√	√		214.60 km
Slieve Tooley/Tormore Island/Loughros Beg Bay SAC [000190]	√				410.18 km
Slyne Head Islands SAC [000328]	√		√		613.24 km
Slyne Head Peninsula SAC [002074]			√		615.77 km
South-West Porcupine Bank SAC [002329]			√		870.46 km
St. John's Point SAC [000191]			√		449.83 km
West Connacht Coast SAC [002998]			√	√	574.88 km
West of Ardara/Maas Road SAC [000197]		√			398.43 km

Disturbance to Annex II marine mammals

The proposed survey works will involve short-duration vessel movements using a small RIB operating at low speed, together with standard sampling activities. No impulsive or high-intensity activities (*e.g.*, piling, seismic surveying or blasting) will be undertaken.

While marine mammals rely on sensory cues, including sound, for communication and foraging, the nature, intensity and duration of vessel presence associated with the proposed works are very limited and comparable to existing baseline maritime activity within Dundalk Bay. Any behavioural response by marine mammals would be limited to brief and localised avoidance.

There are no designated SACs for marine mammals within or adjacent to the ZOI, and Dundalk Bay does not support core seal haul-out sites or other key resting, breeding or moulting areas. Bottlenose dolphin and harbour porpoise SACs occur at considerable distance from the survey area and are not ecologically connected to the receiving environment of the proposed works.

Any marine mammals potentially transiting the wider area would be exposed, at most, to minor and temporary disturbance, with no potential for population-level effects or impacts on the integrity of European sites. The Eurasian otter, while present in Ireland and designated in multiple SACs nationally, has no nearby SACs associated with Dundalk Bay, and the proposed survey activities will not affect otter habitat, prey availability or behaviour.

On this basis, likely significant effects on Habitats Directive Annex II species can be objectively excluded at Stage 1, and no further assessment is required.

2.7. Plans or Projects That Might Act in Combination

As outlined in above the obligation to undertake AA under the 2011 Birds and Natural Habitats Regulations derives from the Habitats Directive. Regulation 42(1) of the 2011 Regulations requires that:

*A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or **in combination with other plans or projects** is likely to have a significant effect on the European site.*

It is therefore required that the potential impacts of the proposed Project be considered in combination with other relevant plans or projects. Given the nature of the proposed activities associated with the Project, the potential project impact mechanisms (or sources of impact) are:

1. Visual disturbance
2. Physical disturbance

The assessment of potential in-combination effects considers other plans and projects that may result in significant effects to QIs and SCIs of SACs and SPAs. To inform the assessment of potential in-combination effects a review of consent applications for projects in the vicinity of the proposed Project included on the following websites was completed in August 2026:

DHPLG - EIA Portal³

Louth County Council - Planning

An Coimisiún Pleanála⁴

Aquaculture Information Management System (AQUAMIS) by DAFM⁵

Ireland's Marine Atlas⁶

MARA Licence Applications⁷ Relevant statutory development plans for the Dundalk area were also reviewed as part of the in-combination assessment (Section 2.7.2).

2.7.1. Threats and Pressures

The Natura 2000 Standard Data Form for Dundalk Bay SAC identifies a variety of pressures affecting estuarine habitats and QI as seen below in (Table 2-6).

Table 2-6: Ranked threats and pressures identified for Dundalk Bay SAC.

Rank	Threats and Pressures [code]	*Occurrence	Relevance to Dundalk Bay
Medium	Diffuse groundwater pollution due to agriculture and forestry activities [H02.06]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Reduction or loss of specific habitat features [J03.01]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Low	Nitrogen input [H04.02]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
High	Bait digging/ collection [F02.03.01]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Flooding [J02.04.01]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Low	Soil pollution and solid waste [H05]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Biocenotic evolution/ succession [K02]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Reclamation of land from sea, estuary or marsh [J02.01.02]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Low	Sea defence or coast protection works, tidal barrages [J02.12.01]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Low	Sport and leisure structures [G02]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
High	Pollution to surface waters (limnic & terrestrial, marine & brackish) [H01]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Anthropogenic reduction of habitat connectivity [J03.02]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats

Rank	Threats and Pressures [code]	*Occurrence	Relevance to Dundalk Bay
Medium	Illegal taking/ removal of marine fauna [F05]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
High	Invasive non- native species [I01]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
High	Disposal of inert materials [E03.03]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Competition (flora) [K04.01]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
High	Disposal of household/ recreational facility waste [E03.01]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Garbage and solid waste [H05.01]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Erosion [K01.01]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Flooding modifications [J02.04]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Low	Nautical sports [G01.01.01]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Diffuse pollution to surface waters due to transport and infrastructure without connection to canalization/ sweepers [H01.06]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Shallow surface abrasion/ mechanical damage to seabed surface [G05.02]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Outdoor sports and leisure activities, recreational activities [G01]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats
Medium	Infilling of ditches, dykes, ponds, pools marshes or pits [J02.01.03]	b	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SAC as a site-level pressure affecting estuarine and coastal habitats

*Occurrence: I = inside, o = outside, b = both

The Dundalk Bay SPA supports several bird species which can be impacted by pressures mentioned below in (Table 2-7).

Table 2-7: Threats and pressures identified for Dundalk Bay SPA.

Rank	Threats and Pressures [code]	Occurrence	Relevance to Dundalk Bay SPA
Medium	Siltation rate changes, dumping, deposition of dredged deposits [J02.11]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
Medium	Dykes, embankments, artificial beaches, general [J02.12]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
Medium	Dispersed habitation [E01.03]	o	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
Medium	Leisure fishing [F02.03]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
High	Urbanised areas, human habitation [E01]	o	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
Medium	Fertilisation [A08]	o	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
Low	Grazing [A04]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
Medium	Walking, horse riding and non-motorised vehicles [G01.02]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
Medium	Shipping lanes [D03.02]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
Medium	Discharges [E03]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
High	Invasive non-native species [I01]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
Medium	Nautical sports [G01.01]	i	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats

Rank	Threats and Pressures [code]	Occurrence	Relevance to Dundalk Bay SPA
Medium	Industrial or commercial areas [E02]	o	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats
High	Roads, motorways [D01.02]	o	Identified in the Natura 2000 Standard Data Form for Dundalk Bay SPA as a site-level pressure affecting estuarine and coastal habitats

*Occurrence: I = inside, o = outside, b = both

2.7.2. Plans

The Louth County Development Plan 2021-2027 and Dundalk Local Area Plan 2025-2031 were reviewed as part of the in-combination assessment. These plans provide the county and local planning framework for development within Dundalk and the surrounding area. Relevant individual developments and projects are considered separately in Section 0. No likely significant in-combination effects on European sites are predicted from the proposed surveys in combination with these plans. Projects

A review of publicly available planning, foreshore and maritime consent information was undertaken to identify permitted, proposed and under-construction developments within the wider Dundalk Bay area which could give rise to in-combination effects with the proposed short-term survey activities. Sources reviewed included the Louth County Council online planning portal (ePlanning GIS viewer), MARA maritime usage licence and maritime area consent applications and determinations, and other publicly available consent information. The review of local planning records did not identify any marine, estuarine, dredging, reclamation, discharge or infrastructure projects within or immediately adjacent to the proposed survey footprint that could give rise to in-combination effects with the proposed short-term survey activities. A number of small-scale residential developments were identified within the wider urban area; however, these are spatially separated from the proposed marine survey activities and are not hydrologically or functionally connected to the intertidal and subtidal habitats within the survey footprint. Given their confined footprints, terrestrial nature and lack of interaction with the marine environment, these developments do not give rise to pathways for in-combination effects.

A review of MARA maritime applications and determinations, MARA foreshore authorisations and other publicly available foreshore consent information identified a number of maritime usage licence, maritime area consent and foreshore authorisations within County Louth and the wider regional maritime area. The MARA Foreshore Authorisations list notes that records may not be exhaustive and that the list does not include foreshore authorisations granted by other departments, including aquaculture authorisations. Relevant applications, consents and authorisations are summarised in **Table 2-8** below.

Of the applications, consents and authorisations reviewed, Of the applications, consents and authorisations reviewed, FS004510, FS004505, FS007223 and MUL260007 were considered the most relevant due to their location within the wider Dundalk area and/or the nature of the authorised activities. The remaining maritime applications are located offshore, outside Inner Dundalk Bay / Dundalk Harbour, within a separate receiving environment, or do not overlap with the proposed survey footprint. Having regard to the temporary, short-duration and localised nature of the proposed surveys, and the absence of dredging, construction, piling, excavation or permanent alteration of the marine environment, no likely significant in-combination effects on European sites are predicted.

Table 2-8: Maritime Applications, Foreshore Authorisations and Consents Considered in the In-Combination Assessment

Application / Project	Applicant	Status	Location/relationship to proposed surveys	Activity type	In-combination assessment
FS004510 – Uisce Éireann Outfall Pipes	Uisce Éireann	Consented/existing foreshore authorisation. Effective 01/10/1997–01/10/2032.	Located within Dundalk, Co. Louth	Existing outfall pipe infrastructure.	Relevant due to its location within the wider Dundalk area and the potential for ongoing discharge-related water-quality pressures. The authorisation relates to existing operational foreshore infrastructure, and any ongoing operational pressures would be associated with existing discharge and the associated water-quality regime. The impact mechanisms of the proposed activities are limited to temporary visual disturbance from survey activity and highly localised physical disturbance associated with intertidal and benthic sampling. These activities will not increase pollutant loading and therefore will not increase the operational effects of the outfall. Therefore, no likely significant in-combination effects on European sites are predicted.
FS004505 – Railway line in Dundalk Harbour	Not specified	Consented/existing foreshore authorisation. Effective 13/03/1931–13/03/2030.	Located in Dundalk Harbour, Co. Louth	Existing harbour/railway-related foreshore infrastructure.	Relevant due to its location within Dundalk Harbour. FS004505 relates to long-established railway infrastructure with an existing fixed footprint. The proposed surveys will not alter, extend or physically interact with this infrastructure and will not result in any permanent habitat loss or change to coastal processes. Survey-related effects are limited to temporary visual disturbance and highly localised physical disturbance at discrete sampling locations. These effects will not increase the footprint or effects associated with the existing railway infrastructure and therefore no likely significant in-combination effects on European sites are predicted.
FS007223 – Dundalk Bay Dredging	Sean O’Hanlon /O’Hanlon and Sons Ltd	Consented/existing foreshore authorisation. Effective 01/10/2022–30/09/2032.	Located at Dundalk Port, Dundalk Bay, Co. Louth	Maintenance dredging.	Relevant due to location and potential overlap in impact pathways. Maintenance dredging may result in seabed disturbance, sediment resuspension and vessel-related disturbance. The proposed surveys may result in similar types of disturbance, but only at a very small and localised scale, with physical disturbance limited to discrete grab sampling locations and short-duration vessel activity. The surveys do not involve dredging, disposal of dredged material or permanent seabed alteration. Therefore, even if the activities occur at the same time, the proposed surveys would not materially increase the magnitude, extent or duration of disturbance associated with the dredging activity. Therefore, no likely significant in-combination effects on European sites are predicted.

Application / Project	Applicant	Status	Location/relationship to proposed surveys	Activity type	In-combination assessment
MUL260007 – Dundalk Marine Environmental Surveys	Uisce Éireann	Determined/granted & works completed 11 August 2026.	Located within Inner Dundalk Bay and the Castletown Estuary, Co. Louth.	Subtidal and intertidal marine ecology surveys.	Relevant due to location and similar survey-based nature. The work on this project is already completed; therefore, there will be no temporal overlap with the proposed surveys. As the activities will not occur concurrently, no likely significant in-combination effects are predicted.
LIC230001 – North Irish Sea Array Site Investigation Activities	North Irish Sea Array Windfarm Limited	Determined/granted 2 August 2024.	Located Offshore/south of Dundalk Bay, with export cable route approaching the Drogheda/Baltray/Boyne coast. No overlap with Inner Dundalk Bay and/or Dundalk Harbour.	Offshore wind farm and export cable route site investigations.	Screened out from detailed assessment. No spatial overlap with the proposed survey footprint. No likely significant in-combination effects are predicted.
MAC20230003 – Greenore Port ORE Operations and Maintenance Facility	Greenore Port Company Unlimited	Determined / MAC granted.	Located at Greenore Port, within Carlingford Lough. No overlap with Inner Dundalk Bay and/or Dundalk Harbour.	ORE operations and maintenance facility, including port infrastructure works.	Screened out from detailed assessment, as it is spatially separate and located in a separate receiving environment. No likely significant in-combination effects on Dundalk Bay SAC or Dundalk Bay SPA are predicted.
2022-MAC-001 / 2022-MAC-001-A – Oriel Offshore Wind Farm	Oriel Windfarm Limited	Determined / MAC granted; assignment granted July 2025.	Located offshore Co. Louth, outside Inner Dundalk Bay/Dundalk Harbour.	Offshore wind farm MAC.	Screened out from detailed assessment, as there is no spatial overlap with the proposed survey footprint. No likely significant in-combination effects are predicted.
2022-MAC-005 – North Irish Sea Array Offshore Wind Farm	North Irish Sea Array Windfarm Limited	Determined / MAC granted.	Located offshore Dublin and Louth coasts, and outside Inner Dundalk Bay, Dundalk Harbour.	Offshore wind farm MAC and associated infrastructure.	Screened out from detailed assessment, as there is no spatial overlap with the proposed survey footprint. No likely significant in-combination effects are predicted.

2.7.3. Aquaculture Operations

Consultation of the DAFM AQUAMIS viewer⁵ (January 2026) confirms that there are no active or proposed aquaculture licences within the Zol of the proposed survey activities.

Accordingly, aquaculture operations can be excluded from further consideration in the in-combination assessment.

2.7.4. Initiatives

No non-statutory plans, programmes, or biodiversity initiatives have been identified within the Zol that would have the potential to act in-combination with the proposed marine survey activities.

2.7.5. Navigational and Marine Traffic

Review of Ireland's Marine Atlas and EMODnet vessel density data indicates that Dundalk Bay does not contain designated shipping lanes or ferry routes and that commercial vessel traffic within the bay is low.

Given the short duration, small vessel size, and localised nature of the proposed survey works, no interaction pathways exist whereby the surveys could give rise to in-combination effects with existing navigational or marine traffic activities. Likely significant effects can therefore be excluded.

2.7.6. Diffuse and Point Source Pollution

Background nutrient and water-quality pressures within Dundalk Bay are associated with wider catchment-level and existing anthropogenic pressures. The proposed survey activities are short-term, confined to discrete locations, and will not involve the introduction of nutrients or contaminants to the marine environment.

All survey vessels will adhere to standard fuel-spill prevention and waste-management procedures, and equipment will be cleaned between stations to minimise the risk of contaminant transfer.

Accordingly, the proposed surveys do not provide a pathway for cumulative or in-combination effects on water quality or the conservation objectives of Dundalk Bay SAC or SPA.

2.7.7. Conclusion

Having regard to the nature and scale of the proposed marine survey activities, and following consideration of other plans, projects and activities within the Zol, no likely significant in-combination effects on European sites have been identified..

Other developments in the wider Dundalk area are spatially separate, largely terrestrial in nature, and subject to their own planning and environmental assessment processes. There are no active or proposed aquaculture operations within the ZOI, marine traffic levels within Dundalk Bay are low, and background water-quality pressures will not be exacerbated by the proposed short-term, non-intrusive surveys.

Each activity is spatially discrete, time-limited, and subject to appropriate regulatory controls. On this basis, the proposed survey works will not give rise to likely significant effects on Dundalk Bay SAC, Dundalk Bay SPA, or any other European site, either alone or in-combination with other plans or projects.

2.8. Screening Outcome

The assessment has determined, in light of best available scientific data, that there no is potential for significant effects on conservation features of SACs and SPAs resulting from the Project, *i.e.*, the likelihood of significant effects on all European sites has been ruled out. The findings of the assessment are summarised in **Table 2-9**.

Table 2-9: Summary of the Appropriate Assessment Screening outcome.

AA Screening outcome	
Brief description of the Project.	Intertidal and subtidal baseline studies to characterise marine habitats, benthic communities and sediment conditions within Dundalk Bay to inform the environmental assessment of the proposed Large-scale Residential Development at Haggardstown and Marshes Upper, Dundalk, Co. Louth.
European site(s)	
List of the European site(s) in the Zone of Influence.	The conservation features of the following SACs and SPAs are listed in Table 2-2 and Table 2-3 alongside conservation objectives. SACs • Dundalk Bay SAC SPAs • Dundalk Bay SPA
Assessment summary	
Description of the potential impact mechanisms from the Project that have likely significant effects on the conservation features.	Potential impact mechanisms associated with the Project were identified and assessed in Sections 2.4 to 2.7, including: 1. Visual disturbance 2. Physical disturbance Following detailed screening, no potential impact mechanism was identified that could give rise to likely significant effects on the conservation features of any European site.
Conservation features with the potential to be impacted by the Project.	None

AA Screening outcome	
Description of the potential direct or indirect impacts of the Project in combination with other plans or projects on the European sites.	No plans or projects were identified that would give rise to likely significant in-combination effects with the proposed survey works.
Conservation features with the potential to be impacted by the Project in combination with other plans or projects.	None
Concluding statement.	It is concluded that there is no pathway between the Project impact mechanisms, alone or in combination with other plans or projects, and the conservation features of European sites.

3. Conclusion

The screening for AA, undertaken using the S-P-R model, has determined that there is no potential for likely significant effects on any European site, either alone or in combination with other plans or projects.

Following an examination, analysis and evaluation of the relevant information, including the nature, scale and location of the proposed project, it can be objectively concluded that the proposed site investigation works will not give rise to any pathways for effects on the conservation objectives of any European site within the Zol.

In view of best scientific knowledge, and on the basis of objective information, it can be concluded that the proposed project, either individually or in combination with other plans or projects, will not have likely significant effects on any European site.

Accordingly, Stage 2 AA is not required.

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Endnotes

¹Article 17 – Council Directive 92/43/EEC (Habitats Directive), latest national reporting cycle (2025)

<https://eur-lex.europa.eu/eli/dir/1992/43/2013-07-01/eng#art17>

² All site synopsis and respective conservation objectives documents can be assessed at [Protected Sites in Ireland | National Parks & Wildlife Service \(npws.ie\)](#)

³ [EIA Portal](#)

⁴ [An Coimisiún Pleanála](#)

⁵ [DAFM Aquaculture Viewer](#) Interactive Map

⁶ [Marine Atlas Interactive Map](#)

⁷ [MARA Maritime Usage Licence Applications](#)