Uisce Éireann

Dundalk Maritime Usage Licence (MUL)

Supporting Information for Screening for Appropriate Assessment

Neve McCann

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Client:	**Uisce Éireann**
Address:	**Colvill House,**
	24-26 Talbot St,
	Mountjoy,
	Dublin, D01 NP86
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AQUAFACT contact:	**Aisling Hearty**
Position:	**Principal Ecologist**
E-mail:	**aisling@aquafact.ie**
Telephone:	**+353 (0) 91 756812**
Website:	**www.aquafact.ie**

Address:	**AQUAFACT International Services Ltd,**
	9A Liosban Business Park,
	Tuam Road,
	Galway,
	Ireland.
	H91 K120
Registered in Ireland:	**No. 493496**
Tax Reference Number:	**9773384O**
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AQUAFACT
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1. Introduction

1.1. Overview

This Supporting Information for Screening for Appropriate Assessment (SISAA) has been prepared by AQUAFACT – APEM Group (AQUAFACT) to provide relevant information to enable the competent authority (Maritime Area Regulatory Authority (MARA)) to carry out a Stage 1: Screening for AA (Appropriate Assessment) of the proposed marine and intertidal survey works associated with the Dundalk Wastewater Treatment Plant (WWTP) Capacity Upgrade Project ('the Project') as required under Article 6(3) obligations 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 objective of the Project is to undertake a programme of intertidal and subtidal baseline studies to characterise marine habitats and benthic communities within the development area to inform the design and assessment of a capacity upgrade at a wastewater treatment plant in Inner Dundalk Bay. The marine survey activities will include intertidal investigations comprising a Phase I walkover and Phase II quantitative assessment to map and classify biotopes, record key species, sediment characteristics, and features of conservation interest, and produce Geographic Information Systems (GIS)-based habitat maps. Additionally, subtidal benthic investigations involving grab sampling at designated stations with replicate samples (**Figure 1-1**), analysis of faunal assemblages, and sediment characterisation including Particle Size Analysis. These works are required to characterise the receiving environment, identify potential constraints, and provide the baseline data necessary for the future consenting and detailed design of the WWTP capacity upgrade.

The surveys are temporary, small in scale, sited, and constructed in a way that minimises environmental impacts, supports compliance with European Union (EU) and national legislation, and protects the ecological integrity of Dundalk Bay nearby European sites. The survey locations, including proposed marine access points, are shown in **Figure 1-1** and **Table 1-1**.

Table 1-1: Intertidal Phase II and subtidal sample coordinates.

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

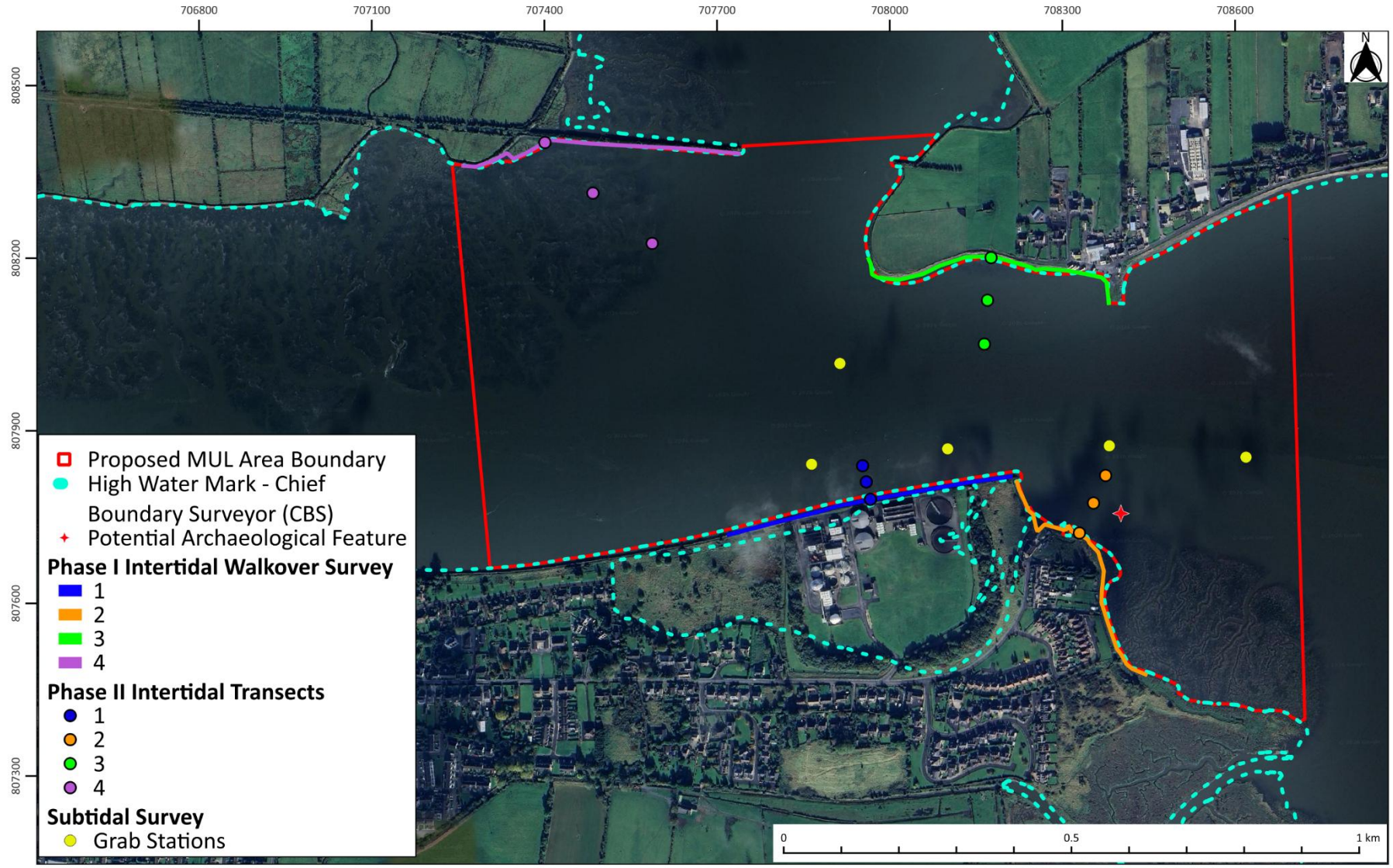


Figure 1-1: Proposed survey area in Dundalk Bay.

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 status. 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).

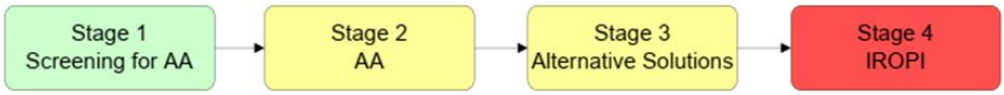


Figure 1-2: Four stages of the Appropriate Assessment Process.

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.
- 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.
- Birds Directive (Directive 79/409/EEC) 1979, amended Directive 2009/147/EC.
- European Communities (Birds and Natural Habitats) Regulations 2011-2021
- 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) – provisions relating to Appropriate Assessment (AA) and Environmental Impact Assessment (EIA) for maritime projects.
- MARA (2024) Applicant Technical Guidance (V7) for Maritime Area Consents and Licensing.

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 Directive[1].
- 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

Neve McCann MSc - Senior Marine Consultant

Neve McCann is a Senior Marine Consultant with AQUAFACT, holding an MSc in Applied Marine Conservation and a BSc in Zoology. She has experience across marine, freshwater and terrestrial ecology, environmental assessment, and regulatory compliance, gained through roles in consultancy and the public sector. She has authored Natura Impact Statements, AA Screenings, Ecological Impact Assessments, and contributed to EIAR biodiversity chapters for major infrastructure projects.

She is technically skilled in data management and spatial analysis, proficient in ArcGIS, R Studio, and SQL, with experience in MSFD Descriptor assessments, ICES data calls, and contributions to MSFD Article 8 reporting. Neve has actively participated in ICES Working Groups and European marine forums, supporting collaborative research and policy development. Her fieldwork experience includes protected species surveys, benthic sampling, freshwater assessments, and sea-going surveys such as Irish Groundfish and Nephrops UWTV. Neve also holds JNCC Marine Mammal Observer certification and has completed specialist training in stock assessment and project management for wildlife conservation.

At AQUAFACT, Neve applies her expertise to marine ecological assessments, compliance documentation, and technical analysis to support robust, evidence-based environmental solutions

Aisling Hearty MSC, ACIEEM – Principal Ecologist

The report has been reviewed by Aisling Hearty. Aisling is a Principal ecologist with over 6 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 bioacoustic 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 proposed project, for the purposes of this AA Screening, comprises site investigation (SI) works associated with the proposed upgrade and expansion of the existing Dundalk Wastewater Treatment Plant (WWTP).

The wider project involves the upgrade and expansion of the existing Dundalk WWTP to increase treatment capacity and improve process efficiency. The existing facility includes inlet works, primary and secondary treatment processes, sludge handling infrastructure, and a common outfall to Castletown Estuary. The upgrade is intended to accommodate projected population growth, improve resilience during storm events, and ensure compliance with applicable environmental legislation, including the Water Framework Directive, the Urban Wastewater Treatment Directive and the Habitats Directive.

This assessment relates solely to the proposed SI works and does not assess the construction or operation of the WWTP upgrade. The SI works are required to characterise existing marine and intertidal habitats and benthic communities, and to inform subsequent project design and environmental assessment.

As Inner Dundalk Bay supports a number of Annex I habitats, a programme of intertidal and subtidal ecological surveys will be undertaken to establish baseline ecological conditions and to inform the assessment of potential effects on the conservation objectives of designated sites.

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

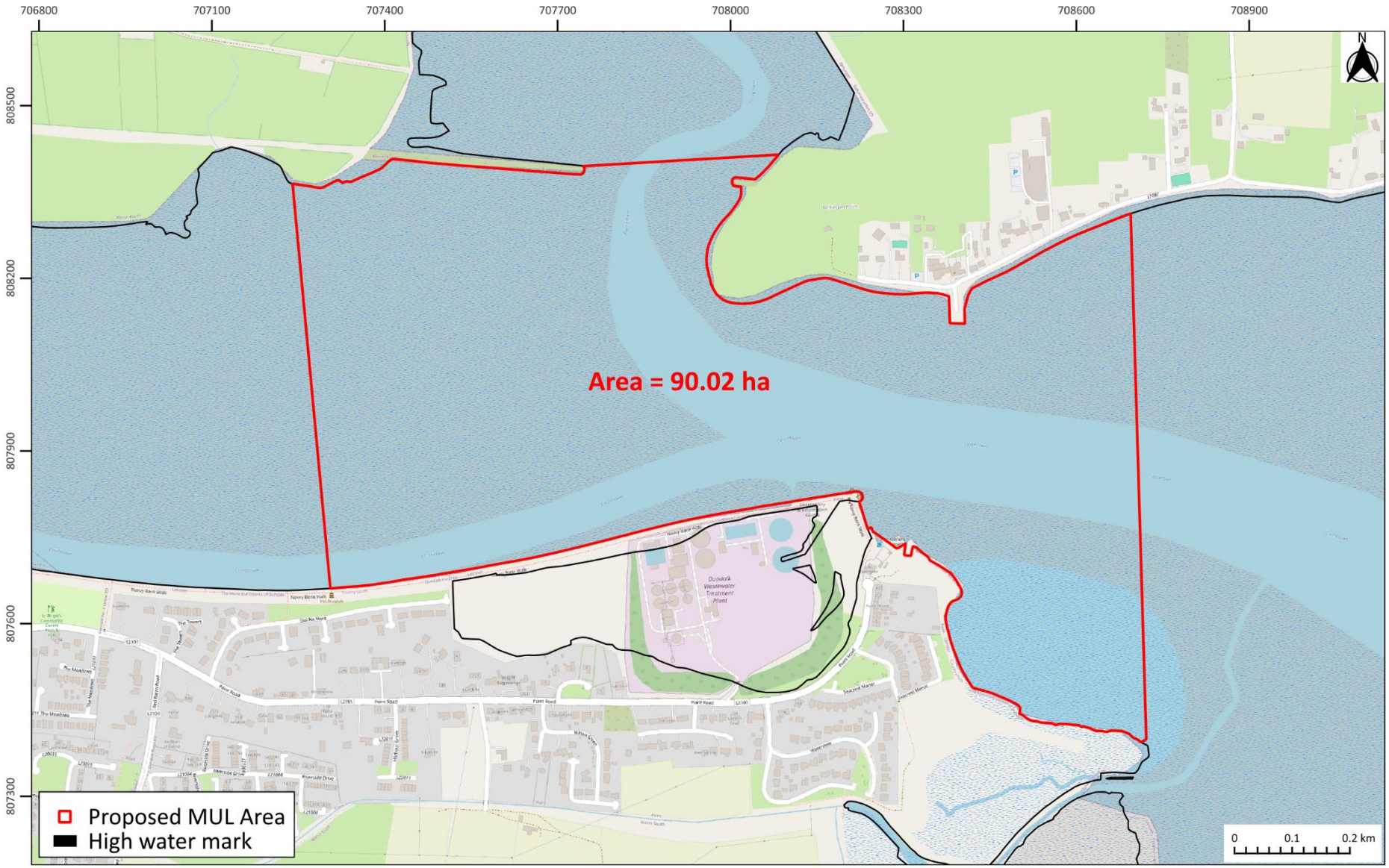


Figure 2-1: Proposed Survey Area in Dundalk Bay, Co. Louth.

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

Intertidal surveys will comprise a Phase I walkover survey and a Phase II quantitative survey of accessible intertidal areas.

The Phase I survey will involve systematic walkover inspections to identify and map broad intertidal habitat types, record key species, sediment characteristics and features of conservation interest, and inform the placement of Phase II sampling locations.

Phase II surveys will involve quantitative sampling along defined transects using quadrats and standard ecological recording methods to classify and map intertidal biotopes.

Intertidal surveys will be undertaken on foot where safe access conditions allow. In areas where soft sediments or tidal conditions present a safety risk, intertidal habitats will be surveyed from a small vessel at high water.

2.2.2. Subtidal Benthic Surveys

Subtidal surveys will involve targeted benthic grab sampling at a limited number of predefined stations within the survey area.

Sampling will be undertaken using a small Van Veen grab (0.025 m^2) deployed by hand from a small vessel. At each station, grab samples will be collected in replicate to characterise benthic faunal assemblages and sediment composition. Additional sediment samples will be collected for Particle Size Analysis (PSA) and Total Organic Carbon (TOC) analysis.

Grab sampling represents a very small, point-source disturbance to the seabed at each sampling location. Disturbed sediments are expected to resettle naturally within a short period following sample collection.

2.2.3. Survey Logistics and equipment

Marine survey operations will mobilise from a designated harbour or slipway, with access coordinated as required. A small, shallow-draft vessel or rigid inflatable boat (RIB) will be used to access subtidal sampling stations.

At each station, a Van Veen grab will be deployed to collect sediment samples in triplicate. Samples will be preserved for laboratory analysis, including faunal identification and sediment characterisation (PSA and TOC). Global Positioning System (GPS) coordinates and photographic records will be collected at each sampling location.

Intertidal surveys will be accessed on foot where possible, supported by standard ecological survey equipment including GPS units, cameras and quadrats. Where soft sediment conditions prevent safe access, sampling may be undertaken from a RIB.

Fieldwork is expected to take approximately 1 week with a requested licence duration of 6 months to allow for scheduling in accordance with suitable tidal and weather conditions.

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 results of these surveys will provide essential baseline data to inform the AA process under the Habitats Directive and ensure that potential effects on designated sites and conservation features are fully assessed.

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	Triplicate per station	Van Veen grab for benthic fauna; sediment cores for PSA.	Approx. 8-12 m length, 3-4 m beam. ~15-20 min
Walkover Survey	Upper/ mid shore zones	Transects at 50 m spacing.	Handheld GPS, camera, quadrats for biotope mapping.	Access on foot or RIB at high water. Duration per transect: ~30-45 min
Quantitative intertidal sampling	Accessible shore stations	Triplicate per station	Van Veen grab (from RIB) 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 (ZoI) 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 status.

To establish the ZoI 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 small RIB operating at low speed to access sampling stations, together with 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**: 4 transects, with sampling undertaken at upper, mid, and lower shore levels; 4 grab deployments per shore level, resulting in 48 grab samples in total.

- **Subtidal benthic survey**: 5 stations, with 3 grab samples per station, resulting in 15 grab samples in total.

In total, 63 Van Veen grab samples will be collected across the intertidal and subtidal environments. Each grab sample disturbs a seabed footprint of 0.025 m^2, resulting in a maximum cumulative disturbed area of approximately 1.6 m^2 (63 × 0.025 m^2). 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 seabed footprint of approximately 1.6 m^2 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 m^2) within the SAC. The proposed grab sampling disturbance therefore equates to approximately 0.0000037% 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.

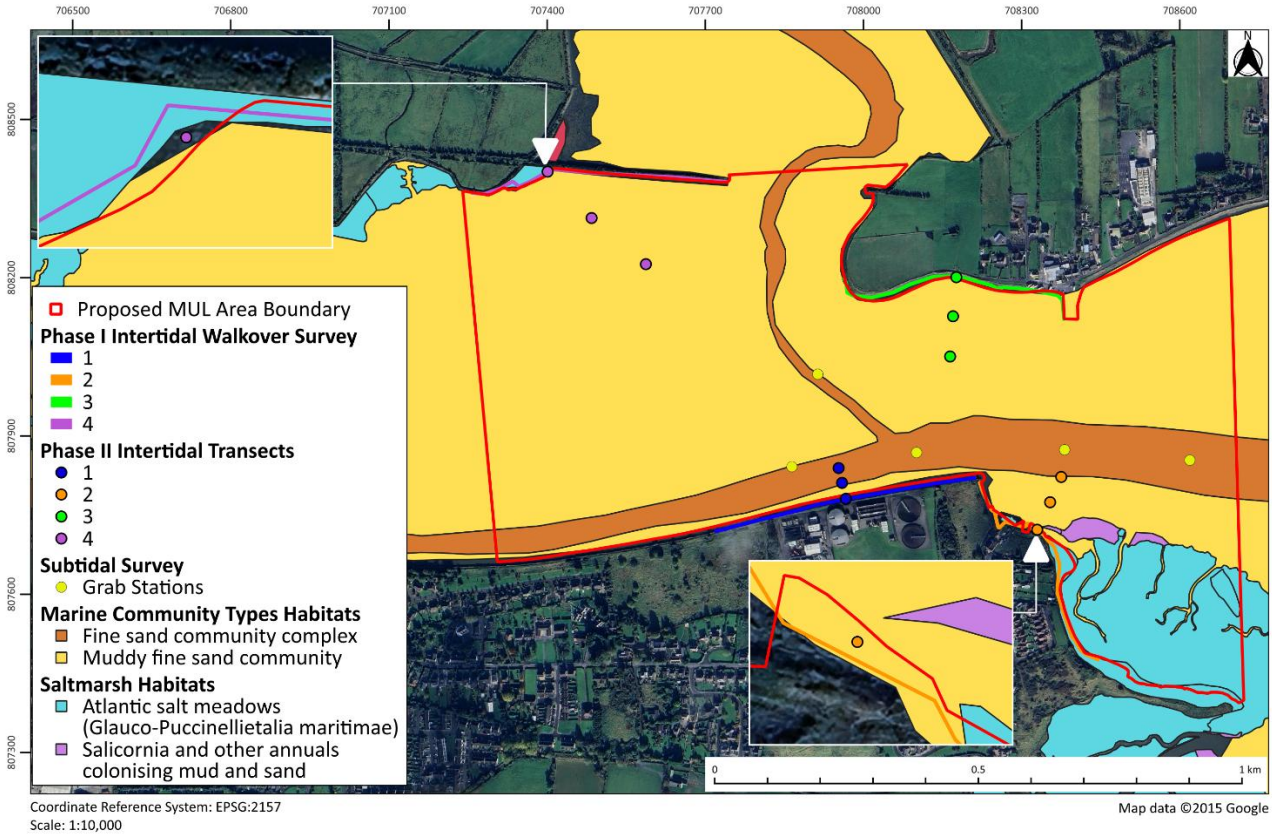
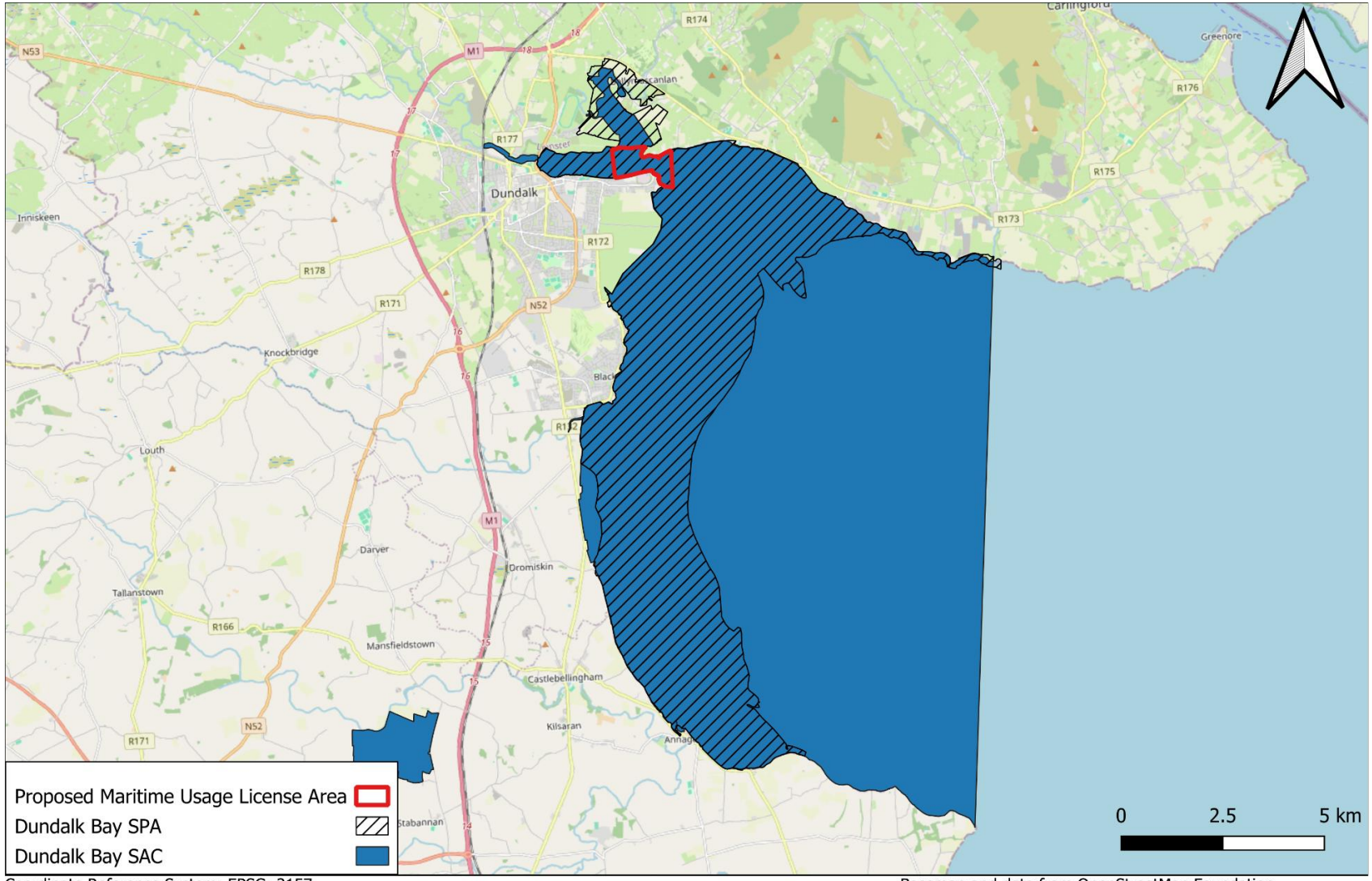


Figure 2-2: Benthic habitats within Dundalk MUL survey boundary.

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 website[2].

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



Coordinate Reference System: EPSG: 2157
Map Scale: 1:300,000

Basemap and data from OpenStreetMap Foundation (CC-BY-SA). https://www.openstreetmap.org and contributors.

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

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]

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

SPA (site code)	Distance from Project (km)	Special Conservation Interest (SCI)	Ecological Group	Conservation objectives
Dundalk Bay SPA [004026]	0 km from proposed site.	Great Crested Grebe (*Podiceps cristatus*) [A005]	Annex I bird species	Maintain favourable conservation condition
		Greylag Goose (*Anser anser*) [A043]	Annex I bird species	Maintain favourable conservation condition
		Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]	Annex I bird species	Maintain favourable conservation condition
		Shelduck (*Tadorna tadorna*) [A048]	Annex I bird species	Maintain favourable conservation condition
		Teal (*Anas crecca*) [A052]	Annex I bird species	Maintain favourable conservation condition
		Mallard *(Anas platyrhynchos*) [A053]	Annex I bird species	Maintain favourable conservation condition
		Pintail (*Anas acuta*) [A054]	Annex I bird species	Maintain favourable conservation status
		Common Scoter (*Melanitta nigra*) [A065]	Annex I bird species	Maintain favourable conservation status
		Red-breasted Merganser *(Mergus serrator*) [A069]	Annex I bird species	Maintain favourable conservation status
		Oystercatcher (*Haematopus ostralegus*) [A130]	Annex I bird species	Maintain favourable conservation status
		Ringed Plover (*Charadrius hiaticula)* [A137	Annex I bird species	Maintain favourable conservation status
		Golden Plover (*Pluvialis apricaria*) [A140]	Annex I bird species	Maintain favourable conservation status
		Grey Plover (*Pluvialis squatarola*) [A141]	Annex I bird species	Maintain favourable conservation status
		Lapwing (*Vanellus vanellus*) [A142]	Annex I bird species	Maintain favourable conservation status
		Knot *(Calidris canutus*) [A143]	Annex I bird species	Maintain favourable conservation status
		Dunlin (*Calidris alpina*) [A149]	Annex I bird species	Maintain favourable conservation status
		Black-tailed Godwit (*Limosa limosa*) [A156]	Annex I bird species	Maintain favourable conservation status
		Bar-tailed Godwit (*Limosa lapponica*) [A157]	Annex I bird species	Maintain favourable conservation status
		Curlew (*Numenius arquata*) [A160]	Annex I bird species	Maintain favourable conservation status
		Redshank (*Tringa totanus*) [A162]	Annex I bird species	Maintain favourable conservation status
		Black-headed Gull *(Chroicocephalus ridibundus*) [A179]	Annex I bird species	Maintain favourable conservation status
		Common Gull (*Larus canus) [*A182]	Annex I bird species	Maintain favourable conservation status
		Herring Gull (*Larus argentatus*) [A184]	Annex I seabird species	Restore 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 (small vessel operations, discrete grab deployments, and 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 48 intertidal grab samples will be collected during Phase II, resulting in a maximum cumulative disturbance of approximately 1.6 m² (48 × 0.025 m²). The Mudflats and sandflats (1140) habitat extend to approximately 4,375 ha within Dundalk Bay SAC, equivalent to 43,750,000 m². The proposed intertidal disturbance therefore represents approximately 0.0000037% 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
	Salicornia 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 *Salicornia and other annuals colonising mud and sand* (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	N - No credible pathway, screened out at Stage 1

Site	Conservation Feature	Impact Mechanism	S-P-R Assessment	Brought to Stage 2 (Y/N)
			credible source-pathway-receptor linkage by which the activity could result in adverse effects on this QI.	
	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 (*Podiceps cristatus*) [A005]	**Impact Mechanism 1: Visual Disturbance** **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
	Greylag Goose (*Anser anser)* [A043]		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 (*Branta bernicla hrota*) [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 (*Tadorna tadorna*) [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 (*Anas crecca*) [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

Site	Conservation Feature	Impact Mechanism	S-P-R Assessment	Brought to Stage 2 (Y/N)
	Mallard *(Anas platyrhynchos*) [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
	Pintail (*Anas acuta*) [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 (*Melanitta nigra*) [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 *(Mergus serrator*) [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 (*Haematopus ostralegus*) [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 (*Charadrius hiaticula)* [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 (Pluvialis apricaria) [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 (*Pluvialis squatarola*) [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 (*Vanellus vanellus*) [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

Site	Conservation Feature	Impact Mechanism	S-P-R Assessment	Brought to Stage 2 (Y/N)
	Knot *(Calidris canutus)* [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
	Dunlin (*Calidris alpina*) [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 (*Limosa limosa*) [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 (*Limosa lapponica*) [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 (*Numenius arquata*) [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 (*Tringa totanus*) [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 *(Chroicocephalus ridibundus)* [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

Site	Conservation Feature	Impact Mechanism	S-P-R Assessment	Brought to Stage 2 (Y/N)
	Common Gull (*Larus canus) [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 (*Larus argentatus*) [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

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 (*Halichoerus grypus*) [1364]	Harbour Seal (*Phoca vitulina*) [1365]	Common bottlenose dolphin (*Tursiops truncatus*) [1349]	Harbour Porpoise (*Phocoena phocoena*) [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 Eastuary SAC [000458]		√			490.26
Lambay island SAC [000204]	√	√		√	71.43 km

Special Area of Conservation (SAC)	Grey Seal (*Halichoerus grypus*) [1364]	Harbour Seal (*Phoca vitulina*) [1365]	Common bottlenose dolphin (*Tursiops truncatus*) [1349]	Harbour Porpoise (*Phocoena phocoena*) [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 Tooey/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 September 2025:

- DHPLG - EIA Portal[3]
- Louth County Council - Planning
- An Coimisiún Pleanála[4]
- Aquaculture Information Management System (AQUAMIS) by DAFM[5]
- Irelands Marine Atlas[6]
- MARA Licence Applications[7]

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

From the planning resources cited in **Section 2.7**, the Louth County Development Plan 2021–2027 establishes the guiding framework for this work.

Policy CDP 4.5 specific to infrastructure states the objective to support the upgrade of high-quality water and wastewater services for both existing and future developments within the area.

The proposed survey will directly benefit wastewater treatment facilities in Dundalk. This infrastructure is expressly supported by the Development Plan, which seeks to remedy existing environmental shortcomings and enable sustainable expansion.

2.7.3. Projects

A review of publicly available planning information was undertaken using the Louth County Council online planning portal (ePlanning GIS viewer) to identify permitted, proposed and under-construction developments within the wider Dundalk Bay area. This review did not identify any marine, estuarine, dredging, reclamation, discharge, or infrastructure projects within or adjacent to the 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.

2.7.4. Aquaculture Operations

Consultation of the DAFM AQUAMIS viewer[5] (January 2026) confirms that there are no active or proposed aquaculture licences within the ZoI of the proposed survey activities.

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

2.7.5. Initiatives

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

2.7.6. 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.

2.7.7. Diffuse and Point Source Pollution

Background nutrient enrichment within Dundalk Bay is primarily associated with existing urban wastewater inputs and catchment-level 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.

2.7.8. 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 ZoI, no pathways for 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 2-8**.

Table 2-8: Summary of the Appropriate Assessment Screening outcome.

AA Screening outcome	
Brief description of the Project.	Intertidal and subtidal baseline studies to characterise marine habitats and benthic communities within the development area to inform the design and assessment of a capacity upgrade at a WWTP in Inner Dundalk Bay
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 0** 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 identified to have potential in combination effects with the survey works proposed in Dundalk Bay
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 ZoI.

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.

4. References

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Endnotes

[1]Article 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 Pleanala

[5] DAFM Aquaculture Viewer Interactive Map

[6] Marine Atlas Interactive Map

[7] MARA Maritime Usage Licence Applications