Wicklow Harbour Maintenance & Disposal at Sea

Supporting Information for Screening of Appropriate Assessment

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Contents

[1] Introduction

[1.1] Project Background

Ayesa, on behalf of Wicklow County Council (WCC), has been commissioned to prepare this Supporting Information for Screening of Appropriate Assessment (SISAA) in support of the maritime consenting process for the proposed Wicklow Harbour maintenance dredging, offshore disposal and associated surveying (bathymetric). The Project includes a single designated offshore disposal site located northeast of Wicklow Harbour.

This SISAA Report has been prepared in accordance with Article 6(3) of the EU Habitats Directive to determine whether the proposed dredging and use of the offshore disposal site, either individually or in combination with other plans or projects, could result in likely significant effects on any European site.

This report supplements, but remains separate from, the Annex IV Risk Assessment prepared for the project in accordance with the requirements of the EU Habitats Directive (92/43/EEC) and the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended).

[1.2] Project Overview

The Project involves the periodic removal of accumulated sediments from the inner and outer harbour basins to maintain safe navigational depths for commercial, fishing, Royal National Lifeboat Institution (RNLI), leisure and visiting vessels. Progressive sedimentation within Wicklow Harbour has resulted in the infilling of berthing, manoeuvring and approach areas. The proposed works will remove these deposits using four potential methods of dredging, including Trailer Suction Hopper Dredger (TSHD), Mechanical Dredging, Water Injection Dredging (WID) and plough dredging. The material proposed to be dredged via the first two methods will require disposal at the two proposed offshore disposal sites.

All dredging activity confined to the established harbour footprint and dredged material (via TSHD or barge only) is proposed to be transported by sea for disposal at a newly identified potential disposal site located northeast of Wicklow Harbour.

Pre-and-post bathymetric surveys will also be required.

[1.3] Project Location

The Study Area covers a total area of 0.406 km² and is comprised of (Image 1):

a) The proposed dredging area. The dredge area comprises an area of 0.056 km^2 within Wicklow Harbour, and

b) The identified potential disposal site northeast of Wicklow Harbour. The site is located 2.5km off the shoreline at Five Mile Point and 9km north east of Wicklow Harbour. It comprises of an area of 0.35 km^2.

Wicklow Harbour is located on the east coast of Ireland within the administrative area of WCC, approximately 50 km south of Dublin. The harbour lies at the mouth of the River Leitrim and is bounded by the R750 coastal road to the west and the Irish Sea to the east. The harbour

comprises an inner basin, outer basin and entrance channel, enclosed by the North and South Piers which provide shelter from prevailing easterly swells. The surrounding coastline consists predominantly of mixed sand and cobble substrates, with occasional rocky outcrops and intertidal areas exposed at low tide.

Wicklow Harbour functions as a multi-use facility, accommodating commercial vessels, fishing craft, leisure boats and the adjacent RNLI station. It is a heavily modified, operational marine environment that experiences regular vessel traffic and tidal exchange with the Irish Sea.

The dredging footprint is confined to the existing dredged harbour area, extending across the inner and outer harbour basins and the approach channel. All dredging activities will be undertaken within the established navigation limits, and no encroachment into adjacent seabed areas is proposed.

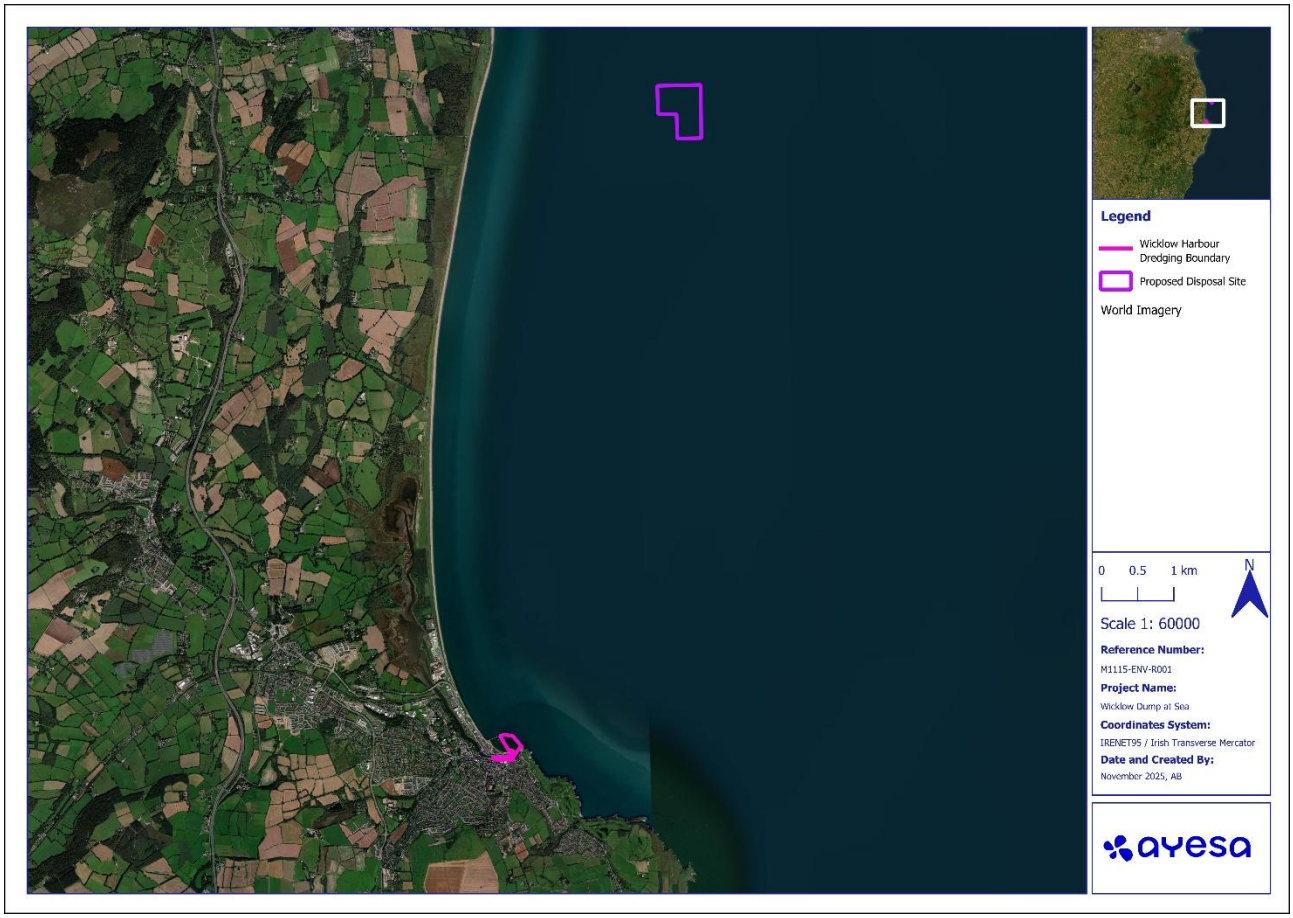

Image 1: Location of the harbour dredging site and offshore disposal site.

[1.4] Description of Proposed Works

The Project involves the removal of accumulated sediments from the inner harbour basin, outer basin and entrance channel to maintain safe navigational depths for commercial, fishing, RNLI, leisure and visiting vessels operating from the harbour. Sediment deposition within the harbour occurs as a result of natural coastal processes and fluvial inputs, leading to progressive infilling of berths and approach channels. The proposed dredging works will restore operational depths to ensure the continued safe functioning of this active port facility.

Four potential methods of dredging are proposed to be utilised across the eight years, including Trailer Suction Hopper Dredger (TSHD), Mechanical Dredging, Water Injection Dredging (WID) and

plough dredging. An indicative 2-week programme is anticipated for each dredge and offshore disposal occasion however this period may be longer based on the volume to be dredged and the plant available.

Offshore disposal will be carried out under a Dumping at Sea Permit (DaS) issued by the Environmental Protection Agency (EPA).

The total dredge volume requiring offshore disposal over the eight-year programme is estimated at 375,000 m³ in-situ volume (equivalent to 562,500 tonnes wet weight), comprising predominantly silts and fine sands. Dredging depths will typically be restored to a minimum level of –3.0 m Chart Datum, consistent with historical maintenance levels required for vessel access within the harbour.

The key activities associated with the project include:

- Pre-and-post dredging bathymetric surveys.
- Mobilisation of dredging plant and support vessels to Wicklow Harbour.
- Establishment of navigational safety controls and coordination with the Harbour Master and RNLI.
- Mechanical or hydraulic excavation of accumulated sediments using either TSHD, backhoe dredger, WID or ploughing.
- Transport and controlled bottom release of dredged material within the licensed boundaries of the disposal site.
- Demobilisation and reinstatement of working areas on completion of each dredging campaign.

Where required, dredging may be undertaken on a 24-hour basis to optimise tidal windows and minimise disruption to harbour users. The overall programme will extend across multiple dredge events over eight years, with the duration of each campaign determined by plant availability, weather and the volume of material to be removed.

Bathymetric surveys have been undertaken in Wicklow harbour for decades to monitor and assess navigation levels. This is the case for every port, harbour and marina in Ireland and internationally. For monitoring annually Wicklow harbour generally undertaken one bathymetric survey a year currently, which takes approximately three hours to complete. However, additional surveys may be required sporadically should concerns be raised about minor isolated areas or to identify debris. When undertaking a dredging campaign, it is a requirement of the EPA that surveys are undertaken before and after dredging, both at the loading area and the disposal area. Period interim surveys during the dredging works to monitor progress, identify high spots and determine completion may also be required. Survey take place using a small vessel or an autonomous unmanned survey vessel. Generally, Wicklow Port uses a multi beam echosounder to attain complete coverage of the seabed levels within the harbour.

All works will be supervised by WCC and undertaken in full compliance with relevant maritime safety, environmental and licensing requirements.

[1.4.1] Disposal Operations

Material dredged by TSHD or backhoe dredger will be transported by sea and disposed of at a single designated offshore disposal site located northeast of Wicklow Harbour. WID and ploughing will not

required transport of material to the proposed offshore disposal site, however, would be classed as ‘disposal at sea’ also.

The offshore disposal site, if permitted, will operate under an EPA Dumping at Sea Permit, issued in accordance with the Dumping at Sea Act 1996 (as amended). Disposal will be undertaken by controlled bottom-release from the hopper dredger or transport barge, strictly within the licensed boundary coordinates specified in the permit.

Disposal operations may be carried out on a 24-hour basis, subject to safe navigation, weather conditions, and implementation of required mitigation measures for marine mammals and other protected species. Disposal activities will be planned to minimise sediment plume dispersion and avoid sensitive periods for marine fauna, where practicable.

No capping, levelling, or seabed preparation is required at the disposal site.

[1.5] Embedded Environmental Controls

The following environmental controls are incorporated into the project design and form part of standard working practice. These measures are embedded, not “additional mitigation”:

- Dredging is restricted to the existing harbour footprint – no capital dredging, seabed deepening, or expansion outside historic limits.
- Only Class 1 (uncontaminated) sediment is proposed for offshore disposal, in accordance with Marine Institute and EPA guidance.
- Offshore disposal will only occur within the licensed boundaries of the offshore disposal site.
- No surface discharge, side-casting, or overspill dumping – disposal is by controlled bottom release only.
- Use of appropriate dredging plant (TSHD, backhoe) to minimise seabed disturbance.
- All dredging and disposal vessels will operate under AIS tracking and maintain VHF contact with the Wicklow Harbour Master.
- Refuelling and waste handling carried out in accordance with MARPOL Annex I & V – no fuelling in open water unless fully controlled.
- Spill prevention measures and certified bunkering procedures in place for all vessels.
- Onboard containment available for all operational oils, lubricants, and waste materials.
- No interaction with intertidal or coastal habitats – all works occur sub tidally and offshore.
- Project design avoids overlap with designated SAC reef habitats.
- No dredging of contaminated sediments and no land-based handling or reprocessing proposed.
- Navigation safety maintained through Harbour Master coordination and Notices to Mariners.

These embedded measures are inherent to the works and apply irrespective of any additional mitigation for Annex IV species, Natura 2000 compliance, or licence conditions. All environmental controls will be implemented under the supervision of the appointed Dredge Supervisor and Harbour Master, with reporting in accordance with EPA DaS Permit requirements.

[1.6] Purpose of this Report

This document comprises a Stage 1 Appropriate Assessment (AA) Screening, prepared in accordance with Article 6(3) of the Habitats Directive and Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended).

The purpose of this report is to:

- Assess whether the proposed maintenance dredging works, disposal operations and associated surveying (bathymetry), individually or in-combination with other plans or projects, are likely to have a significant effect on any European site in view of its Conservation Objectives.
- Determine whether Stage 2 Appropriate Assessment is required.
- Provide a screening assessment of the proposed works.

[1.7] Roles and Qualifications

Table 1 provides a summary of the staff involved in the reporting.

Table 1: Ayesa Roles and Qualifications

Title	Name	Role	Qualifications	Years' experience
Graduate Ecologist	John Tobin	Report Preparation	BSc (Environmental Science & Ecology)	1
Principal Environmental Consultant	Jackelyn Wren	Report Review	BA (Hons) Geography	10
Environment Director	Barry Sheridan	Report Review	MA(Hons) in Environmental Sciences, Higher Diploma (Hons) in Business and Information Technology, Higher Diploma (Hons) in Environmental Engineering, Higher Diploma (Hons) in Acoustics & Noise Control.	20+

[2] Legislative Background and Guidance Documents

[2.1] International Legislation

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as the "Habitats Directive", provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/ECC) as codified by Directive 2009/147/EC.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to have a significant effect on, or to adversely affect the integrity of, Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for AA as follows:

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

Article 6(4) states:

"If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 sites is protected. It shall inform the Commission of the compensatory measures adopted."

[2.2] The Requirements for AA Screening

Section 42(1) of S.I. No. 477 of 2011, the European Communities (Birds and Natural Habitats) Regulations 2011 states:

"*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*."

Where the screening process cannot exclude the possibility that a plan or project, individually or in combination with other plans or projects, could have a significant effect on a Natura 2000 site, there is a requirement under Article 42(9) of these Regulations for the preparation of an NIS to inform the AA process.

[2.3] Screening Determination

In accordance with Regulation 42(7) of the Birds and Natural Habitats Regulations 2011 (S.I. No. 477/2011), as amended:

"The public authority shall determine that an Appropriate Assessment of a plan or project is not required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it can be excluded on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site."

Further, under Regulation 42(8):

"(a)Where, in relation to a plan or project for which an application for consent has been received, a public authority makes a determination that an Appropriate Assessment is required, the public authority shall give notice of the determination, including reasons for the determination of the public authority, to the following—

i. the applicant,

ii. if appropriate, any person who made submissions or observations in relation to the application to the public authority, or

iii. if appropriate, any party to an appeal or referral.

(b) Where a public authority has determined that an Appropriate Assessment is required in respect of a proposed development it may direct in the notice issued under subparagraph (a) that a Natura Impact Statement is required."

[2.4] National Legislation

The Habitats Directive has been transposed into Irish law by Part XAB of the Planning and Development Act, 2000-2015 and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011), as amended.

[2.5] Guidance Documents on Appropriate Assessment

Where an AA is necessary, the AA requirements of Article 6(3) of the Habitats Directive 92/43/EEC (European Communities 2001) follow a sequential approach as outlined in the following guidance documents:

- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities. Department of Environment, Heritage, and Local Government, 2010 revision.
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 and PSSP 2/10.
- Guidance document on assessment of plans and projects in relation to Natura 2000 sites (2022) (European Commission Environment Directorate-General, 2022).
- Managing Natura 2000 Sites: The provisions of Article 6 of the Habitat's Directive 92/43/EEC Commission Notice (European Commission Environment Directorate-General, 2018).

- Guidelines for Good Practice Appropriate Assessment of Plans Under Article 6(3) Habitats Directive (International Workshop on Assessment of Plans under the Habitats Directive, 2011).
- The Department of the Environment, Heritage, and Local Government guidance “Appropriate Assessment of Plans and Projects in Ireland – guidance for Planning Authorities, 2009” and the European Commission (2001) guidelines “Assessment of plans and projects significantly affecting Natura 2000 sites - Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC”.
- Appropriate Assessment Screening for Development Management (OPR, March 2021).

[3] Overview of the Methodology for Appropriate Assessment

[3.1] Overview of the stages of Appropriate Assessment

The AA process is a sequential process consisting of four potential stages. If, at the first stage in the process, it is determined that there will be no significant effect on a Natura 2000 site, the process is effectively completed. The four stages are as follows:

- Stage 1 – Screening of the proposed plan or project for AA (current stage);
- Stage 2 – An AA of the proposed plan or project.
- Stage 3 – Assessment of alternative solutions; and
- Stage 4 – Imperative Reasons of Overriding Public Interest (IROPI) / Derogation.

Stage 1 relates to Regulation 42 of the Birds and Natural Habitats Regulations; Stage 2 relates to Article 6(3) of the Habitats Directive; Stages 3 and 4 relate to Article 6(4) of the Habitats Directive.

[3.1.1] Stage 1: Screening

The aim of screening is to assess if the plan or project is directly connected with or necessary to the management of Natura 2000 site(s) or, in view of best scientific knowledge, if the plan or project, individually or in combination with other plans or projects, is likely to have a significant effect on a Natura 2000 site. This is done by examining the proposed plan or project and the conservation objectives of any Natura 2000 sites that might potentially be affected. If screening determines that there are likely to be significant effects, or the significance of effects are uncertain or unknown, then it will be recommended that a project is brought forward to full AA.

[3.1.2] Stage 2: Appropriate Assessment

The aim of Stage 2 of the AA process is to identify any adverse impacts that the plan or project might have on the integrity of relevant Natura 2000 sites. As part of the assessment, a key consideration is 'in combination' effects with other plans or projects. Where adverse impacts are identified, mitigation measures can be proposed that would avoid, reduce or remedy any such negative impacts and the plan or project should then be amended accordingly, thereby avoiding the need to progress to Stage 3.

[3.1.3] Stage 3: Assessment of Alternative solutions

If it is not possible during Stage 2 to reduce impacts to acceptable, non-significant levels by avoidance and/or mitigation, Stage 3 of the process must be undertaken which is to objectively assess whether alternative solutions exist by which the objectives of the plan or project can be achieved. Explicitly, this means alternative solutions that do not have significant negative impacts on the integrity of a Natura 2000 site. It should also be noted that EU guidance on this stage of the process states that, *"other assessment criteria, such as economic criteria, cannot be seen as overruling ecological criteria"* (EC, 2001). In other words, if alternative solutions exist that do not have negative impacts on Natura 2000 sites, they should be adopted regardless of economic considerations.

[3.1.4] Stage 4: Imperative Reasons of Overriding Public Interest (IROPI)/Derogation

This stage of the AA process is undertaken when it has been determined that negative impacts on the integrity of a Natura 2000 site will result from a plan or project, but that no alternatives exist. At this stage of the AA process, it is the characteristics of the plan or project itself that will determine whether the Competent Authority can allow the plan or project to progress. This is the determination of 'over-riding public interest'. It is important to note that, in the case of Natura 2000 sites that include in their qualifying features 'priority' habitats or species, as defined in Annex I and II of the Directive, the demonstration of 'overriding public interest' is not sufficient and it must be demonstrated that the plan or project is necessary for 'human health or safety considerations'. Where plans or projects meet these criteria, they can be allowed, provided adequate compensatory measures are proposed. Stage 4 of the process defines and describes these compensation measures.

[4] Detailed Methodology for Stage 1: AA Screening

[4.1] Scope

The scope of this AA Screening report is to assess, based on the characteristics of the project and the best available scientific information, whether it could give rise to any direct or indirect likely significant effects on Natura 2000 sites, thereby determining the need for progression to Stage 2 AA.

[4.2] Zone of Influence

The potential Zone of Influence (ZoI) in the context of AA refers to the geographical area over which the proposed maintenance dredging and offshore disposal activities at Wicklow Harbour may have significant effects on a Natura 2000 site, including its qualifying interests and conservation objectives.

The ZoI extends beyond the immediate footprint of the dredging and disposal area to include surrounding marine habitats and ecosystems that could be directly or indirectly affected by temporary construction activities, operational processes, or associated vessel movements. This area encompasses locations where species may be disturbed, habitats may be altered, or ecological connectivity may be impacted, particularly via marine hydrodynamic or acoustic pathways linking the harbour or offshore disposal ground to wider coastal waters.

Defining the ZoI is essential to ensure a comprehensive assessment of all potential significant effects on nearby Natura 2000 sites, taking account of the scale and nature of the proposed works, the sensitivity of potential receptors, and the physical pathways through which effects could occur.

To ensure a focused and evidence-based approach, the ZoI for the current project is determined using the Source–Pathway–Receptor (S–P–R) model as described in OPR Practice Note PN01 – Appropriate Assessment Screening for Development Management (2021) and the OPW Environmental Guidance for Drainage Maintenance and Construction (2019).
This model provides a logical framework for identifying only credible ecological linkages, rather than applying arbitrary precautionary distances (e.g., 15 km buffers).

The **S–P–R model** evaluates potential impacts by:

- identifying the **source** of any potential effect arising from the project.
- defining the **pathway** through which such an effect could be transmitted; and
- determining the **receptor** that could be affected (i.e., a qualifying interest or habitat feature of a designated European site).

Table 2: Overview of the Source-Pathway-Receptor (S-P-R) Model.

Source	Pathway	Receptor
The source of environmental harm can be determined by identifying characteristics of the proposed development such as its nature, size, and location, and the type(s) of impacts that may arise. These	The pathway through which a source of impact is transmitted to an ecological receptor can be determined by identifying the means by which an effect of project-related activity could impact the receptor. These pathways	The potential receptor of adverse impacts is defined as the element of the receiving environment that has the potential to be impacted and can be determined by establishing the location, nature, and sensitivities of the

impacts may be direct or indirect, examples of which are listed below. ***Direct impacts*** • Direct emissions (water, air, noise, or light). • Loss of habitat (including breeding or foraging habitat)). ***Indirect impacts*** • Loss of breeding or foraging habitat outside the designated site. • Effects on a non-designated habitat or species within the designated site that is ecologically linked to the conservation objectives. • Loss of breeding or foraging habitat for prey of species for which the site is designated. • Barriers to movement (e.g., aquatic species, otters, bats, birds). • Collision risk.	may be direct or indirect, examples of which are listed below. ***Direct pathways*** • Proximity (i.e., proposed development located within or immediately adjacent to a designated site). • Waterbodies (rivers/streams, marine, lakes, groundwater). • Air (for both emissions (e.g., dust) and noise). ***Indirect pathways*** • Disruption to migratory paths (e.g., for birds, aquatic species, bats). • 'Sightlines' where noisy or intrusive activities may result in disturbance to timid species.	receptor, and considering the ecological conditions underpinning its survival. Examples include: • Freshwater pearl mussel (*Margaritifera margaritifera*) high sensitivity to siltation in water. • Lesser horseshoe bat sensitivity to noise and light. • Turlough sensitivity to changes in groundwater levels.

Source: Table contents adapted from OPR Practice Note PN01 – Appropriate Assessment Screening for Development Management (OPR, 2021).

For this project, the ZoI reflects the spatial extent over which potential effects could realistically occur through marine hydrodynamic or acoustic pathways. The works are confined to established, previously dredged and licensed areas, and the following impact mechanisms are considered relevant:

- **Sediment Dispersion pathway:** Temporary dispersion of fine suspended sediments during dredging and offshore disposal, limited by local tidal and current dynamics.
- **Acoustic pathway:** Underwater and airborne noise generated by dredging, support and survey vessels, potentially audible to marine mammals or foraging seabirds.
- **Disturbance pathway:** Short-term disturbance to mobile fauna (e.g. birds, seals, fish) using nearby open waters.

There are no terrestrial, groundwater, or aerial linkages associated with the project. The proposed works do not generate surface water discharges, air emissions, or land-based disturbance.

Accordingly, the ZoI for this AA Screening encompasses:

- The Wicklow Harbour basin and entrance channel; and
- The licensed offshore disposal site located approximately 9 km northeast of Wicklow Harbour, including surrounding open waters that could experience temporary sediment dispersion or underwater noise propagation.

While many effects arising from small- to medium-scale developments tends to be localised, the extent of potential impacts is ultimately determined by the nature and scale of the proposed project, the sensitivity of ecological receptors, and the characteristics of the surrounding environment. Accordingly, the ZoI for each impact type is defined on a case-by-case basis, informed by the S-P-R model.

The ZoI for the proposed works has been defined with reference to the S–P–R model and the nature of the activities involved. As the project comprises marine-based maintenance dredging and licensed offshore disposal, the ZoI is limited to the marine environment, specifically the water column, seabed, and associated water quality receptors that are hydrodynamically or acoustically connected to Wicklow Harbour and the offshore disposal site.

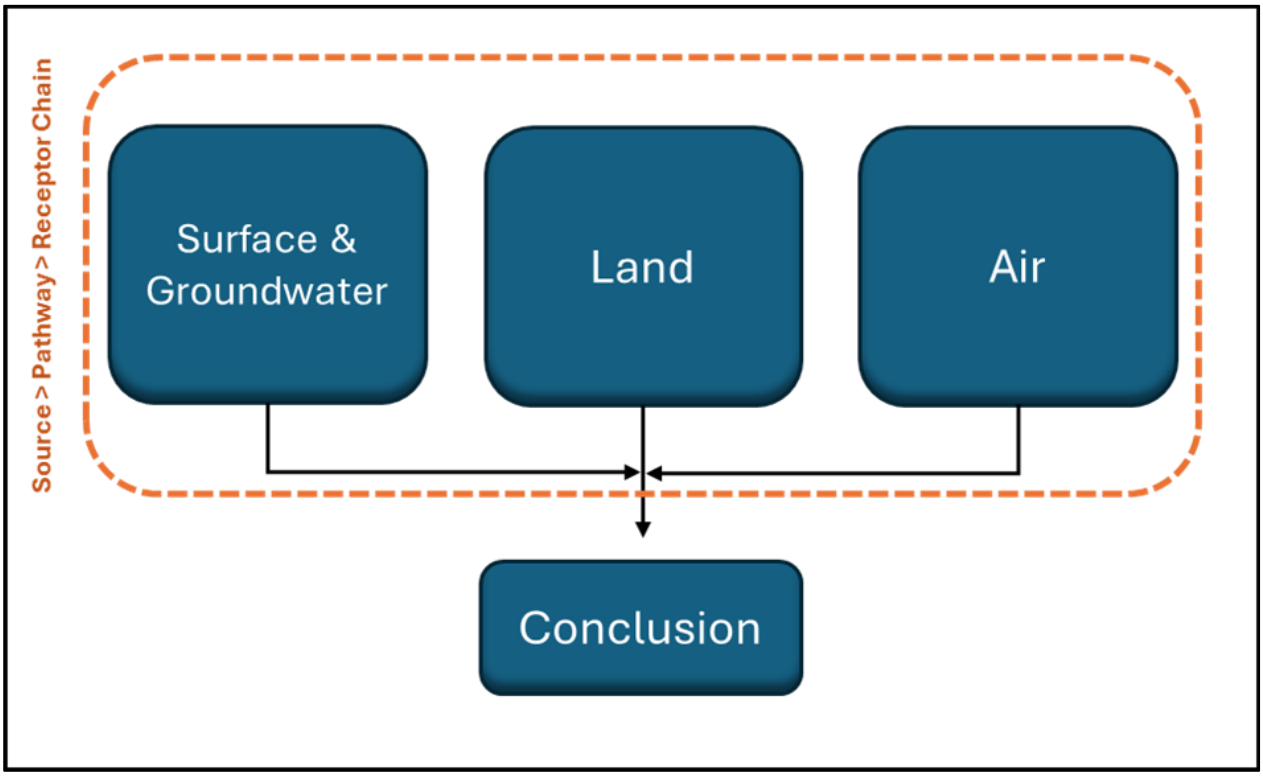

Image 2: Assessment Process

[4.3] Likely Significant Effects

In the context of AA, a Natura 2000 site is at risk of likely significant effects only if a clear S-P-R link exists between the proposed development and the site. This pathway is crucial; if no such pathway exists, the development can be confidently screened out as unlikely to have significant effects on the site. Similarly, if the QIs/SCIs of the site are not susceptible to impacts from the development, either directly or indirectly, likely significant effects can also be ruled out.

The core of the 'likely significant effect' test in screening is to determine whether there is a risk or possibility of significant effects on Natura 2000 sites that cannot be excluded based on objective information. This involves assessing whether the development's effects would undermine the conservation objectives of the site, either individually or in combination with other plans and projects. The significance of potential impacts is evaluated based on the ecological characteristics of the qualifying species or habitats, including their structure, function, conservation status, and sensitivity to change, as well as the nature, scale, duration, and likelihood of the impacts. The higher the sensitivity of the species or habitat and the greater the magnitude of the impact, the more significant the potential effect. If the assessment becomes overly complex, indicating uncertainty, it suggests that a full AA is necessary. Importantly, conclusions regarding the absence of likely significant effects

must be made without the implementation of mitigation measures other than standardised embedded measures that are integral to a project's design (OPR, 2021).

In assessing the likelihood of significant effects, the logic is as follows:

- The conditions necessary for a significant effect are considered, and
- The likelihood of that effect is assessed, considering the process/emission magnitude, duration, timing and frequency, as well as the connectivity with the proposed project site and the sensitivity of the QI to the process/emission in question.

The following definitions are relevant during the screening assessment:

- Likely significant effect*:* Where a plan or project is likely to undermine any of the site's conservation objectives.
- Possible significant effect: Where a plan or project has an indicated potential to undermine any of the site's conservation objectives, but where doubt exists about the risk of a significant effect in the current context. Nevertheless, where doubt exists about the risk of a significant effect, use of the precautionary principle requires this effect to be considered appropriately within the Article 6 (EC, 2018) assessment process.

[4.4] Screening Report

This AA screening report has been completed in the following logical order:

- Definition of the ZoI for the proposed works.
- Identification of the Natura 2000 sites that are situated (in their entirety or partially) within the ZoI of the proposed works.
- Identification of the most up to date QIs and SCIs for each Natura 2000 site occurring either wholly or partially within the ZoI;
- Identification of the environmental conditions that maintain the QIs/SCIs at the desired favourable conservation status target.
- Identification of the threats/impacts, actual or potential, that could negatively impact the environmental conditions of the QIs/SCIs within the Natura 2000 sites.
- Highlighting the activities of the proposed works that could give rise to significant negative impacts; and
- Identification of other plans or projects, for which in-combination impacts would likely have significant effects.

The following issues have been considered:

- Information relating to the ecology of the Natura 2000 site.
- The status of QIs/SCIs for which the relevant Natura 2000 site(s) has been designated, and the relevant conservation status and objectives for these QIs/SCIs.
- The key structural and functional relationships maintaining the integrity of the Natura 2000 site(s);

- The status of other annexed habitats and species occurring in proximity to the site of the proposed development; and
- The scale and nature of the project in relation to the relevant Natura 2000 site(s).

[4.4.1] Desk Study

A desktop review was undertaken to compile baseline ecological information for the study area and to evaluate the potential presence of, or connectivity to, any Qualifying Interests (QIs) or Special Conservation Interests (SCIs) of Natura 2000 sites. The following sources were consulted as part of this review:

- **Project information:** Dredging and disposal methodology and survey information provided by WCC. Sediment Dispersion Modelling completed for the disposal operations (Tetra Tech, 2025). Previous reports previously prepared in support of the DaS permit.
- **NPWS resources:** Site Synopses, Conservation Objectives, and boundary shapefiles for all relevant SACs and SPAs.
- **EPA Catchments.ie:** Waterbody status data for the Leitrim River Estuary, Wicklow Harbour, and adjacent coastal waterbodies to assess potential hydrological connectivity.
- **Geological Survey Ireland (GSI):** Coastal geology, seabed sediment, and groundwater vulnerability datasets confirming the absence of karst or freshwater connectivity with the marine project area.
- **Planning Records:** WCC online planning portal reviewed to identify any other plans or projects with potential to act in combination with the proposed dredging and disposal works.

[4.4.1.1] Survey/Data Limitations/Constraints

The assessment is based on a comprehensive desktop review. The following minor limitation is noted:

- Marine mammal observations: The assessment of potential effects on marine mammals is based on NPWS datasets, the Irish Whale and Dolphin Group (IWDG) sighting records, and published literature for the wider Irish Sea. While no dedicated vantage point surveys were completed, this approach is considered robust given the short-term, low-impact nature of the proposed maintenance dredging and the implementation of NPWS (2014) Marine Mammal Observer Guidance.

Overall, this limitation does not affect the validity of the screening conclusion. There is sufficient baseline information to determine the likelihood of significant effects on European sites in view of their Conservation Objectives.

[4.5] Cumulative and In-Combination Effects

It is a requirement of AA that the cumulative or in-combination effects of the proposed development together with other plans or projects are assessed. Cumulative effects can be defined as a project/plan/programme likely to have a significant effect thereon, either individually or in combination, with other plans or projects.

[4.5.1] Methodology

In accordance with EC Article 6 Guidance Document (EC, 2018), to ensure all impacts upon the site are identified, including those direct and indirect impacts that are a result of cumulative impacts, the following steps were completed:

- Identify all projects/plans that might act in combination: Identify all possible sources of effects from the project or plan under consideration, together with all other sources in the existing environment and any other effects likely to arise from other proposed projects or plans.
- Impacts identification: Identify the types of impacts that are likely to affect aspects of the structure and functions of the site vulnerable to change.
- Define the boundaries for assessment: Define boundaries for examination of cumulative effects that will be different for different types of impact and may include remote locations.
- Pathway identification: Identify potential cumulative pathways (e.g. via water, air etc.; accumulations of effects in time or space).
- Prediction: Prediction of magnitude/extent of identified likely cumulative effects.
- Assessment: Comment on whether the potential cumulative impacts are likely to be significant.

[5] Preliminary Screening Assessment of Natura 2000 Sites

[5.1] Baseline Data Sources

No ecological field surveys were undertaken for this AA Screening. The proposed works are confined to the existing operational footprint of Wicklow Harbour and the proposed offshore disposal site. Wicklow Harbour is a highly modified environment that has been subject to previous ecological appraisal and routine maintenance dredging. In contrast, the offshore disposal site is located within the open marine environment and is a newly proposed disposal site.

Baseline information used to inform this assessment was compiled from existing and verified data sources, including:

- the Environmental Protection Agency (EPA) and Dumping at Sea permit records.
- the National Parks and Wildlife Service (NPWS) datasets on Natura 2000 sites and qualifying interests.
- previous Wicklow Harbour maintenance dredging reports; and
- OPW (2019) Environmental Guidance for Drainage Maintenance and Construction.

This information was sufficient to characterise existing site conditions and to identify all potential ecological pathways relevant to the assessment of likely significant effects on nearby European sites.

[5.2] Natura 2000 sites within ZoI

[5.2.1] Offshore Disposal Site

The proposed offshore disposal site is located in open coastal waters approximately 9 km Northeast of Wicklow Harbour and lies partly within the boundary of The Murrough SPA (004186). The site therefore overlaps with a designated European site supporting wintering and passage waterbirds that utilise adjacent coastal waters for foraging.

Potential impact pathways are limited to hydrodynamic dispersion of suspended sediments, temporary increases in turbidity, underwater and airborne noise from vessels, and short-term behavioural disturbance of mobile qualifying species.

Assessment of these pathways has been undertaken using the S–P–R framework, considering the potential for interaction between the disposal activity and qualifying interests of the relevant European sites.

Based on these pathways, the following Natura 2000 sites were identified as having a potential connection to the proposed works:

- **Wicklow Reef SAC (002274)** – c. 8 km southeast (straight-line distance); potential indirect hydrodynamic linkage due to proximity to the offshore disposal site and shared coastal circulation patterns.
- **The Murrough Wetlands SAC (002249)** – c. 1.2 km west; potential for temporary increases in suspended sediment and turbidity via offshore sediment plume dispersion within the same hydrodynamic unit.

- **The Murrough SPA (004186)** – disposal ground lies within the SPA's marine waters (direct spatial overlap); potential visual/noise disturbance from vessel activity and short-term turbidity affecting wintering/passage waterbirds using adjacent coastal waters and intertidal areas.
- **Wicklow Head SPA (004127) –** c. 9.5 km south of harbour mouth; potential for localised disturbance to breeding seabirds (kittiwake) from vessel movement and construction noise.

All other Natura 2000 sites within the wider search area were screened out due to the absence of a viable source–pathway–receptor linkage (e.g. no hydrodynamic connection, excessive distance, or lack of functional ecological interaction).

Considering the conservation objectives of the above sites and the nature of the proposed works, it is deemed that only sediment dispersion and temporary vessel noise represent potential impact pathways. The Natura 2000 sites outlined above have therefore been selected for further assessment. Potential impacts are discussed in detail in Section 6.

[5.2.1.1] Other Sites Considered and Scoped Out

Three additional SACs were considered on the basis of their proximity to the project area, but were screened out at this stage due to the absence of any credible source–pathway–receptor linkage, as determined by the S-P-R model:

- **Buckroney–Brittas Dunes & Fen SAC (000729)** – c. 18 km south; terrestrial dune and fen habitats with no marine pathway.
- **Magherabeg Dunes SAC (001766)** – c. 14 km south; dune system landward of the active shoreline; no offshore sediment or disturbance pathway.
- **Bray Head SAC (000714)** – c. 11km north: coastal cliffs and terrestrial habitats; no marine impact pathway.

As no plausible impact pathways were identified for these sites, they are not considered further in this screening assessment.

[5.2.1.2] Description of Relevant Natura 2000 Sites

Table 3: Natura 2000 sites within a 20 km ZoI of the proposed offshore disposal site northeast of Wicklow Harbour

Site Name and Code	Distance from Study Area	Qualifying Interests	Potential Pathway(s) to Receptors
Wicklow Reef SAC (002274)	8 km SE (offshore)	Reefs [1170]	Indirect hydrodynamic pathway via coastal currents, with potential short-term dispersion of suspended sediment during offshore disposal. Although the disposal site is 8 km from the SAC, sediment dispersion modelling shows that the sediment plume can extend in the direction of the SAC, albeit at very low concentrations. Temporary, localised increases in suspended sediment and turbidity could therefore theoretically interact with reef communities through hydrodynamic transport

The Murrough Wetlands SAC (002249)	1.2 km W	Coastal habitats including drift lines [1210], stony banks [1220], mudflats and saltmarsh [1310, 1330, 1410], dunes [2130], alkaline fen [7230], and *Vertigo angustior* [1014]	Potential temporary increases in suspended sediment and turbidity via indirect offshore dispersion. Although the SAC is located 1.2 km west of the disposal site, dispersion modelling indicates that low-level suspended sediment may be transported shoreward on the same coastal hydrodynamic unit. Site retained on a precautionary basis due to the potential for a weak tidal-current linkage and the sensitivity of coastal and intertidal qualifying habitats.
The Murrough SPA (004186)	Within SPA	• Wintering and passage waterbirds including Greylag Goose, Red-throated Diver, Little Grebe, Wigeon, and Black-headed Gull	Visual and noise disturbance from vessel movements and disposal activity, as the offshore disposal site lies within The Murrough SPA. Temporary behavioural disturbance to wintering and passage waterbirds may occur during active disposal operations. No long-term disturbance pathway is anticipated, and any effects would be short-term and highly localised. Site retained on a precautionary basis.
Wicklow Head SPA (004127)	c. 9.5 km south of Wicklow Harbour	Breeding seabirds, including Kittiwake (*Rissa tridactyla*)	The SPA supports a breeding colony of Kittiwake on coastal cliffs c. 9–10 km south of the disposal site. No direct habitat overlap occurs, and the distance is well beyond the range at which vessel activity associated with offshore disposal would give rise to meaningful noise or visual disturbance. Site retained for screening on a precautionary basis only, due to the presence of breeding seabirds within the wider coastal area.

[5.2.2] Wicklow Harbour (Dredging Area)

The proposed works do not lie within or immediately adjacent to any Natura 2000 sites. However, the S-P-R model was applied to identify potential source–pathway–receptor linkages between the study area and nearby European sites. Given the localised nature of the works within an existing dredged harbour basin, no capital dredging is required, and the spatial extent of potential impact pathways is expected to be limited.

Based on these pathways, the following Natura 2000 sites were identified as having a potential connection to the proposed works:

- **Wicklow Reef SAC (002274) –** c. 3 km east (straight-line distance); potential indirect hydrodynamic linkage due to proximity to the offshore disposal site and shared coastal circulation patterns.
- **The Murrough Wetlands SAC (002249)** – c. 2 km north; potential for temporary increases in suspended sediment and turbidity via offshore sediment plume dispersion within the same hydrodynamic unit.

- **The Murrough SPA (004186)** – c. 0.7km from harbour, potential visual/noise disturbance from vessel activity and short-term turbidity affecting wintering/passage waterbirds using adjacent coastal waters and intertidal areas.
- **Wicklow Head SPA (004127) –** c. 1 km south of harbour mouth; potential for localised disturbance to breeding seabirds (kittiwake) from vessel movement and construction noise.

All other Natura 2000 sites within the wider search area were screened out due to the absence of a viable source–pathway–receptor linkage (e.g. no hydrodynamic connection, excessive distance, or lack of functional ecological interaction).

Considering the conservation objectives of the above sites and the nature of the proposed works, it is deemed that only sediment dispersion and temporary vessel noise represent potential impact pathways. The Natura 2000 sites outlined above have therefore been selected for further assessment. Potential impacts are discussed in detail in Section [6].

[5.2.2.1] Other Sites Considered and Scoped Out

Three additional SACs were considered on the basis of their proximity to the project area, but were screened out at this stage due to the absence of any credible linkage, as determined by the S-P-R model:

- **Buckroney–Brittas Dunes & Fen SAC (000729) –** c. 11.2 km south; terrestrial dune and fen habitats with no marine pathway.
- **Magherabeg Dunes SAC (001766) –** c. 10.9 km south; dune system landward of the active shoreline; no offshore sediment or disturbance pathway.
- **Kilpatrick Sandhills SAC (001742) –** c. 12.6 km south; no functional connectivity with offshore plume.
- **Bray Head SAC (000714) –** coastal cliffs and terrestrial habitats; no marine impact pathway.

As no plausible impact pathways were identified for these sites, they are not considered further in this screening assessment.

[5.2.2.2] Description of Relevant Natura 2000 Sites

Table 4: Natura 2000 sites within a 20 km ZoI of the proposed offshore disposal site northeast of Wicklow Harbour

Site Name and Code	Distance from Study Area	Qualifying Interests	Potential Pathway(s) to Receptors
Wicklow Reef SAC (002274)	3. km E	• Reefs [1170]	The SAC comprises offshore rocky reef habitats located south-west of Wicklow Harbour within an exposed coastal setting influenced by strong tidal currents. A potential indirect hydrodynamic linkage may occur during maintenance dredging; whereby tidally driven dispersion of fine suspended sediment could reach offshore waters supporting reef habitat. Any such interaction would be temporary and highly diluted. Site retained for screening on a precautionary basis.

The Murrough SAC (002249)	2 km N	• Annual vegetation of drift lines [1210] • Perennial vegetation of stony banks [1220] • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • Mediterranean salt meadows (Juncetalia maritimi) [1410] • Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210] • Alkaline fens [7230]	The Murrough SAC lies north of Wicklow Harbour along the open coastal fringe. A potential indirect hydrodynamic linkage may occur during maintenance dredging, whereby fine suspended sediment could be entrained on the ebb tide and transported southward along the same coastal hydrodynamic unit. Any interaction would be short-term and highly diluted. No direct habitat overlap occurs. Site retained for screening on a precautionary basis.
The Murrough SPA (004186)	0.7 km N	• Red-throated Diver (Gavia stellata) [A001] • Greylag Goose (Anser anser) [A043] • Light-bellied Brent Goose (Branta bernicla hrota) [A046] • Teal (Anas crecca) [A052] • Black-headed Gull (Chroicocephalus ridibundus) [A179] • Herring Gull (Larus argentatus) [A184] • Wigeon (Mareca penelope) [A855] • Little Tern (Sternula albifrons) [A885] • Wetland and Waterbirds [A999]	The SPA lies north of Wicklow Harbour and includes intertidal and nearshore marine habitats used by foraging and roosting waterbirds. Potential disturbance pathways include noise and visual disturbance arising from dredging and vessel traffic, which may temporarily affect birds using adjacent nearshore waters. Hydrodynamic connectivity could also occur through short-lived turbidity or sediment plumes, though any such effects are expected to be minor and temporary.
Wicklow Head SPA (004127)	1 km S	• Kittiwake (Rissa tridactyla) [A188]	The SPA supports a colony of breeding Kittiwake on coastal cliffs south of Wicklow Harbour. While the site is located outside the immediate harbour environment, acoustic and visual disturbance pathways may occur indirectly through vessel noise and dredging activity within the general coastal area. Breeding seabirds foraging offshore could experience temporary disturbance or displacement due to increased vessel movement during dredging campaigns.

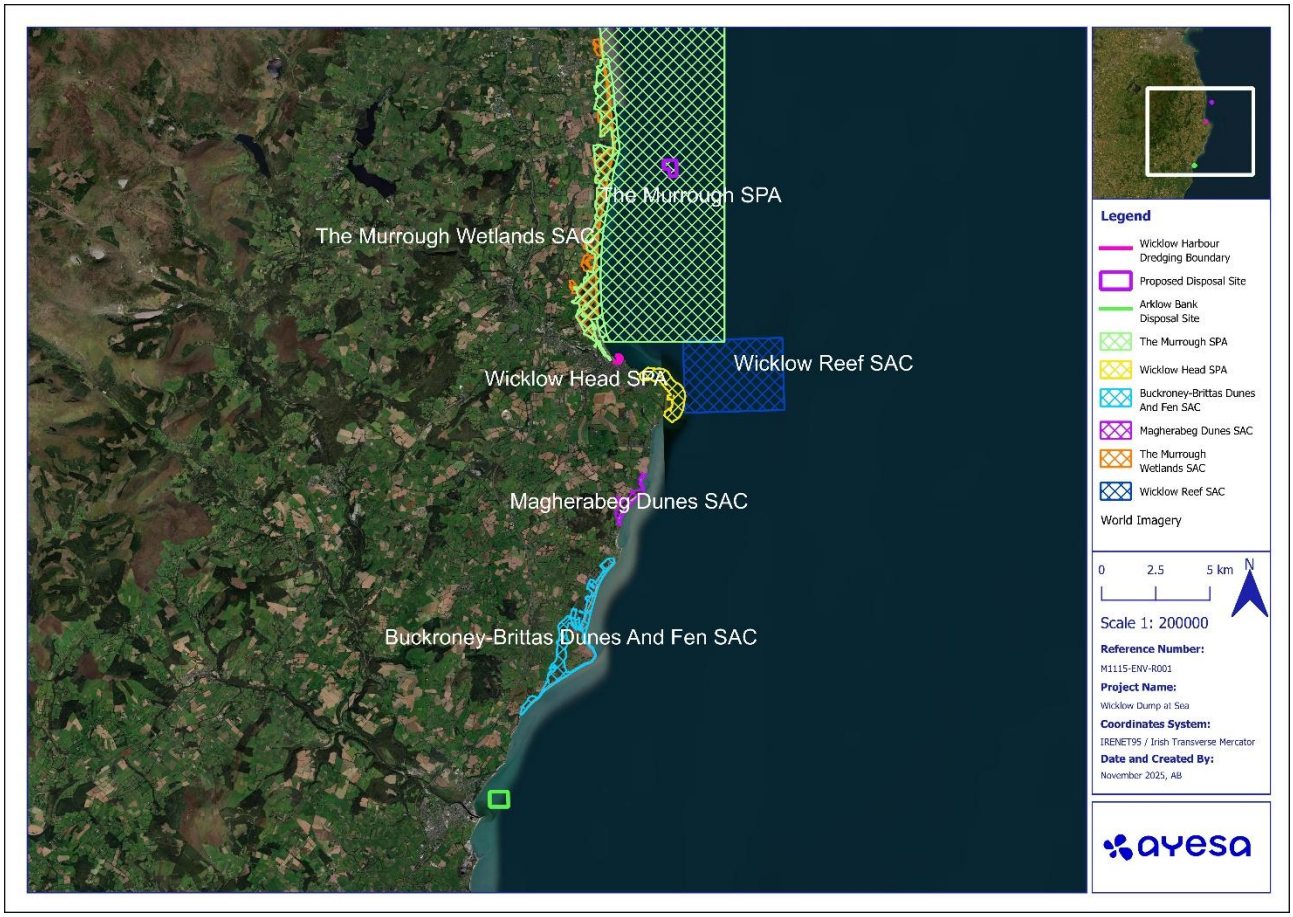

Image 3: Map displaying Natura 2000 sites in the vicinity of the Harbour dredging and the offshore disposal site.

[6] Assessment of Likely Significant Effects

[6.1] Potential Effects to Natura 2000 Sites

[6.1.1] Transport of Waterborne Contaminants

Dredging and offshore disposal activities have the potential to generate short-term releases of waterborne material and associated contaminants into the marine environment. The main potential pathways for such effects include:

- Suspended sediment plumes generated during dredging and disposal operations, which may disperse within the surrounding water column and settle on adjacent seabed habitats.
- Accidental release of hydrocarbons such as marine diesel, lubricants, or hydraulic oils from vessels or plant, which could enter the marine environment through minor leaks or spills.
- Release of debris or waste material, including ropes, plastics, or other solid fragments if not adequately contained during dredging or disposal operations.

These processes could result in temporary increases in suspended solids and turbidity, with potential consequences for:

- Benthic habitats and associated infaunal communities through smothering or reduced light penetration;
- Water quality, particularly through localised increases in fine sediment or contaminant levels; and
- Biological receptors, including fish, shellfish, and foraging seabirds or marine mammals that rely on visual feeding or clear-water conditions.

Potential sources of these effects include both the Wicklow Harbour dredging area and the offshore disposal site, with dispersion pathways influenced by local tidal currents, wave action, and sediment composition.

The extent and persistence of these effects will depend on factors such as sediment type, disposal rate, hydrodynamic conditions, and prevailing weather during operations.

The likely significance of these effects for Natura 2000 sites is considered further in the screening assessment table.

[6.1.2] Sediment Transport

Sediment mobilisation will occur during the release of dredged material from the hopper dredger or barge at the offshore disposal site, and from dredging operations at Wicklow Harbour (TSHD, mechanical, WID or ploughing). The principal potential effect is the generation of short-term suspended sediment plumes in the water column, followed by dilution and settlement under prevailing tidal currents.

The following site-specific factors influence the nature and extent of sediment transport:

- **Controlled release method** – Dredged material will be discharged at depth through the hopper doors, generating a descending sediment plume within the water column.
- **Sediment composition** – The material has been classified as Class 1 (uncontaminated) silty sand with a low fine fraction, which informs the characteristics of plume formation and settlement behaviour.
- **Hydrodynamic conditions** – Tidal currents along the Wicklow coast influence offshore advection and dispersion of suspended sediments, affecting the spatial distribution of plumes.
- **Deposition patterns** – Sediment dispersion modelling for the disposal operations (Tetra Tech, 2025) indicates that the highest suspended sediment concentrations occur only within and immediately adjacent to the disposal site, where maximum total SSC during releases did not generally exceed 3 mg/l. Beyond this zone, the modelled plume becomes rapidly diluted, with concentrations falling to less than 0.5 mg/l within approximately 10 km of the disposal site and fully dispersing into background levels within five days after the final disposal event. Deposition on the seabed is largely confined to the disposal footprint, where a change in bed thickness (not exceeding ~25 mm) is predicted. Outside the footprint, the modelling shows little to no measurable change in bed thickness, indicating that far-field deposition is minimal to negligible. WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that Suspended Sediment Concentration (SSC) reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour, where the maximum SSC values were observed.

Potential ecological effects associated with sediment transport may include:

- **Smothering of benthic organisms** through deposition of sediment on the seabed.
- **Gill irritation or behavioural responses in fish** due to elevated suspended sediment concentrations.
- **Temporary reductions in light penetration**, potentially affecting primary productivity or visual feeding.
- **Interactions with foraging seabirds and marine mammals**, particularly species that rely on water clarity for prey detection.

The potential for such effects on Natura 2000 sites is considered further in the screening assessment table.

[6.1.3] Nutrient Enrichment

The disposal of dredged material at sea has the potential to release naturally occurring organic matter and fine sediments into the water column, which may temporarily alter local nutrient levels or water quality conditions. Although the material is classified as *Class 1 (uncontaminated)*, trace amounts of organic carbon and naturally bound nutrients (e.g. nitrogen, phosphorus) may be present.

Any nutrient release would occur locally at the point of disposal and would be rapidly diluted and dispersed by tidal currents. As the material originates from a marine environment rather than terrestrial or wastewater sources, no artificial nutrient input or enrichment is anticipated. However, short-term increases in suspended organic fines could theoretically interact with benthic or pelagic receptors in the wider marine area, depending on dispersion extent.

Potential ecological effects may include:

- Temporary increases in background nutrient concentrations.
- Localised stimulation of phytoplankton productivity; and
- Indirect effects on benthic oxygen demand during organic particle settlement.

The relevance and magnitude of these potential effects for nearby Natura 2000 sites depend on the location of qualifying habitats and species relative to the predicted sediment plume and nutrient dispersion field.

The potential for nutrient enrichment to give rise to significant effects on Natura 2000 sites is considered further in the screening assessment.

[6.1.4] Hydrocarbon Transport

A potential source of hydrocarbon contamination during the dredging, disposal and surveying (bathymetry) activities is accidental spillage or leakage of marine diesel, lubricants, or hydraulic oils associated with dredging or disposal vessel operations. Such releases could occur during refuelling, equipment malfunction, or minor operational losses.

Hydrocarbons, being less dense than seawater, can form surface films or sheens and spread laterally under wind or tidal action if not contained. These may temporarily interact with receptors in the water column, intertidal zone, or at the sea surface. Potential ecological effects include:

- **Reduced oxygen transfer** at the water surface,
- **Localised toxicity** to plankton, fish eggs, or larvae, and
- **Smothering or feather fouling** of surface-foraging seabirds.

Any spilled hydrocarbons would disperse rapidly under wave and tidal movement, reducing persistence and spatial extent. Nevertheless, short-term exposure risks cannot be entirely excluded in the event of a release.

While the probability of a spill is considered low, adherence to standard maritime controls, including MARPOL requirements, certified bunkering procedures, onboard spill kits, and crew training, will further minimise risk. Hydrocarbons therefore represent a potential contaminant pathway within the offshore Zone of Influence.

Accordingly, accidental hydrocarbon release is identified as a potential source of effect that could interact with qualifying interests of nearby Natura 2000 sites. The extent and likelihood of such interactions are considered further in the site-specific screening assessment.

[6.1.5] Barrier Effects

Potential barrier-type effects associated with the dredging and offshore disposal activities relate primarily to the temporary presence and movement of dredging, disposal, support and surveying vessels within the water column. As no permanent in-water structures will be installed and all operations are transient in nature, any barrier effect would be short-term, mobile, and reversible.

Temporary avoidance behaviour may occur in fish, marine mammals, or diving seabirds in response to vessel presence, engine noise, or altered vessel traffic patterns during disposal runs. Short-term safety exclusion zones may also be implemented around active disposal vessels, temporarily displacing other marine fauna or users from the immediate operational area.

These effects are expected to remain spatially confined to the disposal footprint and navigation corridor, moving with vessel transit. Nevertheless, there is potential for short-term disruption of normal movement or foraging behaviour among mobile qualifying species, including Annex II marine mammals and SPA bird species utilising the wider Wicklow coastal waters.

Accordingly, temporary vessel-related barrier effects are identified as a potential interaction pathway with Natura 2000 site features. The extent and likelihood of such interactions are considered further in the site-specific screening assessment.

[6.1.6] Noise and Light Disturbance

Underwater and airborne noise will be generated by operation of the dredger, disposal, support and survey vessels during transport and release of dredged material at the offshore site and surveying (bathymetry). Principal sources include main engines, propeller cavitation, and thruster use during controlled disposal, together with general vessel movements. These are continuous, non-impulsive noise sources, typical of normal commercial marine activity.

In line with the Source–Pathway–Receptor (S–P–R) model, the potential for disturbance to qualifying interests (e.g. Annex II marine mammals, fish, and SPA bird species using adjacent waters) is determined by:

- **Source:** vessel type, duty cycle, and noise level characteristics.
- **Pathway:** propagation conditions (depth, bathymetry, ambient noise, and weather/sea state); and
- **Receptor:** presence, distribution, and behavioural sensitivity of species within the area.

Accordingly, the spatial extent of any interaction is assessed functionally, based on receptor sensitivity and propagation conditions, rather than by applying a fixed radial buffer.

Airborne noise from vessel operations and on-deck equipment may also be audible to seabirds using nearby waters. Night-time operations could give rise to temporary artificial lighting, limited to standard navigational and deck safety lights. These may attract or temporarily displace certain species under low-visibility conditions; however, no fixed lighting installations are proposed.

These potential disturbance pathways - including underwater noise, airborne noise, and artificial lighting - are therefore identified as potential sources of effect that could interact with qualifying interests of nearby Natura 2000 sites. Their likelihood and significance are evaluated in the site-specific screening assessment using the S–P–R framework.

[6.2] Impact Evaluation

[6.2.1] Wicklow Harbour Dredging Area

Table 8: Screening assessment for Natura 2000 site - Wicklow Head SPA (004127)

Site Name and Code	Distance and Direction from Study Area	Qualifying Interests	Screening Assessment
Wicklow Head SPA (004127)	c. 1 km S of Wicklow Harbour	Kittiwake (*Rissa tridactyla*)	The Wicklow Head SPA supports a nationally important breeding colony of Kittiwake nesting on sea cliffs located approximately 3–4 km south of Wicklow Harbour. Dredging activities will occur entirely within the existing, enclosed harbour basin, a highly modified, operational environment subject to regular vessel traffic, maintenance, and port noise. No dredging or vessel activity will take place near breeding cliffs or within visual range of nesting sites. While individual birds may forage offshore within the wider coastal waters, the increase in vessel movements and underwater noise associated with dredging is expected to be minimal, intermittent, and non-persistent, comparable to baseline harbour activity levels. No alteration to prey availability, roosting habitat, or breeding success is anticipated, and there is no direct hydrodynamic or acoustic linkage to nesting areas. With regards to sedimentation and turbidity, WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. **Screened out.**

Table 9: Screening assessment for Natura 2000 site - The Murrough Wetlands SAC (002249)

Site Name and Code	Distance and Direction from Study Area	Qualifying Interests	Screening Assessment
The Murrough Wetlands SAC (002249)	c. 2 km N (coastal)	Annual vegetation of drift lines [1210]	The dredging area is located entirely within the confines of Wicklow Harbour, an artificial and hydrodynamically enclosed basin. There is no spatial or tidal connection to natural drift-line habitats along the open coast west of the harbour. Any sediment release will be rapidly dispersed and settle within the harbour itself, with no measurable transport beyond the breakwaters. WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. No deposition, disturbance, or alteration of coastal drift-line vegetation is anticipated. **Screened out.**
		Perennial vegetation of stony banks [1220]	Stony bank habitats occur along the exposed coastal margins outside the harbour walls, while dredging operations are restricted to the inner basin. The harbour structure prevents any sediment or hydrodynamic exchange with adjacent coastal areas. WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. Local wave and current conditions within the dredging footprint will not influence the open coast, and there is no pathway for plume dispersion to reach natural stony bank habitats. **Screened out.**
		Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* [7210]	These fen habitats are located inland and are dependent on freshwater hydrology, entirely isolated from marine tidal influences. The dredging activity will not alter surface-water or groundwater regimes that sustain these habitats. There is no hydrological or physical pathway connecting the harbour basin and inland fen systems. **Screened out.**
		Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]	Atlantic salt meadows are situated behind coastal barriers to the west of Wicklow Harbour. The enclosed dredging basin does not interact with nearshore tidal systems that influence these meadows. Suspended material will remain contained within the harbour and will not affect salinity, inundation frequency, or sedimentation processes along the open coast. WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. **Screened out.**

		Mediterranean salt meadows (Juncetalia maritimi) [1410]	These habitats occur in association with Atlantic salt meadows and are dependent on coastal tidal processes. The dredging area lies within a closed harbour basin separated from the open marine environment by breakwaters, preventing any direct hydrodynamic exchange. WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. There will be no nutrient or contaminant input or tidal alteration affecting these communities. **Screened out.**
		Alkaline fens [7230]	Alkaline fen systems within The Murrough Wetlands SAC occur inland and are groundwater-fed. No interaction with marine or surface-water processes occurs. The dredging works are fully marine-based and physically and hydrologically isolated from these habitats. **Screened out.**

Table 10: Screening assessment for Natura 2000 site - The Murrough SPA (004186)

Site Name and Code	Distance and Direction from Study Area	Qualifying Interests	Screening Assessment
The Murrough SPA (004186)	c. 700 m N	Red-throated Diver (*Gavia stellata*)	This offshore foraging species occurs in open marine and nearshore coastal waters, not within confined port environments. The dredging works are restricted to the inner harbour basin, already characterised by high vessel traffic, anthropogenic noise, and low ecological value. The noise and vibration associated with maintenance dredging will be similar to ongoing harbour activity and will not extend into open waters used by this species. No foraging or disturbance linkage exists. With regards to sedimentation and turbidity, WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. **Screened out.**
		Greylag Goose (*Anser anser*)	The species primarily utilises inland freshwater wetlands and grasslands within The Murrough SPA for feeding and roosting. These habitats are hydrologically and spatially isolated from the marine environment. Dredging operations will not generate noise, light, or hydrodynamic effects within these inland habitats. **Screened out.**
		Light-bellied Brent Goose (*Branta bernicla hrota*)	This species forages intertidally within sheltered mudflats and coastal lagoons south of Wicklow Harbour. The dredging basin lies entirely within a walled port area, disconnected from the open tidal flats of The Murrough. Any sediment disturbance will remain contained within the harbour and will not influence prey resources or feeding grounds along the open coast. WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. **Screened out.**
		Wigeon (*Anas penelope*)	Wigeon inhabit lagoonal and wet grassland habitats behind coastal dunes within The Murrough SPA. These areas are hydrologically disconnected from the dredging zone and isolated from marine influence by extensive dune systems. There is no plausible pathway for hydrodynamic, acoustic, or visual disturbance from harbour-based works. **Screened out.**
		Teal (*Anas crecca*)	Teal occupy freshwater and brackish wetland habitats inland of the coastal barrier. The enclosed dredging basin does not interact with these systems hydrologically or acoustically. Dredging noise will not transmit to inland wetlands due to attenuation across intervening land. **Screened out.**

		Black-headed Gull (*Chroicocephalus ridibundus*)	Regularly observed within and around Wicklow Harbour, this species is well habituated to vessel movement and human activity. While dredging may cause localised, temporary disturbance, this will be within the range of existing baseline conditions and is unlikely to cause displacement or prey effects. WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. **Screened out.**
		Herring Gull (*Larus argentatus*)	Abundant within the harbour environment, frequently feeding on fish discards and port-related resources. Dredging operations will not alter prey availability or cause significant disturbance relative to existing conditions. WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. **Screened out.**
		Little Tern (*Sternula albifrons*)	Breeding colonies are located south of The Murrough, well beyond the visual and acoustic influence of the dredging site (>2 km distance). There are no suitable nesting or foraging habitats within or adjacent to Wicklow Harbour. The enclosed nature of the basin prevents any hydrodynamic linkage with nearshore foraging areas. WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. **Screened out.**
		Wetland and Waterbirds (as a group)	The composite assemblage of wetland species is dependent on intertidal and freshwater habitats beyond the harbour walls. Dredging within a fully enclosed, artificial basin will not affect water quality, salinity, or prey dynamics in the open coastal environment. No source–pathway–receptor connection exists. WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. **Screened out.**

Table 11: Screening assessment for Natura 2000 site - Wicklow Reef SAC (002274)

Site Name and Code	Distance and Direction from Study Area	Qualifying Interests	Screening Assessment
Wicklow Reef SAC (002274)	c. 3 km E (offshore)	Reefs [1170]	The Wicklow Reef SAC supports a rare subtidal biogenic reef constructed by the honeycomb worm *Sabellaria alveolata*. This habitat is of exceptionally high conservation value, being the only documented example of a subtidal *Sabellaria* reef in Ireland. The reef structure—formed from consolidated sand grains—supports a diverse assemblage of hydroids, polychaetes, molluscs, bryozoans, amphipods, and other invertebrates, many of which are uncommon in Irish waters. *Sabellaria* reefs are sensitive to smothering, increases in sediment deposition, and sustained turbidity, as these pressures can disrupt tube-building and reef consolidation. The reef lies approximately 8 km south of Wicklow Harbour and is fully outside the enclosed tidal limits of the dredging footprint. Maintenance dredging will occur entirely within the harbour basin, which is hydrodynamically isolated from the open coastal environment by breakwaters and restricted exchange through the harbour mouth. Suspended sediment generated during dredging consists primarily of coarse-grained material with rapid settling velocities, and data from previous dredge campaigns show negligible sediment export beyond the harbour. No plume transport to the open coastal zone occurs under the low-flow conditions of the basin. WID modelling for the dredging in Wicklow Harbour (GDG, 2024b) indicate that SSC reaches negligible levels after two days without dredging, measuring less than 0.00177 kg/m3 (1.77 mg /L) at the entrance of Wicklow Harbour. As no suspended sediment, turbidity increase, or deposition can reach the offshore reef environment, and no physical disturbance or hydrodynamic alteration is possible, there is no credible pathway for effects on *Sabellaria alveolata* reef structures or associated species. Accordingly, no source–pathway–receptor linkage exists, and the qualifying interest *Reefs [1170]* is **Screened out.**

[6.2.2] Offshore Disposal Site

Table 5: Screening assessment for Natura 2000 site - Wicklow Reef SAC (002274)

Site Name and Code	Distance and Direction from Study Area	Qualifying Interests	Screening Assessment
Wicklow Reef SAC (002274)	c. 8 km S (offshore)	Reefs [1170]	The SAC comprises subtidal rocky reef communities supporting diverse algal and invertebrate assemblages, including the biogenic honeycomb worm *Sabellaria alveolata*, which constructs the unique reef feature present at Wicklow Reef. *Sabellaria* reefs are sensitive to smothering, increases in sediment deposition, and sustained turbidity, as these pressures can disrupt tube-building and reef consolidation. The offshore disposal site lies within the same general coastal hydrodynamic system; however, updated sediment dispersion modelling (Tetra Tech, 2025) shows that suspended sediment released during disposal is rapidly diluted and fully dispersed under prevailing tidal conditions. Modelled SSC levels at the Wicklow Reef SAC are low. Monitoring at the SAC boundary (Tetra Tech, 2025, Figure 4.12) shows that: • Peak total SSC reaches ~6 mg/l during disposal, occurring during mid-ebb conditions when the plume is transported southwards. • Average total SSC remains <2 mg/l over the full disposal period. • The wider plume envelope declines to <1 mg/l north and south of the site within the general nearshore zone. • All SSC values return to background levels within 5 days of cessation of disposal activity. These SSC levels are comparable to natural turbidity fluctuations typical of the exposed Wicklow coast. Model outputs show no measurable deposition within the SAC: predicted bed-level change is confined to the disposal site itself, with no detectable accumulation (~0 mm) at the reef habitat. Coarse fractions settle at the disposal point, while fine silts disperse to background concentrations at distance. Given the sensitivity of *Sabellaria alveolata* and associated reef fauna to prolonged turbidity and smothering, the modelled SSC levels (maximum ~6 mg/l; average <2 mg/l; no deposition) are substantially below thresholds associated with ecological effects or habitat change. No mechanism exists for long-term turbidity, smothering, or disturbance of reef communities.

			Bathymetric surveying will only occur in the disposal site itself and will not occur near to or within this SAC. On the basis of these site-specific SSC values and deposition predictions, there is no credible pathway for significant indirect effects on the Reefs [1170] qualifying interest. **Screened out.**

Table 6: Screening assessment for Natura 2000 site - The Murrough Wetlands SAC (002249)

Site Name and Code	Distance and Direction from Study Area	Qualifying Interests	Screening Assessment
The Murrough Wetlands SAC (002249)	c. 1.2 km W (coastal)	Annual vegetation of drift lines [1210]	The offshore disposal site lies within the same general coastal hydrodynamic system as the nearshore habitats of The Murrough Wetlands SAC. Sediment dispersion modelling (Tetra Tech, 2025) shows that suspended sediment concentrations at the SAC boundary remain very low: peak SSC is ~0.65 mg/l at the northern monitoring point and rises only slightly above 1 mg/l at the southern point late in the disposal period (Day 11–15). Concentrations return to background levels by Day 15. These SSC values fall within the range of natural coastal turbidity on the exposed Wicklow coastline. Model outputs confirm no measurable deposition at the SAC (bed-level change = 0 mm). No direct physical disturbance is possible, and sediment-driven changes to drift-line processes are not predicted. While a hydrodynamic pathway exists, the magnitude of any effect would be minimal, localised, and temporary. **Screened out.**
		Perennial vegetation of stony banks [1220]	This habitat occurs along the upper shore within the same broader hydrodynamic system as the disposal site. Modelling results indicate low suspended sediment concentrations reaching the coastal margin, with peak SSC of ~0.65 mg/l at the northern SAC boundary and just over 1 mg/l at the southern boundary during a short window towards the end of the disposal period. These levels attenuate rapidly after Day 15 and do not exceed natural seasonal variability in nearshore turbidity. Deposition modelling indicates no measurable accumulation (<1 mm threshold) at the stony bank habitat. No smothering, turbidity-driven stress, or alteration of sediment composition is predicted. A hydrodynamic linkage exists only under specific tidal phases; however, sediment reaching the shore zone is extremely dilute and transient. **Screened out.**
		Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* [7210]	These fen habitats are hydrologically isolated from marine processes and sustained by groundwater-fed freshwater systems. There is no tidal, wave, coastal-water, or drainage linkage between the disposal site and the fen complex. Sediment dispersion modelling (Tetra Tech, 2025) confirms that suspended sediment plumes remain confined to coastal waters and dissipate rapidly before reaching freshwater hydrology pathways. Peak SSC values at the nearest coastal boundary (≤1 mg/l) have no mechanism to influence inland freshwater fen systems. No pathway for impact exists. **Screened out.**

		Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]	These salt meadows occur in sheltered coastal inlets and are hydrologically linked to nearshore coastal waters via tidal exchange. Sediment dispersion modelling (Tetra Tech, 2025) shows that suspended sediment levels reaching the SAC are extremely low: peak SSCs at the boundary range from ~0.65 mg/l (north) to just above 1 mg/l (south) during a short period late in the disposal cycle, with all concentrations returning to background by Day 15. No measurable deposition is predicted within the salt meadow zone (bed-level change = 0 mm). A hydrodynamic connection exists, but only delivers dilute, short-lived increases in suspended sediment under specific tidal phases. No effects on vegetation, elevation, or sediment structure are anticipated. **Screened out.**
		Mediterranean salt meadows (Juncetalia maritimi) [1410]	These habitats occur landward of the lower tidal gradient and are influenced by periodic saline intrusion during high tides. Modelling shows that suspended sediment generated at the offshore disposal site remains highly diluted before reaching the nearshore environment, with peak SSCs at the SAC boundary remaining ≤1 mg/l except for a brief increase slightly above 1 mg/l at the southern monitoring point. Concentrations decline rapidly to background after Day 15. No measurable deposition occurs at the estuarine margin, and no changes to water clarity, salinity regime, inundation frequency, or sediment supply are predicted. The habitat lies outside the zone of plume influence for any material-altering effect. **Screened out.**
		Alkaline fens [7230]	Alkaline fens occur inland and are maintained by groundwater-fed systems entirely independent of marine or tidal influence. There is no hydrological, morphological, or sediment-transport linkage between the offshore disposal site and this qualifying interest. SSC values recorded at the marine boundary of the SAC (≤1 mg/l) have no pathway to interact with the freshwater hydrology supporting fen development. No source–pathway–receptor link exists. **Screened out.**

Table 7: Screening assessment for Natura 2000 site - The Murrough SPA (004186)

Site Name and Code	Distance and Direction from Study Area	Qualifying Interests	Screening Assessment
The Murrough SPA (004186)	Within the SPA.	Red-throated Diver (*Gavia stellata*)	This species forages in offshore and nearshore waters, including areas lying broadly within the same coastal hydrodynamic regime as the disposal site. Sediment dispersion modelling (Tetra Tech, 2025) shows that suspended sediment generated during disposal remains highly localised offshore, rapidly disperses, and only reaches the SPA coastline at background levels (~1 mg/l). These concentrations are too low to affect visibility, prey detection, or foraging efficiency. Noise and visual disturbance associated with disposal and survey operations are limited to short-term vessel activity several kilometres offshore and are comparable to routine marine traffic. The disposal location lies outside typical nearshore foraging hotspots used by this species, and disturbance levels are insufficient to alter behaviour or habitat use. No credible sediment or noise-related impact pathway exists. **Screened out.**
		Greylag Goose (*Anser anser*)	Greylag Goose primarily uses freshwater, grassland, and terrestrial feeding habitats within The Murrough SPA and does not utilise marine waters influenced by disposal activity. Sediment dispersion modelling confirms no meaningful SSC elevation at the shoreline (background ~1 mg/l), and no pathway exists for sediment to affect terrestrial feeding areas. Acoustic or visual disturbance from offshore vessel operations cannot affect inland or freshwater habitats used by this species. No source–pathway–receptor linkage is present. **Screened out.**
		Light-bellied Brent Goose (*Branta bernicla hrota*)	This species feeds extensively on intertidal seagrass and mudflat habitats along the coastal fringe of The Murrough SPA. Updated dispersion modelling shows that suspended sediment concentrations reaching the nearshore area remain at background levels (~1 mg/l), with no deposition or turbidity-related changes predicted. Offshore disposal and survey activity occurs well outside intertidal feeding zones. Vessel-related noise and visual disturbance at the offshore site are too far from the shoreline to affect foraging behaviour. No functional pathway exists for disturbance or water-quality effects. **Screened out.**

		Wigeon (*Anas penelope*)	Wigeon occur mainly in sheltered coastal lagoons and inland wetlands within the SPA, generally isolated from open marine hydrodynamics. Offshore disposal activity is several kilometres seaward of these habitats, and sediment concentrations at the coastline remain at background levels (~1 mg/l), providing no mechanism for interaction. Noise and visual disturbance from offshore vessel movements attenuate rapidly over distance and cannot affect lagoonal or inland waterbird habitats. No viable hydrodynamic or disturbance pathway exists. **Screened out.**
		Teal (*Anas crecca*)	Teal favour sheltered freshwater and brackish wetlands inland of the coastal barrier. These habitats are beyond the influence of marine hydrodynamics. Sediment dispersion modelling (Tetra Tech, 2025) shows that suspended sediment remains confined offshore and reaches the coastline only at background levels (~1 mg/l), with no pathway to inland wetlands. Vessel-related noise and visual disturbance at the offshore disposal site do not propagate to inland Teal habitats. No potential sediment, hydrodynamic, or disturbance pathway exists. **Screened out.**
		Black-headed Gull (*Chroicocephalus ridibundus*)	This species forages widely in coastal waters but typically utilises nearshore and intertidal zones rather than offshore environments. Updated sediment dispersion modelling shows that SSC in nearshore areas remains at background levels (~1 mg/l), with no detectable effect on water clarity or prey availability. No deposition reaches the shoreline. Vessel activity at the disposal site is comparable to normal marine traffic and occurs several kilometres offshore, well beyond the species' primary feeding corridor. Noise/visual disturbance is insufficient to affect behaviour or foraging success. No functional hydrodynamic or disturbance pathway exists. **Screened out.**
		Herring Gull (*Larus argentatus*)	Herring Gull is abundant along the Wicklow coastline and displays broad foraging behaviour in both coastal and marine environments. Sediment dispersion modelling (Tetra Tech, 2025) confirms that disposal-related plumes do not alter turbidity (~1 mg/l at the shore), visibility, or prey availability within the areas used by this species. No deposition occurs along the coast. Noise and visual disturbance from offshore operations would be indistinguishable from existing routine vessel activity. No behavioural or functional disturbance pathway arises. **Screened out.**

		Little Tern (*Sternula albifrons*)	Little Tern colonies occur south of The Murrough SPA, with foraging concentrated in sheltered nearshore waters and shallow inlets. Sediment dispersion modelling (Tetra Tech, 2025) shows that suspended sediment concentrations attenuate to background levels before reaching the coastline, with no turbidity increase in the tern foraging band. No deposition occurs shoreward of the disposal site. Disposal operations are located several kilometres offshore and outside the acoustic and visual detection zones relevant to tern foraging. No mechanism for hydrodynamic or behavioural interaction exists. **Screened out.**
		Wetland and Waterbirds (as a group)	The wetland and waterbird assemblage of The Murrough SPA utilises intertidal mudflats, saltmarshes, lagoons, and nearshore waters for roosting and foraging. Sediment dispersion modelling (Tetra Tech, 2025) shows that suspended sediment concentrations reaching the SPA coastline remain at background levels (~1 mg/l), with peak SSC values of ~0.65 mg/l at the northern monitoring point and slightly above 1 mg/l at the southern point during a brief period late in the disposal cycle. All SSC values return to background by Day 15, and no measurable deposition occurs within intertidal or coastal habitats. Offshore disposal operations occur several kilometres offshore and do not spatially overlap with intertidal feeding or roosting areas. Vessel noise and visual disturbance dissipate rapidly over distance and are indistinguishable from routine marine traffic. No hydrodynamic, acoustic, or ecological pathway exists by which offshore disposal could influence this receptor group. **Screened out.**

[6.3] Cumulative and In-Combination Effects

It is a requirement of Appropriate Assessment that the cumulative or in-combination effects of the proposed development, together with other plans or projects, are assessed. Cumulative impacts can be defined as a project/plan/programme likely to have a significant effect on a European Site, either individually or in combination with other plans or projects.

The following sources were consulted to identify other plans or projects within the wider Wicklow coastal area that could result in cumulative impacts:

- Wicklow County Development Plan 2022–2028
- Wicklow County Council Planning Enquiry System (https://www.wicklow.ie/Living/Services/Planning)
- DHLGH EIA Portal (https://www.housing.gov.ie/planning/environmental-impact-assessment-eia/eia-portal)

A review of these sources indicates that there are two major approved or proposed marine infrastructure projects within close proximity of Wicklow Harbour and the offshore disposal area, including the Arklow Bank Wind Park 2 and the Codling Wind Park. However, these projects have been subject to individual AA studies, and no adverse effect to the integrity of the same SAC and SPA sites was predicted. Appropriate mitigation has been recommended. In combination effects with the proposed infrequent and temporary maintenance dredging and disposal works is unlikely.

The nearest comparable marine activities include routine harbour maintenance and navigation safety works undertaken by WCC, which occur periodically and under separate environmental consents. There are no other current or pending applications for capital dredging, reclamation, or coastal construction within 1 km of either the harbour or the licensed offshore disposal site.

In light of the nature, extent and location of the approved planning permission (see Table 12), it is therefore determined that the potential for in-combination effects is negligible.

Table 12: Assessment of Approved Plans and Potential In-Combination Effects.

Plan/Project (Decision Date)	Applicant (Address)	Overview	Potential Significant Effects from Plan/Project and Potential In-Combination Effects
Planning Ref: 221257 Granted Conditional 18/05/2023	Trustees of Wicklow SC [South Quay, Corporation Lands, Wicklow Harbour, Wicklow Town, Co. Wicklow A67 WV82]	Completion of foundations in the club's boat park and planning permission sought for the erection of a crane to service the boat storage area. Permission also required for all ancillary site works associated with same	The planning application is located within Wicklow Harbour, approximately 0.20km from the dredging area. There is potential for: • Sediment run-off • Noise and vibration impacts • Contaminated surface water runoff / hydrocarbon spills. However, both projects are within the same modified harbour environment and will be subject to standard harbour controls and environmental management (spill prevention, turbidity monitoring). There is no direct hydrological or ecological pathway to nearby European sites, and works are small-scale and temporary. Therefore, in-combination effects are considered unlikely.
Arklow Bank Wind Park 2 (An Coimisiún Pleanála Case Ref: OA27.319864)	Turley on behalf of Sure Partners Ltd, being a wholly owned subsidiary of SSE plc.	Arklow Bank Wind Park 2 Offshore Infrastructure being an offshore wind farm which is to be located c. 6 – 15 km off the coast of Co. Wicklow and Co. Wexford in the Irish Sea.	The planning application is located >20km from Wicklow Harbour and >10km from the proposed offshore disposal site. There is potential for: • In combination contribution of increased sedimentation/turbidity during seabed preparation works. • Noise and vibration impacts • Contaminated surface water runoff / hydrocarbon spills. The Project has been subject to NIS and EIAR, with detailed mitigation provided. The NIS (2024) reported 'no adverse effect to site integrity' for all SAC/SPA sites located in proximity. Sediment concentrations were modelled during drilling for foundation installation, and the plume does not extend beyond the immediate boundaries of the Wind Park and therefore does not enter any SAC or SPA site. Given this, and the fact that the frequency and duration of dredging and disposal operations

			for Wicklow Harbour is so minimal (one occurrence per year, with indicative 2-week timeframe per occurrence), in-combination effects are unlikely to be significant.
Codling Wind Park (An Coimisiún Pleanála Case Ref: OA29N.320768)	EDF Renewables and Fred, via Olsen Seawind.	Codling Wind Park Project, an offshore wind farm (OWF) consisting of a generating station with wind turbine generators (WTGs) in the Irish Sea, approximately 13-22 km off the County Wicklow coast.	The planning application is located >15km km from Wicklow Harbour and approximately 10 km from the proposed offshore disposal site. • In combination contribution of increased sedimentation/turbidity during seabed preparation works. • Noise and vibration impacts • Contaminated surface water runoff / hydrocarbon spills. The Project has been subject to NIS and EIAR, with detailed mitigation provided. The NIS reported 'no adverse effect to site integrity' for all SAC/SPA sites located in proximity. Given this, and the fact that the frequency and duration of dredging and disposal operations is so minimal (one occurrence per year, with indicative 2-week timeframe per occurrence), in-combination effects are unlikely to be significant.

[7] Screening Statement

This Screening exercise was completed in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) and relevant European Commission and national guidance. Under Article 42(7) of the Regulations, *"The public authority shall determine that an Appropriate Assessment of a plan or project is not required […] if it can be excluded, on the basis of objective scientific information, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site."*

The proposed maintenance dredging, offshore disposal works and associated surveying (bathymetry) have been assessed to determine whether they are likely to result in significant effects, either alone or in combination with other plans or projects, on any Natura 2000 site.

A detailed S–P–R analysis was undertaken to examine the potential for interaction with European sites within the marine Zone of Influence. Pathways were considered through hydrodynamic, acoustic, and disturbance mechanisms, with particular reference to sediment dispersion modelling undertaken for the offshore disposal site (Tetra Tech, 2025).

Following comprehensive evaluation of these pathways (refer to Section 5) and based on the objective scientific information provided by the sediment dispersion model, it is concluded that no viable source–pathway–receptor linkages exist that could give rise to significant effects on any qualifying interests or special conservation interests of nearby SACs or SPAs. All European sites screened were found to be not at risk, and each qualifying interest has been screened out at Stage 1.

Key Considerations in reaching this conclusion are:

- **Hydrodynamic pathway:** The disposal of Class 1 (uncontaminated) material at licensed offshore sites occurs under high-energy marine conditions. Numerical modelling shows that suspended sediment concentrations attenuate rapidly, remain at or near background levels (~1 mg/l) at the coastline, and do not reach designated sites at concentrations capable of altering habitat structure, function, or species behaviour. No measurable deposition occurs at any European Site receptor.
- **Marine mammals:** Vessel activity associated with dredging, disposal and surveying occurs during daylight hours, is slow-moving, and comparable to routine marine traffic along the Wicklow coast. No impulsive or high-energy noise sources are used, and no adverse effects on Annex IV species are predicted.
- **Noise and disturbance:** Vessel and equipment noise is continuous and non-impulsive, typical of normal marine operations. Works occur predominantly during daylight hours with no percussive piling or elevated noise sources. No disturbance mechanism affecting European sites exists.
- **Pollution prevention:** Embedded environmental controls, including spill response, turbidity monitoring, and vessel refuelling procedures, eliminate potential contamination pathways to marine waters.
- **In-combination effects:** No other planned or permitted marine works within the ZoI were identified that could contribute to cumulative or interactive effects on European sites.

[8] Conclusion

On the basis of objective scientific information, including the results of the sediment dispersion modelling (Tetra Tech, 2025), and in view of the COs of the relevant European sites, it is concluded that the proposed Wicklow Harbour maintenance dredging and offshore disposal works, either alone or in combination with other plans or projects, will *not* have a significant effect on any European Site. This conclusion is drawn in light of the main considerations outlined in Section [7].

Accordingly, in accordance with Regulation 42(7) of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), a Stage 2 Appropriate Assessment (Natura Impact Statement) is not required.

[9] References

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