

Ecological Impact Assessment

Cruise Terminal Reorientation – Pedestrian Link & Public Realm

at

Dún Laoghaire Harbour Cruise Terminal

On behalf of

**Dún Laoghaire Rathdown County
Council**





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Dún Laoghaire Rathdown County Council
Dún Laoghaire Harbour Cruise Terminal

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1 INTRODUCTION

1.1 Background and Purpose of Report

Malone O'Regan Environmental ('MOR Environmental') was commissioned by Dún Laoghaire Rathdown County Council ('DLRCC') to undertake an Ecological Impact Assessment ('EclA') for the proposed Cruise Terminal Reorientation – Pedestrian Link and Public Realm ('the Proposed Development') at Dún Laoghaire Harbour Cruise Terminal Harbour Rd, Dún Laoghaire, Co. Dublin (ITM OS Reference 724489 728899).

The Proposed Development will be located on a site that is circa ('ca.') 0.28 hectares ('ha') in size and is located within the townland of Dunleary (Dún Laoghaire), Co. Dublin, ca. 0.4km northeast of Dún Laoghaire Village and is shown in Figure 1-1 ('the Site').

The objective of this EclA was to survey and assess the land within and adjacent to the Site for the presence of any habitats or species that could present a constraint on the Proposed Development or an opportunity for enhancement.

Figure 1-1: Site Location



1.2 Statement of Authority

This report was reviewed and approved by Ms. Kathryn Broderick, Principal Consultant - Ecologist. Kathryn has over 10 years of experience working in the ecological consultancy sector. As part of her role, Kathryn is required to undertake habitat surveys and appraisals as well as specialist protected species surveys in support of Ecological Impact Assessments ('EIA') and Appropriate Assessments ('AA'). Kathryn has also completed a diploma in Environmental Law and Planning, with a focus on EIA and AA, providing her with a comprehensive understanding of the legal context and requirements for these assessments.

1.3 Site Context

The Site is located on a ca. 0.28ha site, which is located ca. 0.4km northeast of Dún Laoghaire Village, Co. Dublin. The Site is located within the existing Cruise Terminal area at Dún Laoghaire Harbour. The harbour itself lies to the north and east of the Site, along with associated marine infrastructure and facilities such as the Royal St. George Yacht Club and Dublin Bay Cruises.

Along the western perimeter of the Site, there is an existing large-scale commercial building, beyond which lies an extensive car park and the Dún Laoghaire Marina. The land to the south comprises additional car parking areas, public realm spaces and Harbour Road.

Figure 1-2: Site Context and Overview



1.4 Watercourses within the Vicinity of the Site

As per Environmental Protection Agency ('EPA') maps, Dublin Bay is the only hydrological feature of note within close proximity of the Site. Dublin Bay forms part of the South Dublin Bay Special Area of Conservation ('SAC'), North Dublin Bay SAC, Rockabill to Dalkey Island SAC, South Dublin Bay and River Tolka Estuary Special Protection Area ('SPA'), Northwest Irish Sea SPA, North Bull Island SPA and Dalkey Islands SPA.

Under the Water Framework Directive ('WFD') 2000/60/EC, the EPA classifies the status and the risk of not achieving good water quality status for all waterbodies in Ireland [1]. According to the river waterbody WFD 2019-2024, the water quality within Dublin Bay is considered to be 'good,' and the status of this river is considered 'not at risk' [1].

The Site is situated within the Liffey and Dublin Bay WFD Catchment [Catchment_ID: 09] and the Dodder_SC_010 subcatchment [Subcatchment_ID: 09_16] [1].

The locations of the key surface water features in the vicinity of the Site are illustrated in Figure 1-3 below.

Figure 1-3: Watercourses in the Vicinity of the Site



1.4.1 OPW Flood Maps

The Office of Public Works ('OPW') Flood Maps identifies Drainage Districts, Arterial Drainage Schemes and Benefitted Areas [2]. Arterial Drainage Schemes were works that were carried out under the Arterial Drainage Act, 1945 to improve land for agriculture and to mitigate flooding. The Benefitted land identifies land that was drained as part of the Drainage District with the aim to improve land for agriculture and to mitigate flooding.

As per OPW Flood Maps, there are no Drainage Districts, Arterial Drainage Schemes or Benefitted Areas located within the vicinity of the Site [2].

1.4.2 Drainage Ditches

No drainage ditches were identified during the Site walkover.

1.5 Legislation and Planning Policy Context

1.5.1 Legislation Policy Context

Within Ireland, a number of sites of international or national importance to nature conservation, as well as many species of animal and plants are afforded a degree of legal protection, as set out in Box 1 below.

A study of biodiversity-related planning policy at both national and local level has been undertaken for the Site and locality in order to highlight any potential conflicts with the relevant legislation and guidance documents.

Box 1 Designated Wildlife Sites and Protected and Otherwise Notable Habitats and Species

The National Park and Wildlife Service ('NPWS') notifies sites in Ireland that are of international or national importance for nature conservation (although some sites that are of national importance for certain species have not been so designated).

Internationally important sites may also be designated as:

- Special Areas of Conservation ('SACs') and Candidate Special Area of Conservation ('cSACs'): the legal requirements relating to the designation and management of SACs in Ireland are set out in the European Communities (Birds and Natural Habitats) Regulations 2011-2021 (S.I. No. 477/2011);
- Special Protection Areas ('SPAs') and candidate Special Protected Areas ('cSPAs'): strictly protected sites classified in accordance with Article 4 of the EC Directive on the Conservation of Wild Birds (2009/147/EC), also known as the Birds Directive; and,
- Ramsar sites: wetlands of international importance designated under the Ramsar Convention, to which Ireland is a signatory.

Other statutory site designations relating to nature conservation are:

- Natural Heritage Areas ('NHA'): these represent examples of some of the most important natural and semi-natural terrestrial and coastal habitats in the country and are afforded protection under the Wildlife (Amendment) Act 2000. NHAs are legally protected from damage and receive protection from the date they are formally proposed for designation; and,
- Proposed Natural Heritage Areas ('pNHAs'): these sites are not afforded the same protection as NHAs. These sites are proposed by the NPWS but are not statutorily proposed or designated. Prior to statutory designation these are subject to a very limited legal protection. They are, however, sites of significance for wildlife and habitats and are important for the purposes of this EclA.

Legally protected species

Many species of animal and plant receive some degree of legal protection. For the purposes of this study, legal protection refers to:

- Species included in the Wildlife (Amendment) Act 2000, excluding species that are only protected in relation to their sale, reflecting the fact that the site disposal will not include any proposals relating to the sale of species; and,
- Species afforded protection under the Flora (Protection) Order 2022 (S.I.No.235/2022).

Other notable habitat / species categories

- Biodiversity Action Plan ('BAP') species: those targeted in local or national BAPs as being of particular conservation concern (priority species).
- Red and Amber List birds: those listed as being of high or medium conservation concern as listed by Birdwatch Ireland on the Birds of Conservation Concern in Ireland 2020-2026 [3].
- Other Irish Red Data Book species [4] and Nationally/Regionally/Locally Notable species where appropriate.

1.5.2 National Planning Context

A study of biodiversity-related planning policy at the national and local level has been undertaken for the Site and locality to highlight any potential conflicts with the relevant legislation and guidance documents as outlined in Box 1 above.

1.5.2.1 Planning Policy Statement

Project Ireland 2040 was launched by the Government in February 2018 [5] and incorporates two policy documents - the National Planning Framework ('NPF') and the National Development Plan ('NDP').

Following a decision of the Government in June 2023, the preparation of a revised NPF [6] commenced to take account of changes that have occurred since it was published (in 2018) and to build on the existing framework. Public consultation took place from 10th July 2024 to 12th September 2024, following which the Government agreed to progress and publish a draft schedule of amendments to the First Revision to the NPF in November 2024. On 8th April 2025, the Government approved the revised NPF following the conclusion of environmental assessments, which included a Strategic Environmental Assessment ('SEA'), Natura Impact Statement ('NIS') and Appropriate Assessment Determination and a Strategic Flood Risk Assessment ('SFRA'). Both houses of the Oireachtas, the Seanad and the Dáil, approved this

document as of 30th April 2025. The revised NPF is a direct replacement for the NPF and is detailed further below.

Revised National Planning Framework (April 2025)

Objectives under the 'Strategic Planning for Biodiversity' section of this draft framework include the following:

National PO 84:

'In line with the National Biodiversity Action Plan and European Union Nature Restoration Law, and best available scientific information, regional and local planning authorities shall support the preparation and implementation of the National Restoration Plan.'

National PO 85:

'In line with the National Biodiversity Action Plan; the conservation, enhancement, mitigation and restoration of biodiversity is to be supported by:

- Integrating policies and objectives for the protection and restoration of biodiversity, including the principles of the mitigation hierarchy of - avoid, minimise, restore and offset - of potential biodiversity impacts, in statutory land-use plan.*
- Retention of existing habitats which are currently important for maintaining biodiversity (at local/regional/national/international levels), in the first instance, is preferable to replacement/restoration of habitats, in the interests of ensuring continuity of habitat provision and reduction of associated risks and costs.'*

National PO 86:

'In line with the objectives of the National Biodiversity Action Plan, planning authorities should seek to address no net loss of biodiversity within their plan making functions.'

National PO 87:

'Enhance the conservation status and improve the management of protected areas and protected species by:

- Implementing relevant EU Directives to protect Ireland's environment and wildlife and support the objectives of the National Biodiversity Action Plan;*
- Developing and utilising licensing and consent systems to facilitate sustainable activities within Natura 2000 sites;*
- Continued research, survey programmes and monitoring of habitats and species.'*

National PO 88:

Facilitate the protection and restoration of biodiversity [including in European sites and the habitats and species for which they are selected] through the preparation of national guidance in relation to Planning and Biodiversity to:

- Plan and manage for integration of biodiversity protection and restoration in future planning and development;*
- Ensure a consistent and strategic approach to biodiversity protection and restoration across planning authorities and administrative boundaries, and*
- Support the implementation of the National Biodiversity Action Plan (2023-2030) and the forthcoming National Restoration Plan.*

The National Development Plan (2021-2030)

The National Planning Framework and the National Development Plan will continue to align and form a single vision for Ireland under Project Ireland 2040.

The National Development Plan also lists the following items as strategic investment priorities in relation to National Heritage and biodiversity:

- *‘Implementation of the current and future National Biodiversity Action Plan, delivery of National Parks and Wildlife Service Farm Plans and LIFE projects, enhanced wildlife crime investigation capacity and identification and delivery conservation measures at designated sites as identified in the Prioritised Action Framework for Ireland (2021-2027).’*
- *‘Investment in nature and biodiversity, to improve the quality of natural habitats and support native plants and animals, including those under threat, and to bolster broader societal wellness and sustainability goals.’*
- *‘Future-proofing obligations under the Biodiversity Strategy 2030, including potential national designations and the preparation and delivery of a National Restoration Plan.’*

1.5.2.2 Ireland’s 4th National Biodiversity Action Plan 2023 - 2030

The 4th National Biodiversity Action Plan (‘NBAP’) 2023-2030 sets out a number of strategic objectives, and it lays out a clear framework for Ireland’s approach to biodiversity and demonstrates Ireland’s commitment to protect our biodiversity and also halt decline [7].

‘This National Biodiversity Action Plan 2023-2030 builds upon the achievements of the previous Plan. It will continue to implement actions within the framework of five strategic objectives, while addressing new and emerging issues.’ The five objectives are as follows:

- **Objective 1:** Adopt a Whole of Government, Whole of Society Approach to Biodiversity;
- **Objective 2:** Meet Urgent Conservation and Restoration Needs;
- **Objective 3:** Secure Nature’s Contribution to People;
- **Objective 4:** Enhance the Evidence Base for Action on Biodiversity; and,
- **Objective 5:** Strengthen Ireland’s Contribution to International Biodiversity Initiatives.

The following Objective Outcomes were considered relevant to the Proposed Development and this report:

Outcome 2A:

‘The protection of existing designated areas and protected species is strengthened and conservation and restoration within the existing protected area network are enhanced.’

Outcome 2D:

‘Biodiversity and ecosystem services in the marine and freshwater environment are conserved and restored.’

Outcome 2H:

‘Invasive alien species (‘IAS’) are controlled and managed on an all-island basis to reduce the harmful impact they have on biodiversity and measures are undertaken to tackle the introduction and spread of new IAS to the environment.’

1.5.3 Regional Planning Context

1.5.3.1 Eastern & Midland Regional Spatial and Economic Strategy 2019-2031

The Eastern & Midland Regional Spatial and Economic Strategy 2019-2031 ('RSES') [8] recognises the need to conserve and enhance biodiversity through co-ordinated spatial planning in the eastern and midland region. The vision of the RSES is:

'To create a sustainable and competitive Region that supports the health and wellbeing of our people and places, from urban to rural, with access to quality housing, travel and employment opportunities for all.'

Dún Laoghaire is listed as a 'Major Town Centre' with Dún Laoghaire Harbour being recognised as a 'Regional Port'. Policies within the RSES that are relevant to the Proposed Development include:

RPO 6.15:

"Support the preparation and implementation of Visitor Experience Development Plans within the Region to underpin the overarching regional tourism brands and to deliver greater tourism benefits and to promote the natural and cultural assets of the Region."

RPO 6.16:

"Support working with relevant landowners and recreational/ tourism agencies to increase access to the countryside and coastal areas to ensure maintenance of the existing network."

RPO 6.17:

"Support the maintenance of, and enhanced access to state and semi-state lands such as National Parks, Forest Parks, Waterways, etc., together with Monuments and Historic Properties, for recreation and tourism purposes. Access should be planned and managed in a sustainable manner that protects environmental sensitivities, ecological corridors, and the ability of local infrastructure to support increased tourism."

RPO 6.18:

"Support the preparation and implementation of local authority tourism strategies and diaspora strategies. All tourism strategies and plans should include clear monitoring protocols to monitor the ongoing effect of tourism on sensitive features with particular focus on natural and built heritage assets."

RPO 7.5:

"EMRA shall work with coastal stakeholders to support the sustainable development of the national Fishery Harbour Centre in Howth and the sustainable growth of the seafood and on-shore aquaculture sector in the Region, and to ensure that marine resources are sustainably managed and that planned activities on land do not adversely affect the marine economy and environment."

RPO 7.16

'Support the implementation of the Habitats Directives in achieving an improvement in the conservation status of protected species and habitats in the Region and to ensure alignment between the core objectives of the EU Birds and Habitats Directives and local authority development plans.'

RPO 7.17

‘Facilitate cross boundary co-ordination between local authorities and the relevant agencies in the Region to provide clear governance arrangements and coordination mechanisms to support the development of ecological networks and enhanced connectivity between protected sites whilst also addressing the need for management of alien invasive species and the conservation of native species.’

RPO 10.6

‘Delivery and phasing of services shall be subject to the required appraisal, planning and environmental assessment processes and shall avoid adverse impacts on the integrity of the Natura 2000 network.’

1.5.4 Local Planning Context

1.5.4.1 Dún Laoghaire-Rathdown County Development Plan 2022-2028

The Dún Laoghaire-Rathdown County Development Plan 2022-2028 (‘DLRCDP’) was adopted by DLRCC on 21st April 2022 [9]. The DLRCDP contains a number of policies and objectives that relate directly to the protection of biodiversity and natural heritage in the context of proposed developments [9]. The Policy Objectives (‘PO’) of the DLRCDP with regard to the natural environment that are relevant to the Proposed Development are as follows [9]:

PO GIB18: Protection of Natural Heritage and the Environment:

‘It is a Policy Objective to protect and conserve the environment, including, in particular, the natural heritage of the County, and to conserve and manage nationally and internationally important and EU-designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), proposed Natural Heritage Areas (pNHAs) and Ramsar sites (wetlands) – as well as non-designated areas of high nature conservation value known as locally important areas, which also serve as ‘Stepping Stones’ for the purposes of Article 10 of the Habitats Directive.’

PO GIB19: Habitats Directive:

‘It is a Policy Objective to ensure the protection of natural heritage and biodiversity, including European Sites that form part of the Natura 2000 network, in accordance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines.’

PO GIB20: Biodiversity Plan:

‘It is a Policy Objective to support the provisions of the forthcoming DLR County Biodiversity Action Plan, 2021-2025’.

PO GIB21: Designated Sites:

‘It is a Policy Objective to protect and preserve areas designated as proposed Natural Heritage Areas, Special Areas of Conservation, and Special Protection Areas. It is Council policy to promote the maintenance and as appropriate, delivery of favourable conservation status of habitats and species within these areas.’

PO GIB22: Non-Designated Areas of Biodiversity Importance:

It is a Policy Objective to protect and promote the conservation of biodiversity in areas of natural heritage importance outside Designated Areas and to ensure that notable sites, habitats and features of biodiversity importance - including species protected under the Wildlife Acts 1976 and 2000, the Birds Directive 1979, the Habitats Directive 1992, Birds and Habitats Regulations 2011, Flora (Protection) Order, 2015, Annex I habitats, local

important areas, wildlife corridors and rare species - are adequately protected. Ecological assessments will be carried out for all developments in areas that support, or have potential to support, features of biodiversity importance or rare and protected species and appropriate mitigation / avoidance measures will be implemented. In implementing this policy, regard shall be had to the Ecological Network, including the forthcoming DLR Wildlife Corridor Plan, and the recommendations and objectives of the Green City Guidelines (2008) and 'Ecological Guidance Notes for Local Authorities and Developers' (Dún Laoghaire-Rathdown Version 2014).'

PO GIB28: Invasive Species:

'It is a Policy Objective to prepare an 'Invasive Alien Species Action Plan' for the County which will include actions in relation to Invasive Alien Species (IAS) surveys, management and treatment and to also ensure that proposals for development do not lead to the spread or introduction of invasive species. If developments are proposed on sites where invasive species are or were previously present, the applicant will be required to submit a control and management program for the particular invasive species as part of the planning process and to comply with the provisions of the European Communities Birds and Habitats Regulations (2011 (S.I. 477/2011)).'

1.5.5 Dún Laoghaire Harbour Masterplan 2011-2030 (Non-Statutory)

DLRCC has published a Dún Laoghaire Harbour Masterplan. The Masterplan sets out guiding principles to reimagine Dún Laoghaire Harbour as a dynamic, multifunctional space that honours its maritime heritage while embracing contemporary needs and opportunities [10].

The plan sets out a phased approach to the regeneration of the harbour area over an estimated 20-year period, with the objective of enhancing its recreational, cultural, residential and tourism functions while maintaining its heritage and maritime character.

The Masterplan contains multiple areas for biodiversity increasing initiatives on both short, medium and long term. As outlined in Chapter 7, Landscape and Resilience, the Masterplan outlines a Landscape and biodiversity strategy. The five core ecological objectives of this Strategy are summarised below:

- **Objective 1:** Ensure compliance and environmental leadership. Meet or exceed all legal requirements for habitat and species protection, integrating biodiversity into decision-making at every stage;
- **Objective 2:** Protect and safeguard habitats. Safeguard existing important habitats and create or improve habitats if possible, aiming for no net loss in habitat extent / quality;
- **Objective 3:** Mitigate disturbance and pollution. Minimise the impact of harmful disturbances (noise, light, human presence) and prevent pollution through rigorous control measures;
- **Objective 4:** Nature-inclusive design and enhancement. Embed features in the Harbour's design that benefit wildlife, turning infrastructure into ecological opportunities; and,
- **Objective 5:** Monitoring, Research and Adaptive Management. Continuously monitor ecological outcomes and adjust actions as needed, while engaging stakeholders and the public in conservation.

2 METHODOLOGY

2.1 Assessment Methodology for Prediction of Effects

Desk study data collection and field survey work were carried out as part of the EclA process, with the objective of ensuring that sufficient data was collected to identify the designated sites, habitat areas and species that could be significantly affected by the Proposed Development. This information then informed the assessment of potential effects on biodiversity receptors.

The area for which biological data was collected was based on an assessment of the ecological zone of influence of the Proposed Development. The ecological zone of influence is the area that could be affected by the Proposed Development, within which there is the potential for significant ecological effects. All SPAs and SACs within 15km have been considered to assess their ecological pathways and functional links. As acknowledged in the Office of the Planning Regulator ('OPR') guidelines [11], few projects have a Zone of Influence this large; however, the identification of European sites within 15km and NHAs and pNHAs within 5km has become widely accepted as the starting point. For this reason, all SPAs and SACs in 15km and NHAs and pNHAs in 5km have been identified for consideration. Desk study data were collected for this area (See Section 4.1), whilst field surveys focused on the lands within and adjacent to the Site (See Section 4.2). These distances are used as the starting point for the assessment and are based on accepted best practice and professional expertise.

It should be noted that there was the potential for the Zone of Influence to be redefined during the assessment process in response to new design or environmental information, and / or for the geographical extent of field surveys to be extended to cover a greater extent of the desk study area (e.g., if the desk study identified species occurring off-site that could be significantly affected by the Proposed Development). In the end, such an increase in the study area was not required for this assessment.

The next stage of the assessment was to determine which, if any, of the sites, habitats and species within the Zone of Influence (referred to in this report as 'potential biodiversity receptors') had the potential to be significantly affected by the Proposed Development (see Section 5). A high-level 'scoping' assessment was then undertaken (see Section 5.1) to differentiate effects that were sufficiently likely to be significant as to merit more detailed assessment, from those that could be assessed at a less detailed level as they were classified as not likely to be significant (referred to as 'screened out' effects).

The assessment of how the potential biodiversity receptors would likely be affected by the environmental changes associated with the Proposed Development was based not only on the results of the desk study and field surveys, but also on published information on the potential biodiversity receptors' status, distribution, sensitivity to these changes, biology and knowledge of ecological processes and functions, as appropriate.

2.2 Desk Study

A desk-based review of information sources was completed, which included the following sources of information:

- Review of aerial maps of the Site and surrounding area;
- The National Parks and Wildlife Services ('NPWS') website was consulted with regard to the most up-to-date details on conservation objectives for the Natura 2000 sites relevant to this assessment [12];
- The Irish Whale and Dolphin Group was consulted in regard to the most up-to-date sighting of cetaceans [50];

- The DLRCC Planning Portal to obtain details about existing / proposed developments in the vicinity of the Site [13]
- The Department of Housing, Local Government and Heritage's planning portal – the National Planning Application Database to obtain details about existing / proposed developments in the vicinity of the Site [14];
- The National Biodiversity Data Centre ('NBDC') website was consulted with regard to species distributions [15];
- Bird Watch Ireland – The publicly available Site Summary Irish Wetland Bird Survey ('I-WeBS') data was reviewed with regard to wintering waterbird population within the vicinity of the Site [16]; and
- The EPA Maps website was consulted to obtain details about watercourses in the vicinity of the Site [1].

2.3 Field Survey

2.3.1 Habitat Survey

An initial Site walkover was undertaken on 9th October 2025, and a follow-up survey was completed on 31st March 2026 by suitably qualified MOR Environmental Ecologists. The surveys aimed to assess the extent and quality of habitats present on the Site and to identify any potential ecological receptors.

During the initial survey, a habitat survey was undertaken using the Heritage Council's '*Guide to Habitats in Ireland*' [17] and conducted in line with the Heritage Council's '*Best Practice Guidance for Habitat Survey & Mapping*' [18]. This is the standard habitat classification system used in Ireland and includes both a desk-based and field-based assessment.

The assessment was extended to also identify the potential for these habitats to support other features of nature conservation importance, such as species afforded legal protection under either Irish or European legislation.

2.3.2 Protected / Notable Species

The methodologies used to establish the presence / potential presence of faunal species are summarised below. These relate to those species / biological taxa that the desk study and habitat types present indicated could occur on-site.

2.3.2.1 Flora

The Site was assessed for the presence of notable / protected flora species in accordance with the following:

- Flora (Protection) Order 2022 (S.I. No. 235/2022); and,
- Ireland Red List No. 10: Vascular Plants [19].

2.3.2.2 Bats

An assessment of the suitability of the habitats within and bordering the Site to support bat roosting, foraging, and commuting was carried out. Mature trees were inspected for evidence of cavities, splits, cracks, loose bark, and dense and woody ivy (*Hedera helix*) growth that could be used by bats for roosting. The trees were inspected in accordance with the National Roads Authority's ('NRA') '*Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes*' [23].

A daytime bat walkover was carried out during the habitat survey to assess the suitability of the habitats on-site to support bat roosting, foraging and commuting.

2.3.2.3 Birds

The Site was assessed for its potential to support important assemblages of birds of rare or notable species which have been designated as conservation interest species for European sites within 15km of the Site.

Following the desk-based assessment and the initial habitat assessment, it was deemed necessary to conduct breeding bird surveys to determine whether any birds were nesting on-site or in the immediate vicinity of the Site. These surveys included:

- Breeding bird vantage point survey ('VP') on 31st March 2026; and,
- Breeding bird boat-based survey on 4th April 2026.

During the VP survey, one suitably qualified and experienced MOR Environmental Ecologist was positioned at a VP within the harbour that had clear views of the Site and the nearby Carlisle Pier; see Figure 2-1 below.

During the survey, all birds that were observed within the Site and the nearby harbour were recorded, and their behaviours were noted. Birds were classified as non-breeding, possibly breeding and confirmed breeding based on the behaviours exhibited. The criteria for each classification are described below:

- Non-breeding – Birds that were flying over the Site, birds that were foraging and not calling, birds that were loafing;
- Possible Breeding – Birds observed in suitable nesting habitat and displaying either territorial and/or courtship behaviours, nest building behaviours or observed visiting a possible nest; and,
- Confirmed Breeding – Birds observed either on the nest or carrying faecal sac or food, sighting of a nest with eggs / chicks, used nests, eggshells or recently fledged young.

Following the initial VP survey, it was deemed necessary to undertake a breeding bird survey from a boat in order to access under the pier on which the Site is located and also under the nearby Carlisle Pier. The boat survey assessed all accessible areas to identify suitable breeding habitat for black guillemots (*Cepphus grylle*) and potential nests under the piers.

The survey methodology utilised for the boat survey was adapted from the Seabird Monitoring Handbook [24], specifically for black guillemots. The survey methodology utilised for these surveys was adapted from Seabird Monitoring Handbook [24]. The methodology utilised entailed visiting the full extent of the survey area, counting all adult birds seen on water, on shore and on structures within the study area and locating crevices and holes observed to be potentially utilised by black guillemots. A torch was used to illuminate any crevices or dark recesses under the piers. Nest sites were recorded as apparently occupied nests ('AON') if it was visited and entered by adults (probable or confirmed breeding status). All potentially nesting species were recorded.

The survey was undertaken at sunrise to coincide with the likely visiting of AON sites by adults, as fish delivery is known to be highest during the morning and evening, in order to avoid under-recording sites where foraging adults were absent.

Figure 2-1: Bird Survey VP Location



Table 2-1: Bird Survey Metadata

Date	Survey	Start – End Time	Sunrise	Weather Conditions
31/03/2026	VP Survey	07:00 - 10:00	07:01	9-12°C, Overcast, Light Breeze
16/04/2026	Boat Survey	07:00 - 10:00	06:23	9-12°C, Clear skies, Light Breeze

2.3.2.4 Otter

The survey aimed to identify and examine areas where otter might occur by noting any evidence of otter observed. Evidence of otter searched for included:

- Holts (features log piles, caves and cavities);
- Slides (flattened areas of mud or vegetation);
- Paw prints;
- Evidence of foraging (usually in the form of feeding remains such as fish scales and shellfish); and,
- Spraints (isolated otter droppings).

The field survey of the Site was conducted in line with the following relevant guidance for otter:

- Scottish Natural Heritage ('SNH'), '*Technical Advice Note #2: Otter Surveys*' [25];
- DoAHG, '*National Otter Survey of Ireland 2010 / 12*' [26]; and,
- NRA, now Transport Infrastructure Ireland ('TII'), '*Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes*,' [20].

2.3.2.5 Harbour Porpoise

The Site was assessed for its potential to support harbour porpoise, which have been designated as a conservation interest species for European sites within 15km of the Site. An appraisal of the suitability of the Site and surrounding waters for harbour porpoise was completed. This assessment considered habitat suitability, levels of vessel activity and disturbance and the potential for the area to support foraging, commuting or resting harbour porpoise.

The survey was informed by a review of available records from the NBDC and the Irish Whale and Dolphin Group ('IWDG').

2.3.2.6 Grey and Harbour Seal

The survey aimed to identify and assess the potential presence and use of the Site and surrounding area by grey seal (*Halichoerus grypus*) and harbour seal (*Phoca vitulina*) through the identification of suitable habitat and any evidence of seal activity. Evidence searched for included:

- Haul-out sites (e.g. exposed rocks, slipways, pontoons and sheltered areas suitable for resting);
- Individuals present within the harbour and adjacent waters;
- Tracks, slides or access points used to move between the water and haul-out locations;
- Signs of regular use, including faeces and moulting remains; and
- Areas providing suitable foraging, breeding or resting habitat.

As part of the survey effort, a boat was utilised in order to access under the pier on which the Site is located and also under the nearby Carlisle Pier. The boat survey assessed all accessible areas to identify suitable haul-out sites under the piers.

The field survey of the Site was undertaken in accordance with current best practice and relevant guidance for marine mammals, including:

- NPWS, Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters [27].

2.3.2.7 Invasive Species

The Site was visually assessed for the presence of any noxious / invasive species that are regulated under the European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374/2024) [28], such as Japanese knotweed (*Reynoutria japonica*) and Himalayan balsam (*Impatiens glandulifera*).

The Site was also assessed for the presence of non-regulated invasive species that have the potential to effect local biodiversity.

2.3.2.8 Other Species

In addition, an assessment was carried out of the potential for the Site to support any other species considered to be of value for biodiversity, including those identified as occurring locally based on the findings of the desktop study and professional judgment.

2.3.3 Survey Limitations

The habitat survey was undertaken outside of the optimal botanical season for flowering plants, which is usually considered to be April – September inclusive. However, given the

nature of the habitats on site, it is not considered that this limitation will alter the findings of this assessment and no further habitat surveys are considered necessary.

No other survey limitations were encountered.

2.4 Assessment Methodology

The current Guidelines for Ecological Impact Assessment in the UK and Ireland [29] recognise that an ecological assessment cannot consider in detail every individual species or habitat that may potentially be affected by a Proposed Development.

The EclA process aims to identify those ecological receptors that could be significantly affected by the Proposed Development, i.e., where the effects on the receptor are of sufficient concern that they could influence the planning decision, or for which the development could result in the breach of relevant legislation.

The effects of the Proposed Development on these receptors are then assessed, taking into account the sensitive design measures (avoidance measures) and, where necessary, the mitigation measures incorporated as part of the Proposed Development. The scope of the EclA is determined iteratively.

2.4.1 Significance Evaluation Methodology

As part of the high-level assessment reported in Section 4.1, the conclusion about whether effects are sufficiently likely to be significant as to merit more detailed assessment is informed by a judgement about whether:

- The Site, habitat or species population is of sufficient quality or size that an effect upon it could be significant; and,
- The environmental changes associated with the development are such that there is the potential for a significant effect to occur (i.e., for the integrity of a site or for the conservation status of a habitat area or species population to be affected).

If the answer to both of these questions is yes, the relevant receptor would be subject to more detailed assessment, and the significance of effects would be evaluated based on the methodology that is outlined below.

2.4.1.1 Negative Effects

For biodiversity receptors, an effect is assessed as being significant if the favourable conservation status of the specified biodiversity receptor is compromised by the Proposed Development. Conservation status is defined by the Chartered Institute of Ecology and Environmental Management ('CIEEM') [29] as follows:

- *"Habitats – conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area;"* and,
- *"Species – conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area."*

The decision as to whether the conservation status of the specified biodiversity receptor has been compromised has been made using professional judgement, drawing upon the results of the assessment of how each receptor will be affected by the Proposed Development.

A similar procedure has been used for designated sites that are affected by the Proposed Development, except that the focus is on the effects on the integrity of each site, defined as "the coherence of its ecological structure and function, across its whole area, that enables it

to sustain the habitat, complex of habitats and / or the levels of populations of the species for which it was designated.”

2.4.1.2 Positive Effects

A positive effect is assessed as being ‘significant’ if development activities are predicted to cause:

- An improvement in the condition of a habitat / species population from unfavourable to favourable – condition data are only available for some European sites, but professional judgement and a review of available literature have been used to apply the same principle to habitats / species elsewhere; or,
- Partial or total restoration of a site’s favourable condition.

If a species population, habitat or site is already in favourable condition, it is still possible for there to be a significant positive effect. There is, however, no simple formula for determining when such effects are significant, given the complexities of assessing these types of effects. In such cases, decisions about significance have therefore been made on a case-by-case basis.

2.5 Identification of Potential Biodiversity Receptors

The assessment of the ecological Zone of Influence of the Proposed Development concluded that the development would be likely to result in changes in the extent and / or condition of the existing land cover on the Site, with potential effects on habitats and species on the Site. There is also the potential for effects on any areas that adjoin the site, where fauna might make use of the land cover on-site.

In summary, therefore, the ecological Zone of Influence of the Proposed Development is defined as:

- The Site of the Proposed Development (fauna and flora); and,
- Habitats adjoining the Site (fauna).

In the case of designated sites, a precautionary approach has been taken and the search area extended to identify sites outside of the zone of ecological influence. This information was used to further inform the assessment process and to ensure that the on-site habitats are not of importance for either habitats or species for which these sites have been designated.

As a basis for determining which biodiversity receptors need to be assessed within the Zone of Influence of the development, CIEEM’s guidelines on EclA recommend that consideration be given to the biodiversity conservation value of the sites, habitats and species that occur within the zone (as appropriate). The guidelines also refer to the need to consider the legal status that is afforded to some species and habitats (refer to Box 1).

Legal status needs to be considered because all developments must comply with the requirements of the law. By implication, therefore, there cannot be significant effects as a result of non-compliance with the law. However, it should be noted that, notwithstanding legal requirements, there is the potential for some legally protected species to be significantly affected in relation to their biodiversity conservation value.

In relation to biodiversity conservation value, only those designated sites, habitat types and species that fall within one or more of the categories defined in Box 1 are of sufficient importance that they could be significantly affected by the Proposed Development.

Drawing upon the biological data assembled for the purposes of this EclA (Section 4), the potential receptors in relation to the Proposed Development are discussed in Section 5.1.

3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

3.1 Description of the Proposed Development

DLRCC are proposing to construct a new ramp and steps connecting Harbour Plaza with the lower St Michael's Pier. The latter is to become a new resurfaced public plaza with a gift kiosk, planting, seating, new railings and views of the sea.

Construction of the new external access ramp and adjoining steps is to provide universal, wheelchair-accessible egress for all members of the public, while streamlining and simplifying the journey from boat to Dún Laoghaire Town for cruise ferry passengers.

The proposed works consist of:

- The removal of the two existing access stairs (one from the upper plaza level to the lower plaza level and one from the upper plaza level to the existing building);
- Partial demolition and making good of a low wall at Harbour Plaza;
- Reconfiguration of the parking and access arrangements, including partial demolition of a low wall and amendments to vehicular routes within the lower/undercroft parking level;
- Diversion of existing drainage and underground services;
- Construction of a new access ramp and stairs to link the upper and lower plaza levels;
- Provision of new line markings to the car park and access road areas;
- Relocation of kiosk and moveable sheltered walkways;
- Provision of new historic lifeboat display; and,
- New planting and landscaping throughout.

3.2 Drainage

Surface Water Drainage

Due to the close proximity of the proposed works to the sea, no uncontrolled runoff of surface water from the works area will be permitted from the Site.

During the Construction and Demolition Phase, all runoff from the area of works and compound it to pass through a silt bag and petrol separator prior to being discharged into the existing surface water network for discharge. All surface water gullies and access points within the area of works and compound are to be bunged to prevent direct runoff from occurring.

During the Operational Phase, the Proposed Development will not alter the existing surface water drainage regime, and no changes to current surface water drainage arrangements are proposed.

Foul Water

No foul water will occur as part of the Proposed Development.

3.2.1 Site Access

Access to the Proposed Development will be via the Harbour Road. The Contractor will establish a site boundary with the provision of appropriate signage, construction of hoarding, and welfare facilities, site office and establishment of appropriate access and egress.

Controlled access points to the site, in the form of gates or doors, will be kept locked for any time that these areas are not monitored (e.g. outside working hours). The hoarding shall be a

minimum 2m high, solid, painted, well-maintained and contain graphics relating to the Proposed Development.

3.2.2 Construction Compound

The construction compound will be located on-site and shall primarily consist of:

- Site Offices & associated welfare facilities;
- Materials drop-off and storage areas;
- Set down areas for HGVs;
- Temporary car parking facilities; and,
- Temporary fencing and hoarding.

Materials are to be stored on will be stored in a safe manner, and will minimise the risk of any negative environmental effects and will be managed on a 'just-in-time' basis.

3.3 Construction and Demolition Procedure

During the Construction and Demolition Phase, the methods of working will comply with all relevant legislation and best practice guidelines in reducing the environmental adverse effects of the works. Although Construction Phase adverse effects are generally of a short-term duration and are localised in nature, the adverse effects will be reduced as far as practicable through compliance with current construction industry guidelines.

An outline Construction Environmental Management Plan ('CEMP') has been prepared by Donnachadh O'Brien and Associates Consulting Engineers. A final CEMP will be submitted to the planning authority in advance of works commencing at the Site. The following guidance will be referred to and will be followed during the Construction and Demolition Phase of the Proposed Development to prevent water pollution that may occur within the area:

- Construction Industry Research and Information Association ('CIRIA') Guidance C532: *Control of Water Pollution from Construction Sites. Guidance for Consultants and Contractors* [30];
- CIRIA Guidance C741: *Environmental good practice on site guide* [31];
- CIRIA Guidance C750D: *Groundwater control: design and practice* [32];
- CIRIA Guidance C692: *Environmental Good Practice on Site* [33];
- Enterprise Ireland, *Best Practice Guide BPGCS005 – Oil Storage Guidelines* [34];
- CIRIA Guidance C811: *Environmental Good Practice on Site, 5th Edition* [35];
- CIRIA Guidance C648: *Control of Water Pollution from Linear Construction Projects: Technical Guidance* [36];
- CIRIA Guidance C649: *Control of Water Pollution from Linear Construction Projects: Site Guide* [37];
- Government of Ireland, *Safety, Health and Welfare at Work (Construction) Regulations 2013* [38];
- TII, *Road Drainage and the Water Environment DN-DNG-03065* [39];
- ICE Earthworks, *A Guide* [40];
- TII, *Specification for Road Works Series 600 – Earthworks* [41]; and,

- All works will be undertaken in accordance with the Inland Fisheries Ireland ('IFI'), "*Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters*" [42].
- NPWS, *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* [27].
- NRA, now TII, *Guidance for the Treatment of Otters Prior to the Construction of National Road Schemes* [43];
- NRA, now TII, *Guidance for the Treatment of Bats Prior to the Construction of National Road Schemes* [45]; and,
- NRA, now TII, *Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads* [46].

The proposed works will aim to be completed in approximately 3-4 months from the grant of planning conditions. Working hours will generally be restricted to between 07:00 – 18:00 hours Monday to Friday inclusive and between 09:00 – 16:00 hours on Saturdays.

Construction work will not be permitted on Sundays, public holidays or at night-time except where safety concerns necessitate it or if agreed in advance with the Planning Authority.

4 STUDY RESULTS

4.1 Desk-Based Study

Prior to conducting any field surveys, a desk-based review of information sources was completed. This baseline information provided a valuable insight into the types of flora and fauna that may occur on-site and allowed for the identification of features / habitats located off-site that may require further assessment.

4.1.1 European Designated Sites

In accordance with the European Commission Methodological Guidance [47] and PO GIB18, PO GIB19 and PO GIB21 of the DLRCDP [9], a list of European Designated sites that can be potentially affected by the Proposed Development has been compiled. Guidance for Planning Authorities prepared by the Department of Environment, Heritage and Local Government [48] states that defining the likely zone of impact for the screening and the approach used will depend on the nature, size, location and the likely significant effects of the project. The key variables determining whether or not a particular European Designated site is likely to be negatively affected by a project are:

- The physical distance from the project to the European Designated site;
- The presence of impact pathways;
- The sensitivities of the ecological receptors; and,
- The potential for in-combination effects.

All SPAs and SACs within 15km have been considered to assess their ecological pathways and functional links. As acknowledged in the OPR guidelines [11], few projects have a zone of influence this large; however, the identification of European Designated sites within 15km has become widely accepted as the starting point for the screening process. For this reason, all SPAs and SACs within 15km have been identified for consideration as part of the screening.

There are 17 European Designated sites located within 15km of the Site - these are identified in Figure 4-1 and Table 4-1.

Figure 4-1: European Designated Sites within 15km of the Site

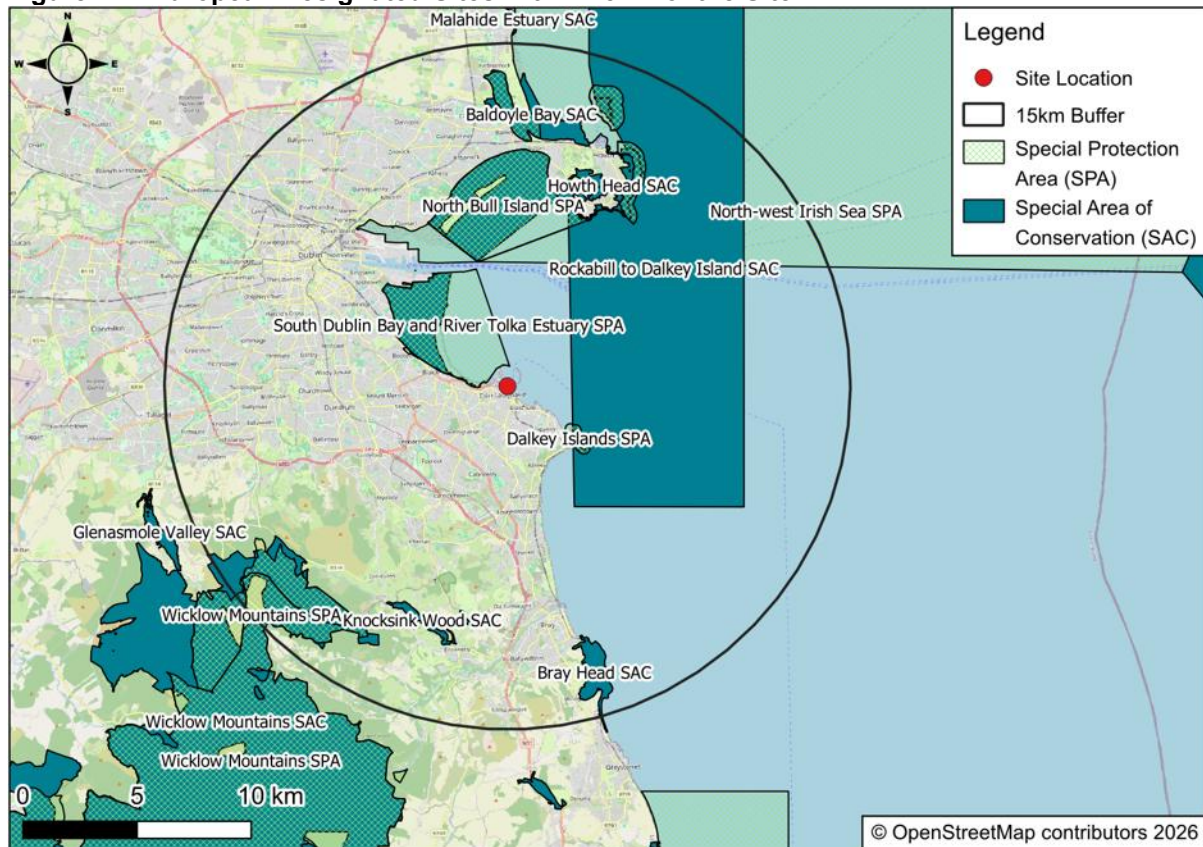


Table 4-1: European Designated Sites within 15km of the Site

Site Name	Code	Distance (km)	Direction from the Site
Special Areas of Conservation ('SAC')			
South Dublin Bay SAC	000210	Ca. 1.4km	W
Rockabill to Dalkey Island SAC	003000	Ca. 2.8km	E
North Dublin Bay SAC	000206	Ca. 5.6km	N
Howth Head SAC	000202	Ca. 8.5km	NE
Ballyman Glen SAC	000713	Ca. 10km	S
Knocksink Wood SAC	000725	Ca. 10.4km	SW
Baldoyle Bay SAC	000199	Ca. 10.8km	N
Bray Head SAC	000714	Ca. 11.4km	SE
Wicklow Mountains SAC	002122	Ca. 11.7km	SW
Ireland's Eye SAC	002193	Ca. 12.4km	NE
Special Protection Area ('SPA')			

Site Name	Code	Distance (km)	Direction from the Site
South Dublin Bay and River Tolka Estuary SPA	004024	Ca. 0.8km	NW
Dalkey Islands SPA	004172	Ca. 3.1km	SE
North Bull Island SPA	004006	Ca. 5.5km	N
Howth Head Coast SPA	004113	Ca. 9km	NE
Baldoyle Bay SPA	004016	Ca. 10.8km	N
Ireland's Eye SPA	004117	Ca. 12km	NE
Wicklow Mountains SPA	004040	Ca. 12km	SW

The Site is located adjacent to Dublin Bay but is situated within the enclosed environment of Dún Laoghaire Harbour. Given the small scale and localised nature of the Proposed Development, together with the absence of direct hydrological connectivity, likely significant effects on North Dublin Bay SAC, Howth Head SAC, Ballyman Glen SAC, Knocksink Wood SAC, Baldoyle Bay SAC, Bray Head SAC, Wicklow Mountains SAC, Ireland's Eye SAC, North Bull Island SPA, Howth Head Coast SPA, Baldoyle Bay SPA, Ireland's Eye SPA and Wicklow Mountains SPA can be objectively excluded. These sites are therefore screened out from further consideration.

However, South Dublin Bay SAC, Rockabill to Dalkey Island SAC, Dalkey Islands SPA and South Dublin Bay and River Tolka Estuary SPA are located within 5km of the Site and are hydrologically connected via the waters of Dún Laoghaire Harbour and Dublin Bay.

Further consideration to the European Designated sites listed in Table 4-1 is provided in the AA that has been submitted as part of the overall planning application.

4.1.2 Nationally Designated Sites

Nationally designated sites within 5km of the Site were investigated as per PO GIB18, PO GIB19 and PO GIB21 of the DLRCDP [9].

There are no NHAs within 5km of the Site. There are three pNHAs located within 5km of the Site. Refer to Figure 4-2 for context.

Figure 4-2: Nationally Designated Sites within 5km of the Site

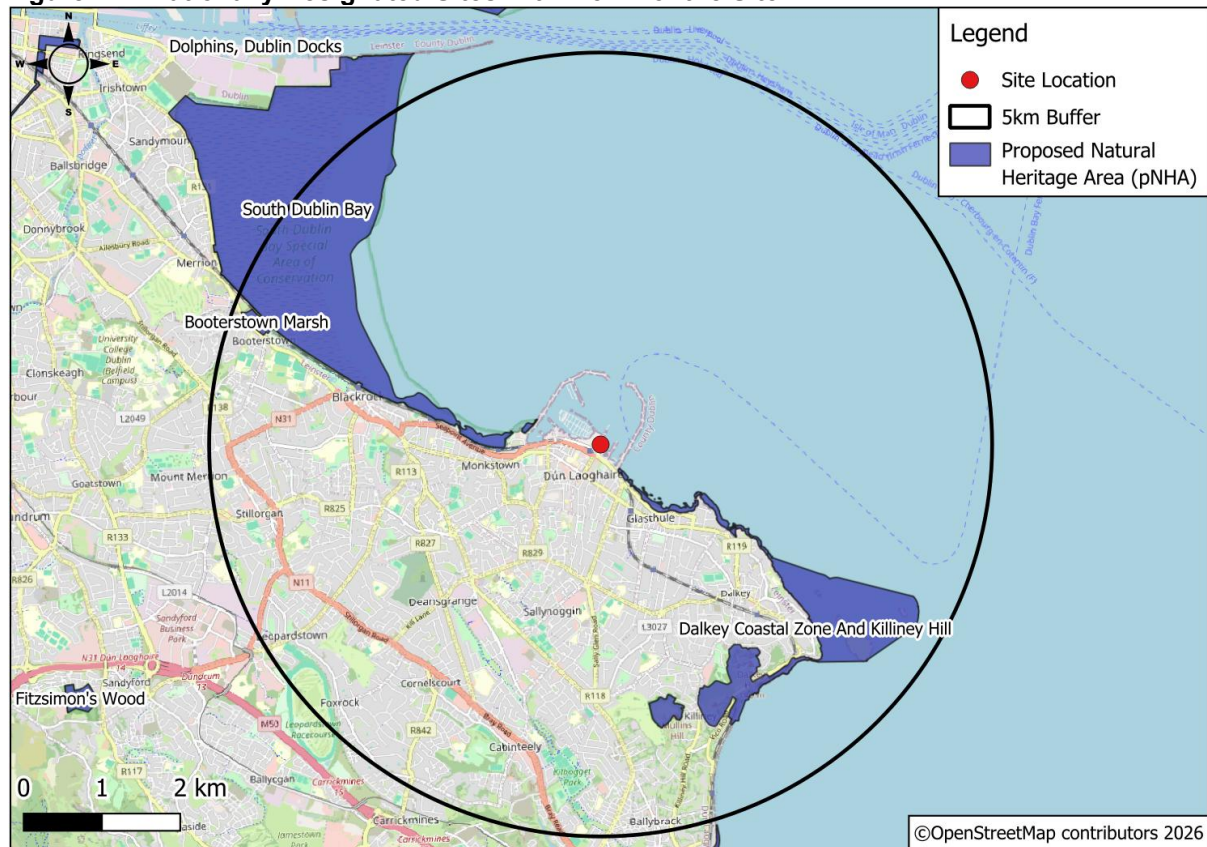


Table 4-2: Proposed Natural Heritage Areas within 5km of the Site

Site Name	Code	Distance (km) & Direction	Qualifying Interest
Proposed Natural Heritage Areas ('pNHA')			
Dalkey Coastal Zone and Killiney Hill pNHA	001206	Ca. 330m E	This site includes the coastal stretch from Scotman's Bay to south of White Rock, the Dalkey Island group and Dalkey Sound, and Killiney Hill. This site is of importance as it represents a complete coastal ecosystem. The marine area is especially valuable for its wide variety of invertebrates. The islands - Dalkey Island, Lamb Island, Maiden Rock, and the Muglins - are of note due to the assemblage of notable bird species found there. They provide key breeding, nesting, and roosting sites for many seabirds such as gulls and terns, with large seasonal populations gathering there. These relatively undisturbed areas make them ideal wildlife refuges. Killiney Hill and the nearby drift banks add further importance through their plant diversity. The hill supports coastal heath and woodland, while the drift banks contain warm soils that allow rare plants like Bee Orchid and Bloody Crane's-bill to grow. Together, the site is also geologically important and shows a wide range of natural coastal habitats in one area.

Site Name	Code	Distance (km) & Direction	Qualifying Interest
South Dublin Bay pNHA	000210	Ca. 850m W	A site synopsis for this pNHA from the NPWS is unavailable. However, this Site encompasses most of the same area as the South Dublin Bay SAC. Therefore, the qualifying interests of this pNHA will likely be the same as the South Dublin SAC.
Boosterstown Marsh pNHA	001205	Ca. 4.5km W	Boosterstown Marsh lies approximately 5km south of Dublin City. It is the only saltmarsh in South Dublin and, despite concerns about rising salinity, it remains a valuable habitat for many birds and hosts diverse flora. Due to irregular flooding and salinity fluctuations, the site exhibits an interesting gradient from freshwater plant communities in the northwest to a more saline-tolerant flora in the southeast. The protected plant Borrer's Saltmarshgrass (<i>Puccinellia fasciculata</i>), known only from a few locations in Ireland, is found here. Boosterstown Marsh is a site of local and regional ornithological importance. Of particular interest are the high concentrations of Snipe that occur in winter. The marsh is also used as a high-tide roost by a variety of waders and gulls. Other species that frequent the marsh include Kingfisher, an Annex I species under the E.U. Birds Directive. Rarer birds of coastal marshes have been recorded, notably Little Egret and Yellow Wagtail.

4.1.3 NBDC Protected Species

Table 4-3 provides a summary of records of legally protected or otherwise notable species that occurred within 2km of the Site at the time of writing this report [15]. The NBDC records were checked on 23rd June 2026. The following NBDC grid squares were checked: O22J, O2330, O2430, O2530, O2630, O22P, O2629, O2627, O2527, O2427, O2327 [15].

Only species recorded within the past 10 years were included in Table 4-3. The parameter of 10 years was chosen based on habitat adaption and modification; it is considered that any records over 10 years old are not representative of the current distribution of species populations.

Table 4-3: NBDC Notable / Protected Species within 2km of the Site

Common Name	Scientific Name	Date of Last Record*	Designation
Amphibians			
Common Frog	<i>Rana temporaria</i>	29/02/2020	Wildlife Acts 1976 / 2000 EU Habitats Directive Annex V
Smooth Newt	<i>Lissotriton vulgaris</i>	02/08/2019	Wildlife Acts 1976 / 2000
Bird Species*			
Arctic Tern	<i>Sterna paradisea</i>	05/09/2024	Wildlife Acts 1976 / 2000 EU Habitats Directive Annex I Bird Species Birds of Conservation Concern Amber List
Bar-tailed Godwit	<i>Limosa lapponica</i>	10/12/2024	Wildlife Acts 1976 / 2000 EU Habitats Directive Annex I Bird Species

Common Name	Scientific Name	Date of Last Record*	Designation
			Birds of Conservation Concern Red List
Barn Swallow	<i>Hirundo rustica</i>	26/10/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Black Guillemot	<i>Cephus grylle</i>	28/12/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	22/09/2025	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Black Legged Kittiwake	<i>Rissa tridactyla</i>	07/12/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Red List
			Threatened Species: OSPAR Convention
Black-tailed Godwit	<i>Limosa limosa</i>	10/12/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Red List
Brent Goose	<i>Branta bernicla</i>	17/01/2025	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Common Coot	<i>Fulica atra</i>	16/11/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II and III Section I and II Bird Species
			Birds of Conservation Concern Amber List
Common Eider	<i>Somateria mollissima</i>	04/12/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II Section I and Annex III Section II Bird Species
			Birds of Conservation Concern Red List
Common Goldeneye	<i>Bucephala clangula</i>	04/12/2023	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II Section II Bird Species
			Birds of Conservation Concern Red List
Common Guillemot	<i>Uria aalge</i>	22/09/2025	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Common Kestrel	<i>Falco tinnunculus</i>	31/07/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Red List
Common Kingfisher	<i>Alcedo atthis</i>	02/11/2024	Wildlife Acts 1976 / 2000
			EU Birds Directive Annex I Bird Species

Common Name	Scientific Name	Date of Last Record*	Designation
			Birds of Conservation Concern Amber List
Common Linnet	<i>Linaria cannabina</i>	20/12/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Common Redshank	<i>Tringa totanus</i>	22/09/2025	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Red List
Common Sandpiper	<i>Actitis hypoleucos</i>	21/04/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Common Scoter	<i>Melanitta nigra</i>	10/12/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II Section II and Annex III Section III Bird Species
			Birds of Conservation Concern Red List
Common Shelduck	<i>Tadorna tadorna</i>	10/12/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Common Snipe	<i>Gallinago gallinago</i>	09/09/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II Section I and Annex III and Section III Bird Species
			Birds of Conservation Concern Red List
Common Starling	<i>Sturnus vulgaris</i>	23/08/2025	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Common Swift	<i>Apus apus</i>	04/05/2025	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Red List
Common Tern	<i>Sterna hirundo</i>	16/05/2025	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Bird Species
			Birds of Conservation Concern Amber List
Dunlin	<i>Calidris alpina</i>	22/09/2025	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Bird Species
			Birds of Conservation Concern Red List
Eurasian Curlew	<i>Numenius arquata</i>	26/12/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II Section II Bird Species
			Birds of Conservation Concern Red List
Eurasian Oystercatcher		22/09/2025	Wildlife Acts 1976 / 2000

Common Name	Scientific Name	Date of Last Record*	Designation
	<i>Haematopus ostralegus</i>		Birds of Conservation Concern Red List
Eurasian Teal	<i>Anas crecca</i>	27/09/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II Section I and Annex III Section II Bird Species
			Birds of Conservation Concern Amber List
Eurasian Tree Sparrow	<i>Passer montanus</i>	24/05/2020	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Eurasian Wigeon	<i>Mareca penelope</i>	30/09/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II Section I and Annex III and Section II Bird Species
			Birds of Conservation Concern Amber List
Eurasian Woodcock	<i>Scolopax rusticola</i>	07/02/2018	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II Section I and Annex III and Section III Bird Species
			Birds of Conservation Concern Red List
European Golden Plover	<i>Pluvialis apricaria</i>	08/10/2023	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Annex II Section II and Annex III and Section III Bird Species
			Birds of Conservation Concern Red List
European Shag	<i>Gulosus aristotelis</i>	30/04/2025	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Great Cormorant	<i>Phalacrocorax carbo</i>	06/05/2025	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Great Crested Grebe	<i>Podiceps cristatus</i>	26/12/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Great Northern Diver	<i>Gavia immer</i>	22/12/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Bird Species
			Birds of Conservation Concern Amber List
Grey Plover	<i>Pluvialis squatarola</i>	25/10/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Red List
Herring Gull	<i>Larus argentatus</i>	22/09/2025	Wildlife Acts 1976 / 2000

Common Name	Scientific Name	Date of Last Record*	Designation
			Birds of Conservation Concern Amber List
House Martin	<i>Delichon urbicum</i>	04/10/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
House Sparrow	<i>Passer domesticus</i>	04/01/2025	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Lesser Black-backed Gull	<i>Larus fuscus</i>	22/12/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Little Egret	<i>Egretta garzetta</i>	06/10/2025	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Bird Species
			Birds of Conservation Concern Green List
Little Gull	<i>Hydrocoloeus minutus</i>	02/01/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Bird Species
			Birds of Conservation Concern Amber List
Little Tern	<i>Sternula albifrons</i>	25/06/2022	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Bird Species
			Birds of Conservation Concern Amber List
Long-tailed Duck	<i>Clangula hyemalis</i>	01/05/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II Section II Bird Species
			Birds of Conservation Concern Red List
Mallard	<i>Anas platyrhynchos</i>	16/11/2024	Wildlife Acts 1976 / 2000
			EU Birds Directive Annex II Section I and Annex III and Section I Bird Species
			Birds of Conservation Concern Amber List
Meadow Pipit	<i>Anthus pratensis</i>	15/12/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Red List
Mediterranean Gull	<i>Ichthyaetus melanocephalus</i>	22/10/2025	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Bird Species
			Birds of Conservation Concern Amber List
Merlin	<i>Falco columbarius</i>	03/09/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Bird Species

Common Name	Scientific Name	Date of Last Record*	Designation
			Birds of Conservation Concern Amber List
Mew Gull	<i>Larus canus</i>	28/12/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Mute Swan	<i>Cygnus olor</i>	20/11/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Northern Gannet	<i>Morus bassanus</i>	07/12/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Northern Lapwing	<i>Vanellus vanellus</i>	29/11/2023	Wildlife Acts 1976 / 2000
			EU Birds Directive Annex II Section II Bird Species
			Birds of Conservation Concern Red List
Northern Wheatear	<i>Oenanthe oenanthe</i>	07/10/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Peregrine Falcon	<i>Falco peregrinus</i>	17/08/2025	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Bird Species
			Birds of Conservation Concern Green List
Razorbill	<i>Alca torda</i>	08/12/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Red List
Red Knot	<i>Calidris canutus</i>	11/06/2024	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Red List
Red-breasted Merganser	<i>Mergus serrator</i>	08/12/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II Section II Bird Species
			Birds of Conservation Concern Amber List
Red-throated Diver	<i>Gavia stellata</i>	19/12/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Bird Species
			Birds of Conservation Concern Amber List
Ringed Plover	<i>Charadrius hiaticula</i>	29/09/2025	Wildlife Acts 1976 / 2000
			Birds of Conservation Concern Amber List
Roseate Tern	<i>Sterna dougallii</i>	05/09/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex I Bird Species
			Birds of Conservation Concern Amber List

Common Name	Scientific Name	Date of Last Record*	Designation
			Threatened Species: OSPAR Convention
Sand Martin	<i>Riparia riparia</i>	16/09/2024	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Sandwich Tern	<i>Thalasseus sandvicensis</i>	22/09/2025	Wildlife Acts 1976 / 2000 EU Habitats Directive Annex I Bird Species Birds of Conservation Concern Amber List
Sky Lark	<i>Alauda arvensis</i>	19/12/2024	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Amber List
Stock Pigeon	<i>Columba oenas</i>	05/01/2024	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Red List
Tufted Duck	<i>Aythya fuligula</i>	16/11/2024	Wildlife Acts 1976 / 2000 EU Habitats Directive Annex II Section I and Annex III and Section II Bird Species Birds of Conservation Concern Amber List
Velvet Scoter	<i>Melanitta fusca</i>	29/01/2023	Wildlife Acts 1976 / 2000 EU Habitats Directive Annex II Section II Bird Species Birds of Conservation Concern Red List
Whooper Swan	<i>Cygnus cygnus</i>	12/10/2024	Wildlife Acts 1976 / 2000 EU Habitats Directive Annex I Bird Species Birds of Conservation Concern Amber List
Yellowhammer	<i>Emberiza citrinella</i>	23/12/2024	Wildlife Acts 1976 / 2000 Birds of Conservation Concern Red List
Bat Species			
Leisler's Bat	<i>Nyctalus leisleri</i>	30/06/2022	Wildlife Acts 1976 / 2000 EU Habitats Directive Annex IV
Common Pipistrelle	<i>Pipistrellus pipistrellus sensu stricto</i>	27/09/2020	Wildlife Acts 1976 / 2000 EU Habitats Directive Annex IV
Terrestrial Mammals			
Eurasian Pygmy Shrew	<i>Sorex minutus</i>	12/11/2016	Wildlife Acts 1976 / 2000
Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	19/11/2017	Wildlife Acts 1976 / 2000
European Otter	<i>Lutra lutra</i>	03/07/2018	Wildlife Acts 1976 / 2000 EU Habitats Directive Annex II and IV

Common Name	Scientific Name	Date of Last Record*	Designation
Irish Hare	<i>Lepus timidus subsp. Hibernicus</i>	31/12/2018	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex V
West European Hedgehog	<i>Erinaceus europaeus</i>	30/07/2024	Wildlife Acts 1976 / 2000
Aquatic Species**			
Cod	<i>Gadus morhua</i>	16/09/2021	Threatened Species: OSPAR Convention
Common Dolphin	<i>Delphinus delphis</i>	29/07/2022	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex IV
Harbour Porpoise	<i>Phocoena phocoena</i>	06/11/2023	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II and IV
			Threatened Species: OSPAR Convention
Common Seal	<i>Phoca vitulina</i>	13/02/2024	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II
Dog Whelk	<i>Nucella lapillus</i>	21/02/2026	Threatened Species: OSPAR Convention
European Eel	<i>Anguilla anguilla</i>	12/07/2025	Threatened Species: OSPAR Convention
Grey Seal	<i>Halichoerus grypus</i>	10/11/2025	Wildlife Acts 1976 / 2000
			EU Habitats Directive Annex II and IV
Thornback Ray	<i>Raja clavata</i>	07/05/2018	Threatened Species: OSPAR Convention
Invasive species***			
Brown Rat	<i>Rattus norvegicus</i>	22/09/2018	High Impact Invasive Species
			Regulation S.I. 374 (Ireland)
Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	26/10/2024	High Impact Invasive Species
			Regulation S.I. 374 (Ireland)
Harlequin Ladybird	<i>Harmonia axyridis</i>	15/01/2026	High Impact Invasive Species
			Regulation S.I. 374 (Ireland)
Japanese Knotweed	<i>Reynoutria japonica</i>	27/05/2023	High Impact Invasive Species
			Regulation S.I. 374 (Ireland)
Three-cornered Garlic	<i>Allium triquetrum</i>	29/03/2025	Medium Impact Invasive Species
			Regulation S.I. 374 (Ireland)

*Note that only Annex I bird species protected under European legislation or nationally protected bird species with amber or red-list status according to Birds of Conservation Concern in Ireland 2020-2026 were included in this Table.

** The OSPAR Convention to Protect the Marine Environment of the Northeast Atlantic has identified a number of marine species and habitats which require protection. According to the NPWS, "Ireland committed to establishing marine protected areas to protect biodiversity (i.e., OSPAR MPAs). No legislation is currently used in Ireland to

legally underpin protected areas established to fulfil commitments under international conventions. Therefore, since the creation of OSPAR MPAs would not afford any legal protection to the relevant areas on their own, Ireland (like other OSPAR contracting Parties) established a number of its SACs as OSPAR MPAs for marine habitats." [49] Therefore, the marine species and habitats listed under this convention fall under the protection of the EU Habitats Directive and their associated European sites.

*** Only invasive species that are regulated under S.I. 374 were included in the Table.

4.1.4 Irish Whale and Dolphin Group

A review of the IWDG 12-month archive of verified sightings identified four records of cetacean species within Dublin Bay, in proximity to Dún Laoghaire Harbour and Scotsman's Bay [50]. No records were identified within Dún Laoghaire Harbour itself.

Table 4-4: Irish Whale and Dolphin Group Verified Sightings

Record Number	Sighting Date	Species	Location
#51098	17/08/2025	Harbour Porpoise	Dún Laoghaire
#51310	21/09/2025	Harbour Porpoise	Dún Laoghaire
#55235	26/04/2026	Dolphin species, possibly Harbour Porpoise	Dún Laoghaire
#50670	12/07/2025	Harbour Porpoise	Scotsmans Bay, Dún Laoghaire
#50885	02/08/2025	Harbour Porpoise	Dún Laoghaire

4.1.5 I-WeBS Data

The Site is not located within any I-WeBS sites, given its location within the marina. However, a review of the Site Summary Tables for Dublin Bay (Site Code: 0U404) and South Dublin Coastline (Site Code: 0U915) was undertaken in order to gain an understanding of the potential assemblage of bird populations that may utilise the areas within the vicinity of the Site.

The I-WeBS data for both sites were publicly available for the wintering seasons between the years 2013/14 and 2022/23. A total of 63 species were recorded during this period. A total of 63 species were recorded in the Dublin Bay site, and a total of 32 species were recorded in the South Dublin Coastline site.

Of the species recorded, a total of 25 species were recorded at numbers of national importance, and a total of six species were recorded at numbers of international importance; see Table 4-5 below.

Table 4-5: Wintering Bird Species recorded at numbers of National Importance (N) and International Importance (I) in the Dublin Bay and South Dublin Coastline I-WeBS sites from 2013/14 to 2022/23 Winter Seasons

Site	Species	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Dublin Bay	Bar-tailed Godwit	I	I	I	I	I	I	I	I	N	I
	Black-tailed Godwit	I	N	I	I	I	I	I	I	I	I
	Cormorant	N				N		N	N	N	

Site	Species	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
	Curlew	N	N	N	N	N	N	N	N	N	N
	Dunlin	N	N	N	N	N	N	N	N	N	N
	Golden Plover	N		N	N	N	N	N			
	Great Crested Grebe	N	N	N	N	N	N	N	N	N	N
	Greenshank	N	N	N	N		N	N	N	N	N
	Grey Heron	N	N	N	N		N	N		N	
	Grey Plover	N	N	N	N	N	N	N	N	N	N
	Knot	N	N	N	I	I	I	I	I	I	N
	Light-bellied Brent Goose	I	I	I	I	I	I	I	I	I	I
	Little Egret	N	N	N	N	N	N	N	N	N	N
	Oystercatcher	N	N	N	N	N	N	N	N	N	N
	Pintail	N	N	N	N	N	N	N	N	N	N
	Red-breasted Merganser	N	N	N	N	N	N	N	N	N	N
	Redshank	I	N	N	N	N	N	N	I	I	N
	Ringed Plover				N	N	N	N		N	N
	Sanderling	N	N	N	N	N	N	N	N	N	N
	Shelduck	N	N	N	N	N	N	N	I	N	N
	Shoveler	N	N	N	N	N	N	N	N	N	N
	Teal	N	N	N	N	N	N	N	N	N	N
	Turnstone	N	N	N	N	N	N	N	N	N	N
	Wigeon	N	N	N	N	N	N	N	N	N	N
South Dublin Coastline	Cormorant						N	N	N		

It should be noted that none of these species identified are considered to exclusively occur within this area and will likely move through the Dublin Bay coastline.

4.2 Field Survey

4.2.1 Habitats

The following section provides details of the field-based assessment that was undertaken for the Site on 9th October 2025 and 31st March 2026.

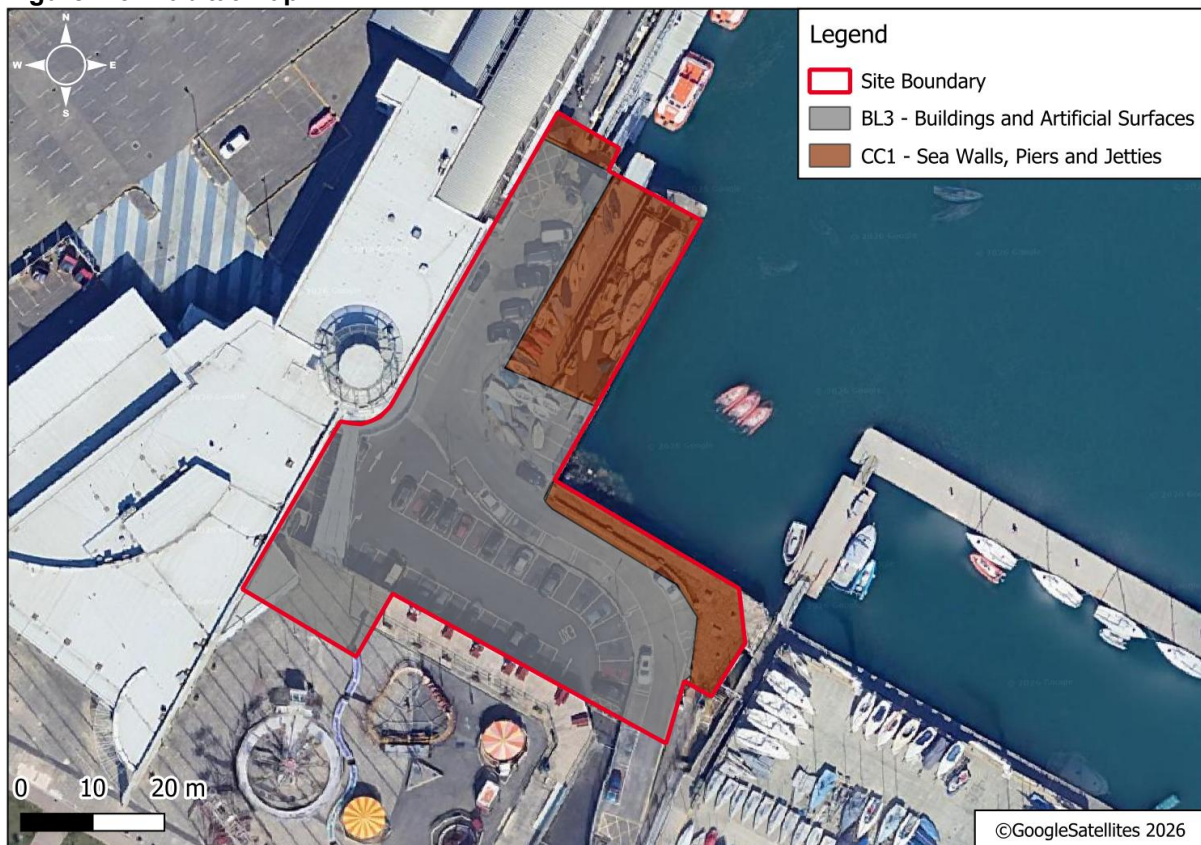
A description of the habitats and features of ecological significance is outlined below and illustrated in Figure 4-3.

Buildings and Artificial Surfaces (BL1) / Sea Walls, Piers and Jetties (CC1)

The majority of the Site comprises existing hardstanding associated with the cruise terminal, access roads and surface car parking areas. These habitats are characterised by concrete, asphalt and paved surfaces. A section of the Site comprises harbour infrastructure, including a pier and associated boat storage area. This structure formed part of the enclosed harbour environment and consists primarily of concrete and stone piers.

No notable species were present, with only isolated ruderal species noted.

Figure 4-3: Habitat Map



4.2.2 Protected / Notable Species

4.2.2.1 Flora

No plant species protected under the Flora Protection Order were recorded on-site.

4.2.2.2 Amphibians

The NBDC held records for common frog and smooth newt within 2km of the Site over the last 10 years [15]. However, given the location of the Site adjacent to the harbour and the nature

of the on-site habitats, comprising mostly areas of hard standing, the Site provided no suitable habitat for amphibians.

4.2.2.3 Bats

The NBDC held records for two species of bat, common pipistrelle and Leisler's bat, within 2km of the Site within the last 10 years [15]. As per the NBDC landscape suitability metric, the Site and surrounding area are considered to be of Moderate suitability for bats (Landscape Suitability Metric Score: 22.2 [15]).

However, the Site consists entirely of hardstanding within a heavily modified urban harbour environment, with no suitable foraging habitat identified.

4.2.2.4 Birds

During the VP and Boat survey, a total of nine species were recorded within the survey area. This included eight species recorded flying over the Site, roosting on infrastructure within the wider harbour or foraging within the harbour waters, which were all classified as non-breeding within the Site due to the fact that they did not interact with the Site:

- Green-listed species: greater black-backed gull (*Larus marinus*) and hooded crow (*Corvus cornix*); and,
- Amber-listed species: cormorant (*Phalacrocorax carbo*), guillemot (*Uria aalge*), herring gull (*Larus argentatus*), lesser black-backed gull (*Larus fuscus*), sandwich tern (*Sterna sandvicensis*) and shelduck (*Tadorna tadorna*).

In addition, black guillemot (*Cepphus grille*) (Amber-listed) were noted flying under the Carlisle Pier and foraging within the adjacent waters during the VP survey. During the VP survey, there were no clear views under the Carlisle Pier, and therefore, the boat survey was conducted.

Black Guillemot Results

VP Survey

During the VP survey, four black guillemots were observed flying, and one individual was recorded calling from beneath the Carlisle Pier. Three individuals were observed foraging within the harbour to the west of the Carlisle Pier, while eight individuals were recorded on the water around the pier.

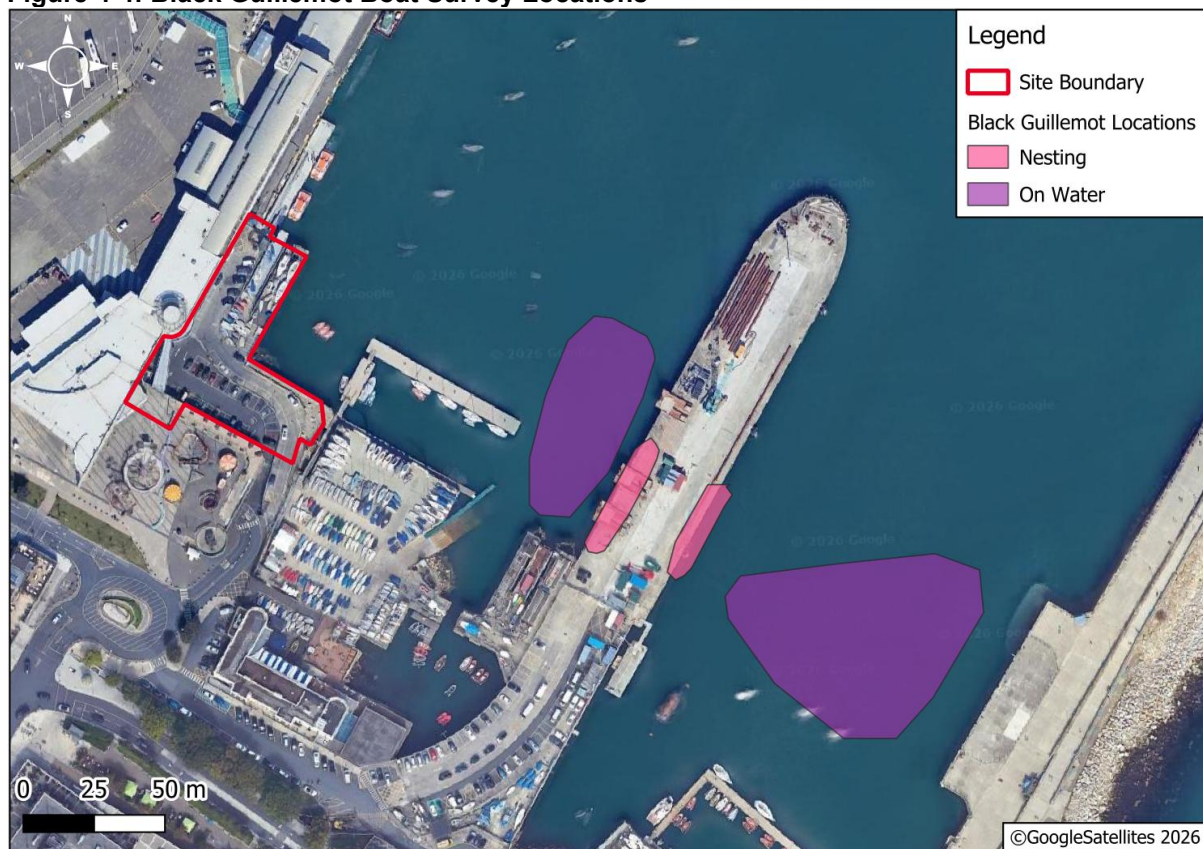
Boat Survey

During the boat-based survey, four breeding pairs of black guillemot were identified nesting beneath the western side of the Carlisle Pier, with a further two breeding pairs recorded beneath the eastern side. In addition, 16 individuals were observed on the water to the west of Carlisle Pier, and eight individuals were recorded on the water to the east.

A number of pigeons were also identified nesting to the southwest and north of Carlisle Pier.

In total, six black guillemot nests were recorded under and along the Carlisle Pier and black guillemot were confirmed as breeding under the Carlisle Pier. Refer to Figure 4-4 for nest locations. There was no breeding of any bird species recorded under the Site. Additionally, no other waterbird species was recorded breeding under the piers.

Figure 4-4: Black Guillemot Boat Survey Locations



4.2.2.5 Otters

The NBDC held records of otter within 2km of the Site over the past 10 years [15].

Furthermore, otter data was provided by the Biodiversity Officer of DLRCC outlined the presence of otter within Dún Laoghaire Harbour. Surveys undertaken in 2019 and 2020 recorded evidence of extensive otter activity throughout the harbour, including multiple sprainting locations on both the East and West Piers. In addition, an otter couch was identified on the inner side of the West Pier. These records demonstrate that Dún Laoghaire Harbour is utilised for commuting, foraging and resting purposes.

However, the otter survey did not identify any evidence of otter activity within 250m of the Site. No suitable habitats for holt construction were identified within the Site, with poor habitat present.

4.2.2.6 Grey and Harbour Seals

The grey seal (*Halichoerus grypus*) and harbour seal (*Phoca vitulina*) are two seal species that breed in Irish waters and are protected under Annex II of the EU Habitats Directive. Both seals are listed under Annex II of the EU Habitats Directive as an animal species of community interest whose conservation requires the designation of SAC's and also under Annex V.

The NBDC held records of grey seals within 2km of the Site over the past 10 years [15].

During the breeding bird VP survey, a single seal, considered likely to be a grey seal, was observed swimming within Dún Laoghaire Harbour. During the subsequent boat-based survey, four seals were recorded beneath the pier. Two individuals were observed in the water, while two others were resting (hauled out) on the adjacent rock armour and rocky ledges.

Both grey and harbour seals are known to regularly utilise Dún Laoghaire Harbour and are frequently observed. Observations are particularly common in the vicinity of Coal Quay, where seals are attracted by the fish shop. The regular presence of seals within the harbour is consistent with the use of sheltered harbour environments for opportunistic foraging, resting and temporary haul-out. No evidence of breeding activity or established haul-out sites was identified within the Site or the immediate surrounding area.

4.2.2.7 Harbour Porpoise

The harbour porpoise (*Phocoena phocoena*) is Ireland's smallest cetacean, and also the most commonly recorded around the Irish coast. Harbour porpoises are listed under Annex II of the EU Habitats Directive as an animal species of community interest whose conservation requires the designation of SACs. Three SACs have harbour porpoises listed as a Qualifying Interest in Ireland; two are in the southwest, while a further SAC has been designated on the east coast extending from Rockabill to Dalkey Island and is located ca. 2.8km from the Site.

The NBDC held records of common dolphin and harbour porpoise within 2km of the Site over the past 10 years [15].

Furthermore, as per IWDG, four records of cetacean species were noted within Dublin Bay, in proximity to Dún Laoghaire Harbour and Scotsman's Bay. No records for harbour porpoise were identified within Dún Laoghaire Harbour itself.

No suitable habitat for these species was identified on-site, as it is entirely hardstanding. In addition, no observation of harbour porpoise was noted during the site walkover and breeding bird surveys completed.

4.2.2.8 Invasive Species

The NBDC held records of five regulated invasive species, including Japanese knotweed, within 2km of the Site [15]. Japanese knotweed is a non-native, highly invasive plant species subject to restrictions under the European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374/2024) [28].

No invasive species were identified on-site.

4.2.2.9 Other Species

No suitable habitat for any other species of note was identified onsite, as it is comprised entirely of hardstanding.

5 CHARACTERISTICS AND POTENTIAL EFFECTS OF THE PROPOSED WORKS AND MITIGATION MEASURES

5.1 Sensitive Design

Specialist ecological input was a key element of the proposed design, to ensure that the design layout of the Proposed Development is sensitive to valued ecological features that occur or may occur within the Site and the surrounding landscape.

In order to minimise the adverse effects of the Proposed Development on biodiversity and, where possible, enhance the ecological value of the Site, a range of environmental measures has been incorporated into the project at the design stage. The key measures relevant to biodiversity for this project have been detailed below:

- All demolition required on-site will be undertaken in accordance with relevant legislation to avoid potential disturbance to nesting birds. These works will be undertaken outside the period of 1st of March to 31st of August; and,
- All works required on-site will be undertaken in accordance with relevant legislation to avoid potential disturbance to the seal moulting season. These works will be undertaken outside the period of 1st July to 31st September.

5.2 Identification of Potentially Significant Effects on Identified Receptors

Based on the methodology that is set out in Section 2.4, Table 5-1 sets out the findings of the evaluation of important and legally protected receptors. Each receptor is assessed, and a scoping justification for each receptor is provided for the Construction, Demolition and Operational Phases of the Proposed Development.

Table 5-1: Valuation of Potential Ecological Receptors

Potential Biodiversity Receptor	Relevant Legislation	Valuation	Scoping Justification	Screening Result
Protected Sites				
European Designated Sites	European Communities (Natural Habitats) Regulations 1997 (as amended)	Internationally designated sites for conservation.	A Stage 1: AA Screening Report has been prepared as part of the overall planning application in line with PO GIB18, PO GIB19 and PO GIB21 of the DLRCDP [9] The Stage 1: AA Screening Report concluded that the Proposed Development would not cause any significant adverse effects on any European sites or any of their designated features of interest and that progression to Stage 2 of the AA process (i.e., Natura Impact Statement) was not considered necessary. For full details on the assessment of impacts to European sites, refer to the AA.	European Designated Sites have been screened out for further consideration. Refer to the AA report submitted as part of planning for further details.
Nationally Designated Sites	Wildlife Act 2000 (as amended)	Nationally designated sites for conservation.	Nationally designated sites within 5km of the Site were investigated as per PO GIB18, PO GIB19 and PO GIB21 of the DLRCDP [9]. There are no NHAs within 5km of the Site. There are three pNHAs are located within 5km of the Site. It is not considered that the Proposed Development will result in any significant effects on any pNHA. This is based on: • The distance separating these pNHAs from the Proposed Development; • The scale and localised nature of the Proposed Development; • All works will be confined to the red line boundary; • The enclosed nature of Dún Laoghaire Harbour and the presence of the harbour walls; • No in-water works will be undertaken; and, • No direct discharges to Dún Laoghaire Harbour or Dublin Bay will occur during construction or operation. This receptor has, therefore, been scoped out from further consideration.	Nationally Designated Sites have been screened out from further consideration.

Potential Biodiversity Receptor	Relevant Legislation	Valuation	Scoping Justification	Screening Result
Habitats				
Buildings and Artificial Surfaces (BL1) / Sea Walls, Piers and Jetties (CC1)	N/A	Low Value Local	The majority of the Site comprises existing hardstanding associated with the existing cruise terminal, access roads and surface car parking areas. These habitats are characterised by concrete, asphalt and paved surfaces. A section of the Site comprises harbour infrastructure, including a pier and associated boat storage area. This structure formed part of the enclosed harbour environment and consists primarily of concrete and stone piers. The habitats and structures within the Site are of low ecological value. Due to the elevated nature of the Site from Dun Laoghaire Harbour waters, and the absence of suitable access routes or habitat features, the Site itself is not considered suitable for otter or seals. However, the structures, rock armour and sheltered waters beneath and immediately adjacent to the Site provide suitable habitat for a number of protected species. These areas have the potential to support birds, while the rock armour and harbour waters are known to be utilised by grey seal and harbour seal for resting, temporary haul-out and potentially moulting. In addition, the rock armour and harbour edge provide suitable commuting and foraging habitat for otter, with records confirming the regular use of Dún Laoghaire Harbour by this species. Accordingly, these species are considered further within the relevant species-specific sections of this report. This habitat is not of conservation value, and any alteration to this habitat is not considered to be significant. Therefore, this receptor was scoped out from further consideration	This habitat has been screened out for further consideration.
Flora and Fauna				
Flora	Flora (Protection) Order 2022 (S.I. No. 235/2022)	N/A	No plant species protected under the Flora Protection Order were noted on-site. Overall, the effect of the Proposed Development on protected flora is considered unlikely to be significant. Therefore, this receptor has been screened out from further consideration.	Flora species have been screened out from further consideration.
Bats	Wildlife Act 2000 (as amended)	Low Value Local	The Site is comprised primarily of hard-standing areas and harbour infrastructure and is considered of low value to this species. None of these habitats were considered suitable for roosting, foraging or commuting bats.	Bats have been screened out from further consideration.

Potential Biodiversity Receptor	Relevant Legislation	Valuation	Scoping Justification	Screening Result
	EU Habitats Directive Annex IV		It should also be noted that, should any bats be utilising the Site or the adjacent areas within the harbour, they are already adapted to high levels of lighting and noise disturbance. Overall, the Proposed Development will result in no habitat loss for this species, and no lighting is currently proposed as part of the Proposed Development. Therefore, it can be concluded that no effects will occur to bats as a result of the Proposed Development. This species has been screened out for further consideration.	
Birds	<u>Nesting Birds</u> Wildlife Act 2000 (as amended)	Low Value Local	During the surveys, the majority of birds identified in the study area were observed roosting on infrastructure in the wider harbour or foraging in the harbour waters. No birds were noted nesting within the Site, and no birds were noted as exclusively utilising the habitats within the Site boundary. Six black guillemot nests were recorded under and along the Carlisle Pier and black guillemot were confirmed as breeding under the Carlisle Pier. There was no breeding of any bird species recorded under the Site. Although it was considered that birds within the vicinity of the Site are subject to ongoing harbour-related activities and are considered to be habituated to anthropogenic noise, the Construction and Demolition Phase has the potential to result in noise effects on species within the wider area. Potential noise sources will include the demolition works required on-site and will be temporary in nature. However, given the abundance of suitable habitat within the wider area, it was considered likely that these birds will move to suitable areas and therefore any noise levels will decrease with distance. Nonetheless, precautionary mitigation will be implemented to avoid any potential effects to breeding birds, refer to Section 5.3 below for further details. During the Operational Phase, it was considered unlikely that bird species will be affected by the Proposed Development due to the fact that birds within the area are habituated to anthropogenic noise emissions of the Harbour. It was considered that there will be no significant change in the noise levels within the area during the Operational Phase.	Birds have been screened in for further consideration.
Harbour Porpoise	Wildlife Act 2000 (as amended)	Low Value Local	No evidence of harbour porpoise was noted within or adjacent to the Site. The NBDC held records of this species within 2km of the Site [15]. Additionally, as per IWDG evidence, this species has been recorded within the vicinity of Dún Laoghaire Harbour; therefore, it is known that these species utilise habitats within the wider Dublin Bay area. However, it is not	Harbour Porpoise have been screened out for further consideration.

Potential Biodiversity Receptor	Relevant Legislation	Valuation	Scoping Justification	Screening Result
	EU Habitats Directive Annex II		considered that the Site and the enclosed harbour environment are of particular importance for this species. The Proposed Development is located entirely within an existing developed area of Dún Laoghaire Harbour, and all works will be confined to within the Site boundary. No piling, dredging or other in-water works are proposed, and therefore there is no impact pathway for direct effects on harbour porpoise or on habitats utilised by this species. Furthermore, the enclosed nature of Dún Laoghaire Harbour and the presence of the harbour walls provide a degree of separation from the wider Dublin Bay, limiting the potential for any effects arising from the Proposed Development to extend beyond the immediate vicinity of the Site. Potential disturbance effects associated with demolition and construction activities are also considered unlikely to be significant. It was considered that marine mammals, including harbour porpoise, within the vicinity of the Site are subject to ongoing harbour operations, commercial shipping, recreational boating and urban activity and are considered to be habituated to anthropogenic noises. Any construction-related noise would be temporary, localised and restricted to the terrestrial environment. In the absence of in-water works, no underwater noise impacts are predicted. Furthermore, harbour porpoises are highly mobile species, and it was considered likely that they will move to suitable areas and therefore any noise levels will decrease with distance. During the Operational Phase, it was considered unlikely that marine mammal species will be affected by the Proposed Development due to the fact that marine mammals within the area are habituated to anthropogenic noise emissions. Therefore, given that the Proposed Development will likely result in similar noise levels to the ongoing harbour activities, it was considered that there will be no significant change in the noise levels within the area during the Operational Phase.	
Grey seal (<i>Halichoerus grypus</i>) and harbour seal (<i>Phoca vitulina</i>)	Wildlife Act 2000 (as amended) EU Habitats Directive Annex II	Low Value Local	Both Grey seal and harbour seal are known to regularly utilise Dún Laoghaire Harbour and were recorded during field surveys undertaken as part of this assessment. Seals are frequently observed within the harbour basin, including in the waters immediately adjacent to the Site and beneath the pier structure, where individuals have been recorded resting and hauling out on the rock armour and ledges below the Site. While no evidence of breeding or pupping activity was identified within the Site, the habitats beneath and adjacent to the Site may provide temporary resting and haul-out opportunities for seals. In addition, these areas may be utilised during the annual moulting period, when seals spend increased periods hauled out ashore.	Grey and harbour seal have been screened in for further consideration.

Potential Biodiversity Receptor	Relevant Legislation	Valuation	Scoping Justification	Screening Result
			The Proposed Development is located entirely within an existing developed area of Dún Laoghaire Harbour, and all works will be confined to the Site boundary above the pier. No piling, dredging or other in-water works are proposed and, therefore, there is no impact pathway for direct effects on seals or on habitats utilised by these species. Furthermore, the enclosed nature of Dún Laoghaire Harbour and the presence of the harbour walls provide a degree of separation from the wider Dublin Bay, limiting the potential for any effects arising from the Proposed Development to extend beyond the immediate vicinity of the Site. Potential disturbance effects associated with demolition and construction activities are also considered unlikely to be significant. Seals occurring within Dún Laoghaire Harbour are subject to ongoing harbour operations, commercial shipping, recreational boating and urban activity and are therefore accustomed to elevated levels of anthropogenic disturbance. Any construction-related noise would be temporary, localised and restricted to the terrestrial environment. In the absence of piling or other in-water works, no underwater noise impacts are predicted. Furthermore, seals are highly mobile species, and any individuals present beneath the Site would be able to temporarily utilise alternative areas within the harbour or wider Dublin Bay should disturbance occur. However, given the regular occurrence of seals within the harbour, their known use of habitats beneath and adjacent to the Site, and the potential for individuals to utilise these areas for resting and moulting, precautionary mitigation will be implemented to avoid any potential effects to seals. Refer to Section 5.3 below for further details. During the Operational Phase, the Proposed Development is not expected to generate noise levels materially different from those associated with existing harbour activities. Consequently, no significant increase in disturbance to grey seal or harbour seal is anticipated.	
Otter	Wildlife Act (as amended) 2000	Low Value Local	No evidence of otter was noted within or adjacent to the Site. However, evidence of otter has been recorded with Dún Laoghaire Harbour; therefore, it is known that otter utilise habitats within the wider area. The Proposed Development is located entirely within an existing developed area of Dún Laoghaire Harbour, and all works will be confined to the Site boundary. Due to the elevated nature of the Site above the waters of Dún Laoghaire Harbour, together with the absence of suitable access routes or habitat features, the Site itself is not considered suitable for otter. However, the structures, rock armour and sheltered waters beneath and immediately	Otter have been screened in for further consideration.

Potential Biodiversity Receptor	Relevant Legislation	Valuation	Scoping Justification	Screening Result
			adjacent to the Site provide suitable commuting and foraging habitat for otter, with records confirming the regular use of Dún Laoghaire Harbour by this species. Although it was considered that otter within the vicinity of the Site are subject to ongoing harbour-related activities and were considered to be habituated to anthropogenic noises, the Construction and Demolition Phase has the potential to result in noise effects that could have a potential impact on otter within the wider area. However, all works will be confined to the site boundary and no in-water works will occur. Potential disturbance effects associated with demolition and construction activities are also considered unlikely to be significant. It was considered that otter within the vicinity of the Site are subject to ongoing harbour operations, commercial shipping, recreational boating and urban activity and are considered to be habituated to anthropogenic noises. Any construction-related noise would be temporary and localised in nature. In the absence of in-water works, no underwater noise impacts are predicted. Furthermore, otter are highly mobile species, and it was considered likely that they will move to suitable areas and therefore any noise levels will decrease with distance. Regardless, this species has been screened in due to potential noise effects in the absence of appropriate mitigation measures. During the Operational Phase, it was considered unlikely that otter species will be affected by the Proposed Development due to the fact that otter within the area are habituated to anthropogenic noise emissions	
Invasive Species	N/A	N/A	No invasives species were identified onsite. Nonetheless, standard measures will be implemented in order to ensure no invasive species are introduced on-site during the Construction and Demolition Phase (see Section 5.3).	Invasive Species have been screened in for further consideration.
Other Species	N/A	N/A	Amphibians The NBDC held records for common frog and smooth newt within 2km of the Site over the last 10 years [15]. However, given the location of the Site adjacent to the harbour and the nature of the on-site habitats, comprising mostly areas of hard standing, the Site provided no suitable habitat for amphibians. Badger	Other Species have been screened out for further consideration.

Potential Biodiversity Receptor	Relevant Legislation	Valuation	Scoping Justification	Screening Result
			The NBDC held no records for badgers within 2km of the Site within the last 10 years [15]. Furthermore, the on-site habitats provide no suitable habitat for this species. Hedgehogs and Pygmy Shrews The NBDC holds records for both hedgehogs and pygmy shrews within 2km of the Site within the last 10 years [15]. Furthermore, the on-site habitats provide no suitable habitat for these species as there is no suitable vegetation cover present on the Site.	

5.2.1 Summary of Potential Effects

Following a detailed assessment, the following receptors were identified as having the potential to be affected by the Proposed Development and were brought forward for further consideration:

- Birds;
- Otter;
- Grey and Harbour Seals; and,
- Invasive Species.

As per the scoping justification outlined in Table 5-1, further consideration was required for each of the receptors listed above in order to develop appropriate mitigation to protect these receptors and avoid effects arising from the Proposed Development. Refer to Section 5.2 below for further details.

5.3 Mitigation Measures

5.3.1 Construction and Demolition Phase

During the Construction and Demolition Phase, all works will comply with all relevant legislation and best practice to reduce any potential environmental effects. An outline CEMP has been prepared by Donnachadh O'Brien and Associates Consulting Engineers. A final CEMP will be submitted to the planning authority in advance of works commencing at the Site. See Section 3.6.

The following mitigation measures will be incorporated and adhered to in order to ensure that the proposed works do not result in any contravention of wildlife legislation:

- All activities will comply with all relevant legislation and best practice to reduce any potential environmental effects. The mitigation measures detailed within this EclA will be fully adhered to;
- The Site manager shall ensure that all personnel working on-site will be trained and made aware of the mitigation measures detailed within this EclA;
- An ECoW will inspect the Sites in advance of works commencing and will undertake Site inspections as required during the works to ensure that they will be completed in line with the mitigation measures detailed within this EclA and the CEMP;
- If protected or notable species are encountered during operations at the Site, the ECoW will be contacted for advice; and,
- In advance of works, all Site personnel will receive a toolbox talk regarding notable and protected species. Everybody working on-site must understand the role and authority of the ECoW.

5.3.1.1 Protection of Water Quality

Should run-off of potential pollutants from these works enter the Dún Laoghaire Harbour, this could adversely affect the water quality within the watercourse and further downstream within the wider catchment. Potential pollutants resulting from the construction works include suspended solids, cementitious materials, silt and hydrocarbon leaks or spills. Therefore, these pollutants could directly affect species such as otter or seals utilising the area.

Therefore, in order to ensure that the proposed works do not have an effect on the Dún Laoghaire Harbour and the wider Dublin Bay, surface water mitigation measures will be implemented.

All the mitigation measures proposed are in line with IFI and NRA (now TII), guidance documents. These mitigation measures will be communicated to all relevant site staff.

General Mitigation Measures for the Protection of Water Quality

The following mitigation measures will be put in place to ensure that water quality is protected. These measures will be put in place to remove the risk from potential contamination and will include emergency procedures to be implemented in the event of an accidental release or spill of potentially contaminating substances, as outlined below. These procedures will be communicated to all relevant site staff.

Sediment control measures will be put in place to prevent suspended solids in runoff from entering the Dún Laoghaire Harbour. These measures include the following:

- Prior to the commencement of works, silt fencing will be installed along the boundary of the development works. These silt fences will remain in place throughout the entire Construction and Demolition Phase;
- The proposed working area will be clearly defined, and construction activities will be carefully planned to minimise ground disturbance;
- During the enabling works, all surface water from the Site will go to foul following desilting. All surface / pumped water will go to foul until the surface water infrastructure is complete, flow controls installed and inspected;
- Runoff will be diverted away from stripped areas;
- Desilting and petrochemical interception of all surface runoff/pumped water will take place for the length of the construction project;
- A petrochemical interceptor will be placed on the surface water network prior to discharge;
- The works area on-site will be sprayed during periods of dry weather in order to suppress dust migration from the Site;
- Weather conditions will be considered when planning construction activities to minimise risk of runoff from the proposed works;
- Sediment control measures will be implemented on any areas of bare soil along or immediately adjacent to Dún Laoghaire Harbour. Use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and;
- Stockpiles will be protected during the construction works and will not be located in areas where sediment-laden runoff may enter the watercourse or surface water drains; and,
- If silt or other contamination is noted within Dún Laoghaire Harbour, construction works will be stopped and will not recommence until the issue is resolved and the cause of the elevated source is remedied. The Ecological Clerk of Works ('ECoW') will be consulted for advice.

The following mitigation measures will be implemented during the proposed works to minimise the likelihood of oil / fuel release to surface water during refuelling of plant and equipment:

- Prior to any works commencing, all construction equipment will be checked to ensure that they are mechanically sound to avoid leaks of oil, fuel, hydraulic fluids and grease;
- All hydrocarbons used during the Construction and Demolition Phase will be appropriately handled, stored, and disposed of in accordance with recognised

standards as laid out by the EPA within the Guidance Note on Storage and Transfer of Materials for Scheduled Activities;

- All chemical and fuel filling locations will be contained within signposted, designated bunded areas, a minimum of 10m from any surface water drains;
- At the construction compound, an area of hard standing will be installed in a demarcated area for refuelling, and vehicle / plant cleaning and service areas. This area will be drained via a hydrocarbon interceptor trap to a soakaway if possible, or to local surface water drains, with the permission of the asset owner, under a permit or licence authorised by the relevant authority;
- Preventative maintenance and relevant maintenance logs will be kept for all on-site plant and equipment;
- The Appointed Contactor will put in place a specific, step-by-step refuelling procedure which will be communicated to all relevant employees on-site;
- Only designated trained operators will be authorised to refuel plant on-site;
- Refuelling of plant and machinery will be completed in a controlled manner using drip trays (bunded container trays) in a dedicated refuelling area;
- All oil stored on-site for construction vehicles will be kept in a lock and bund protected area. This bund protected area will be located over 50m away from any watercourse;
- Suitable precautions will be taken to prevent spillages from equipment containing small quantities of hazardous substances (for example, chainsaws and jerry cans), including:
 - Each container or piece of equipment will be stored in its own drip tray made of a material suitable for the substance being handled;
 - Spill kits and drip trays will be provided for all equipment and at locations where any liquids are stored and dispensed, and staff will be trained on the procedures to be followed; and;
 - Containers and equipment will be stored on a firm, level surface.
- The storage of fuels, other hydrocarbons and other chemicals within the construction compound shall be in accordance with relevant legislation and with best practice and as outlined in CEMP;
- Storage areas will be covered, wherever possible, to prevent rainwater filling the bunded areas;
- Fuel fill pipes will not extend beyond the bund wall and will have a lockable cap secured with a chain; and,
- Procedures and contingency plans will be in place at each work area to address cleaning up small spillages as well as dealing with an emergency incident. A stock of absorbent materials such as sand, spill granules, absorbent pads and booms will be kept at the work site, on plant working near any surface water drains and particularly at refuelling areas and where fuel or oil is stored;

Emergency procedures will be further developed by the contractor with either project-specific works, area-specific or activity-specific measures, and all personnel will be required to know these procedures.

Poured concrete will be utilised for ancillary infrastructure associated with the Proposed Development. However, as mentioned above, concrete will be pre-cast, where possible, to

reduce the need for concrete pouring. The following measures will be implemented to protect all waterbodies during concrete pours:

- The production, transport and placement of all cementitious materials will be strictly planned and supervised;
- All concrete pours will be carried out in dry weather;
- Shutters will be designed to prevent failure;
- Chemicals used will be biodegradable where possible;
- Any spillages will be cleaned up immediately and disposed of correctly;
- Where possible, concrete skips, pumps and machine buckets will be prevented from slewing over water when placing concrete;
- Where concrete is to be placed by means of a skip, the opening gate of the delivery chute will be securely fastened to prevent accidental opening;
- No washing of plant or equipment will be permitted adjacent to the river;
- Concrete washout of trucks and larger plant will not occur on-site;
- Concrete washing from smaller equipment will be collected and disposed of offsite; and,
- Surplus concrete will be returned to batch plant after completion of a pour.

The proposed measures to remove the risk from potential contamination and emergency procedures to be implemented in the event of an accidental release or spill of potentially contaminating substances are outlined below:

- Adequate spill kits, including absorbent booms and other absorbent material will be maintained on-site;
- All contractor workers will be appropriately trained in the use of spill kits;
- Any spillages will be cleaned up immediately and disposed of correctly; and,
- Any sediments effected by contamination will be excavated and stored in appropriate sealed containers for disposal offsite in accordance with all relevant waste management legislation.

Therefore, following the implementation of the above mitigation measures, it is concluded that the works required for the Proposed Development will not adversely affect the water quality within Dún Laoghaire Harbour and, therefore, will not adversely affect the wider Dublin Bay within the vicinity of the Site.

In addition, an ECoW will be appointed to the project to ensure that the mitigation and best practice measures will be fully implemented. Therefore, the mitigation measures outlined above will minimise the identified potential risks to water quality associated with the Construction and Demolition Phase of the Proposed Development.

5.3.1.2 Noise & Vibration

The Site currently experiences a high volume of anthropogenic activities, and therefore, any terrestrial mammals, such as otter, utilising the Site or adjacent areas will be habituated to a high level of noise. The construction works will be short-term, and as terrestrial mammals are highly mobile, it is likely that they will move away from any temporary disturbances. However,

to reduce the potential for disturbance to wildlife from noise, the following mitigation measures will be implemented during the Construction and Demolition Phase:

- Avoid unnecessary revving of engines and switch off equipment when not required;
- Minimise the drop height of materials;
- Start-up plant and vehicles sequentially rather than all together;
- Review planting equipment on-site to ensure that they are the quietest versions available for the required purpose;
- Limiting the hours during which site activities likely to create high levels of noise are permitted. Construction activities will take place Monday to Friday, between 07:00 and 18:00, and on Saturdays, between 08:00 and 13:00; and,
- Site representative responsible for matters relating to noise will be appointed to liaise with DLRCC.

The construction of the development will largely be limited to daylight hours where possible, ensuring minimum disturbance to commuting and foraging activities of local wildlife.

With regard to construction activities, reference will be made to BS 5228- 1, which offers detailed guidance on the control of noise from demolition and construction activities. A variety of practicable noise control measures will be employed. Additional guidance relevant to acceptable vibration and noise levels will be followed and is contained in the following documents:

- British Standard BS 7385: 1993: Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground-borne vibration;
- British Standard BS 5228-2: 2009: Code of Practice for Noise and Vibration Control on Construction and Open Sites: Vibration; and,
- NRA: 2014: Guidelines for the Treatment of Noise and Vibration in National Road Schemes.

The Contractor shall implement the following mitigation measures during construction activities in order to reduce the noise and vibration impact to nearby noise-sensitive areas.

- Site compounds will be located away from noise-sensitive receptors within the site constraints;
- The use of lifting bulky items, dropping and loading of materials within these areas will be restricted to normal working hours;
- For steady continuous noise, such as that generated by diesel engines, it may be possible to reduce the noise emitted by fitting a more effective exhaust silencer system or utilising an acoustic canopy to replace the normal engine cover;
- For concrete mixers, control measures will be employed during cleaning to ensure no impulsive hammering is undertaken at the mixer drum;
- For all materials handling, ensure that materials are not dropped from excessive heights, lining drops chutes and dump trucks with resilient materials;
- Demountable enclosures to screen operatives using hand tools, and will be moved around the site as necessary;
- All items of plant will be subject to regular maintenance to prolong the effectiveness of noise control measures; and,

- Construction site hoarding to be constructed around the site boundaries of a material with a mass per unit of surface area greater than 7 kg/m² to provide adequate sound insulation. Construction noise monitoring will be undertaken at periodic sample periods at the nearest noise-sensitive locations to the development works to check compliance with the construction noise criterion and will be conducted in accordance with the International Standard ISO 1996: 2017: Acoustics – Description, measurement and assessment of environmental noise.

The following noise conditions shall be adhered to (subject to DLRCC conditions):

- 70dB(A) (LAeq 1 hour) between 0800 hours and 1800 hours Monday to Friday inclusive (excluding bank holidays) and between 0800 hours and 1300 hours on Saturdays when measured at any noise-sensitive location in the vicinity of the site. Sound levels shall not exceed 45dB(A) (LAeq 1 hour) at any other time following completion of the site development works.

Vibration Limits to be applied for the duration of construction works are as set out in BS 5228-2:2009+A1:2014 (Code of Practice for Vibration Control on Construction and Open Sites) and BS 7385: 1993 (Evaluation and measurement for vibration in buildings Part 2: Guide to damage levels from ground-borne vibration). Please refer to the CEMP for full details.

5.3.1.3 Protection Measures for Species

Breeding Birds

In order to ensure that no disturbances occur to breeding birds that may potentially use the Site or the adjacent lands, the following mitigation measures will be put in place:

- Any demolition works within the Site will take place outside of the nesting bird season (1st March to 31st August). Vegetation clearance is restricted as per Section 40 of the Wildlife Act 1976, as amended by Section 46 of the Wildlife (Amendment) Act 2000;
- In the event that works need to be undertaken within the main breeding season, this would be undertaken in consultation with NPWS and under the supervision of the project ECoW;
- Should birds nest within the active working area during the Construction and Demolition Phase, works within the area will stop, within the area and the project ECoW will be consulted.

Harbour and Grey Seals

In order to minimise the potential for disturbance to grey seal and harbour seal known to utilise Dún Laoghaire Harbour, including areas beneath and adjacent to the Site, the following mitigation measures will be implemented:

- Demolition and construction works with the potential to disturb seals will, where practicable, be undertaken outside the peak seal moulting period, which typically occurs between July and September;
- Should works be required during the moulting period, these will be undertaken under the supervision of a suitably qualified Marine Mammal Observer ('MMO') and/or ECoW, who will assess seal activity within the vicinity of the Site prior to the commencement of works;
- Pre-construction inspections will be undertaken to identify the presence of hauled-out or resting seals beneath or adjacent to the Site. Where seals are present and considered at risk of disturbance, works will be delayed or modified, where practicable, until the animals have voluntarily moved away from the area;

- Construction activities will be planned and managed to minimise sudden or excessive noise and disturbance in areas known to be utilised by seals; and,
- Should seals begin utilising areas immediately adjacent to active works during the Construction and Demolition Phase, the project ECoW/MMO will be consulted and appropriate measures implemented to avoid unnecessary disturbance.

Marine Mammal Monitoring

A suitably qualified and experienced MMO shall be appointed for the duration of demolition and construction works. The MMO shall undertake regular inspections of areas beneath and adjacent to the Site known to be utilised by seals for resting and haul-out purposes.

Where seals are observed resting, hauling out or moulting in areas that may be affected by the works, activities with the potential to cause disturbance shall be delayed until the animals have voluntarily moved away from the area.

The MMO shall provide advice to the Contractor regarding the presence of marine mammals and appropriate measures to minimise disturbance during the Construction and Demolition Phase.

The MMO shall maintain records of all marine mammal observations and provide ecological advice to the Contractor throughout the Construction and Demolition Phase.

Invasive Species

No Invasive species were noted onsite. Nonetheless, to mitigate against the unintentional introduction of invasive species during construction, the following biosecurity measures will be implemented. These measures are in line with NRA (now TII) *Guidance for the Management of Noxious Weeds and Non-Native Invasive Plant Species* [46]:

- All vehicles, machinery and any other equipment that may be used for the works will be washed prior to its use on-site to prevent the import of plant material and seeds;
- Before machinery or equipment is unloaded at the Site, equipment will be visually inspected to ensure that all adherent material and debris have been removed;
- Any vehicles and machinery that are not clean will not be permitted entry to the Site;
- All materials to be imported to the Site will be sourced from a reputable supplier, and records of all materials / supplies to the Site will be maintained; and,
- In advance of works, all site personnel will receive an induction regarding invasive species.

Nocturnal Species

In general, artificial light creates a barrier to bats, so lighting should be avoided where possible. Where lighting is required, directional lighting (i.e. lighting which only shines on work areas and not nearby countryside) should be used to prevent overspill. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvers and shields to direct the light to the intended area only.

5.3.2 Operational Phase

5.3.2.1 Protection of Water Quality

The Proposed Development will not result in any increase in impermeable surface area and will not alter the existing surface water drainage regime or increase surface water runoff from the Site. As such, no deterioration in water quality is anticipated during the Operational Phase

Therefore, it can be concluded that there will be no adverse effects or significant disturbance from water quality to local wildlife during the Operational Phase of the Proposed Development.

5.3.2.2 Potential Noise Disturbance

During the Operational Phase, anthropogenic activities will be the predominant source of noise emissions. This area currently experiences a high volume of anthropogenic activities, and it is not expected that noise will be elevated beyond current existing levels.

Therefore, it can be concluded that there will be no adverse effects or significant disturbance from elevated noise emissions to local wildlife during the Operational Phase of the Proposed Development.

6 CONCLUSIONS

Based on the findings of a detailed desk-based study, a review of all the ecological information available for the Site and wider area and field surveys conducted by suitably qualified MOR Environmental Ecologists, it is considered reasonable to conclude the following:

- The majority of the Site comprises an existing car park;
- The Site itself is currently considered to be of low local ecological value;
- The Site is not considered to be of high suitability or a site of importance for any Annex I or Annex II species or Red-listed birds; and,
- The Proposed Development will not result in any significant effects on ecological receptors identified both on-site and in the surrounding area following the implementation of appropriate mitigation measures.

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