Natura Impact Statement

Proposed Large-Scale Residential Development

Ballintubber Road,

Baneshane, Midleton

Co. Cork

March 2026

TABLE OF CONTENTS

LIMITATIONS ..... **IV**

1 INTRODUCTION **1**

1.1 PROJECT DETAILS 1
1.2 SITE LOCATION AND SETTING 1
1.3 LEGISLATION 4
1.3.1 BIRDS DIRECTIVE 4
1.3.2 THE HABITATS DIRECTIVE 4
1.3.3 RELEVANT GUIDANCE 4

2 PROPOSED DEVELOPMENT DESCRIPTION **6**

2.1 OVERVIEW 6
2.2 DRAINAGE SYSTEMS 6
2.3 STORM WATER DRAINAGE SYSTEM 7
2.4 SURFACE WATER DRAINAGE NETWORK 8

3 METHODS **9**

3.1 DEVELOPMENT SITE HABITAT ASSESSMENT METHODS 9
3.2 BACKGROUND TO HABITATS DIRECTIVE ARTICLE 6 ASSESSMENTS 9
3.3 STAGE 2: APPROPRIATE ASSESSMENT 10
3.3.1 DEVELOPMENT SITE HABITAT ASSESSMENT METHODS 10
3.3.2 KEY ECOLOGICAL RECEPTORS 10
3.3.3 NON-VOLANT MAMMALS 11
3.3.4 AVIFAUNA 11

4 RESULTS **13**

4.1 THE ZONE OF INFLUENCE 13
4.2 SUMMARY OF NATURA 2000 SITES WITHIN THE 15KM ZONE OF INFLUENCE 14
4.3 NATURA 2000 SITES WITHIN THE 15KM ZONE OF INFLUENCE 14
4.4 GEOLOGY 16
4.5 HYDROLOGY 16
4.5.1 SURFACE WATER 16
4.5.2 WATER FRAMEWORK DIRECTIVE STATUS 16
4.6 FAUNA – DESKTOP STUDY 17
4.6.1 BIRD SPECIES 17
4.6.2 NON-VOLANT MAMMALS 22
4.6.3 HERPETOFAUNA 23
4.7 *IN-SITU* SURVEYS 23
4.7.1 HABITATS 23

4.7.2 Alien Invasive Species 24
No 'High Impact' invasive floral species listed on the First Schedule of the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011) were recorded within the boundaries of the Baneshane LRD site. 24
4.7.3 Fauna - Birds 24
4.7.4 Fauna - Non-Volant Mammals 25
Badgers 25
Otters 25
5 CONSIDERATION OF POTENTIAL IMPACTS TO NATURA 2000 SITES 26
5.1 Examination of Hydrological Pathway 26
5.2 Examination of Potential Noise & Vibration Disturbance 27
5.3 Examination of Potential Dust Emissions 28
5.4 Examination of Wastewater Emissions Pathway 28
5.5 Examination of Mobile Species Pathway 29
5.6 Examination of Human Disturbance Pathway 29
5.7 Cumulative Effects 31
5.8 Consideration of Potential Impacts to Conservation Objectives 36
6 MITIGATION MEASURES OF POTENTIAL IMPACTS TO NATURA 2000 SITES 37
6.1 Construction Phase Mitigation Measures 37
6.1.1 Mitigation Measures: Land Pathways 37
6.1.2 Mitigation Measures: Water Quality 37
6.1.3 Best Practice Measures to Control Noise Emissions 38
6.1.4 Mitigation Measures: Dust & Soiling 39
6.2 Operational Phase Mitigation Measures 41
6.2.1 Surface Water Run-off 41
6.3 Evaluation of Mitigation Measures 42
7 CONCLUSIONS 43
8 REFERENCES 44

APPENDIX

Appendix A – Conservation Objectives

DOCUMENT CONTROL

Project Title:	Natura Impact Statement for Proposed Large-Scale Residential Development
Report Ref.:	S42485
Status:	Final
Client:	Rockspring Properties Ltd.
Site Details:	Ballintubber Road, Baneshane, Midleton, Co. Cork
Issued By:	Verde Environmental Consultants Ltd

Document Production / Approval Record				
	Name	**Signature**	**Date**	**Position**
Created by	Jeff Hean		12/03/2026	Principal Ecologist
Approved by	Kevin Cleary		12/03/2026	Operations Director

LIMITATIONS

This report represents the results of a Natura Impact Statement (NIS) for the above referenced site. Best practice was followed at all times and within the limitations stated, works were undertaken according to budgetary considerations. This report is the property of Verdé Environmental Consultants Limited (Verde) and cannot be used, copied, or given to any third party without the explicit prior approval or agreement of Verde Environmental Consultants Limited.

This report represents an assessment of the site and was performed in accordance with generally accepted standards regarding environmental assessments. Verde makes no other representations whatsoever, including those concerning the legal significance of its findings or as to other legal matters touched on in this report, including, but not limited to ownership of any property or the application of any law to the facts set forth herein.

1 INTRODUCTION

1.1 Project Details

Verde Environmental Consultants, (Verde) was commissioned by Ian Doyle Planning Consultants, on behalf of the client, Rockspring Properties Ltd., to carry out Natura Impact Statement (NIS) for planning permission for a proposed large-scale residential development (LRD) on lands near Baneshane, Midleton, Co. Cork. The proposed development will involve the construction of houses and apartments, as well as access roadways, walkways, community amenity areas, associated ancillary facilities, and beautification areas.

In accordance with Article 6(3) of the Habitats Directive, as transposed into Irish law by Regulation 42(1) and Part 5 of the European Communities (Birds and Natural Habitats) Regulations 2011 – 2015 (i.e. the "Habitats Regulations") and Part XAB of the Planning and Development Act, 2000 (as amended) (i.e. the "Planning and Development Act"), a Screening Report for Appropriate Assessment (AA) was prepared to examine whether it could or could not be ruled out, on the basis of objective information, that the Proposed Development, either individually or in combination with other plans or projects, was likely to have a effects on any Natura 2000 (European) Sites. The Screening Report for Appropriate Assessment concluded, in view of best scientific knowledge and the conservation objectives of the Natura 2000 site occurring within the zone of influence of the proposed development, that, in the absence of appropriate mitigation, it could not be ruled out at the screening stage that the proposed development would not result in significant negative effects to 2 Natura 2000 sites. These Natura 2000 sites are the,

- Great Island Channel SAC
- Cork Harbour SPA

The conclusion of the Screening Report was informed by a highly precautionary approach and adopted a worst-case scenario. Such an approach was adopted to ensure consistency with the low threshold for triggering likely significant effects as determined in both European and Irish case law and Section 177U of the Planning and Development Act. On the basis of that conclusion, it has been determined that AA is required in order to assess the implications of the Proposed Development for those above listed European Sites. In accordance with Section 177T of the Planning and Development Act an NIS of the Proposed Development has been prepared in order to assist Cork County Council in carrying out its Appropriate Assessment. This NIS provides an examination, analysis, and evaluation of the potential impacts from the Proposed Development, both individually and in combination with other plans and projects, in view of best scientific knowledge and the conservation objectives of the Natura 2000 Sites concerned. It also prescribes appropriate mitigation to ensure that the Proposed Development will not adversely affect the integrity of those sites identified as being at risk of likely significant effects. Finally, it provides complete, precise, and definitive findings, which are capable of removing all reasonable scientific doubt as to the absence of adverse effects on the integrity of the Natura 2000 sites concerned.

1.2 Site Location and Setting

The proposed LRD is located on lands to the west of Midleton town, proximal to the N25 dual carriageway. The LRD site is located within a peri-urban development, comprised of agricultural lands and housing estates, with several single lane

roadways traversing throughout the landscape. Figure 1.1, below, provides an overview of the location of the LRD site, whilst Figure 1.2, overleaf, provides an overview of the LRD site layout and immediate surrounding landscape.

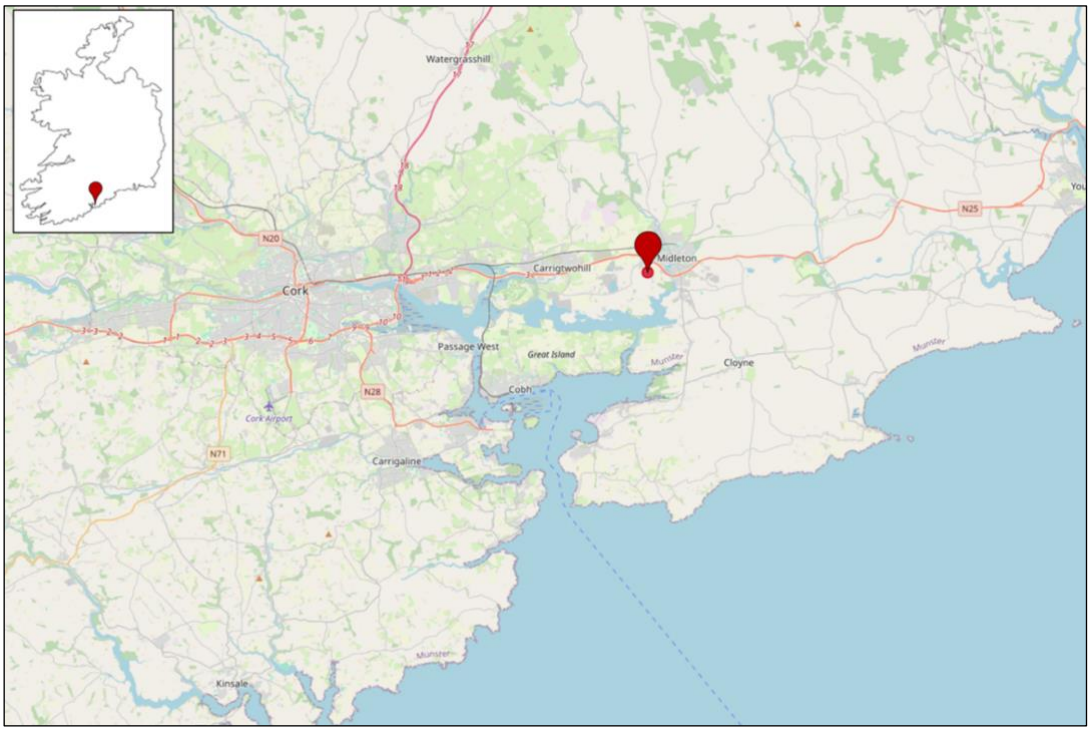

Figure 1.1 – Location of the proposed development, near Baneshane, Midleton, Co. Cork.

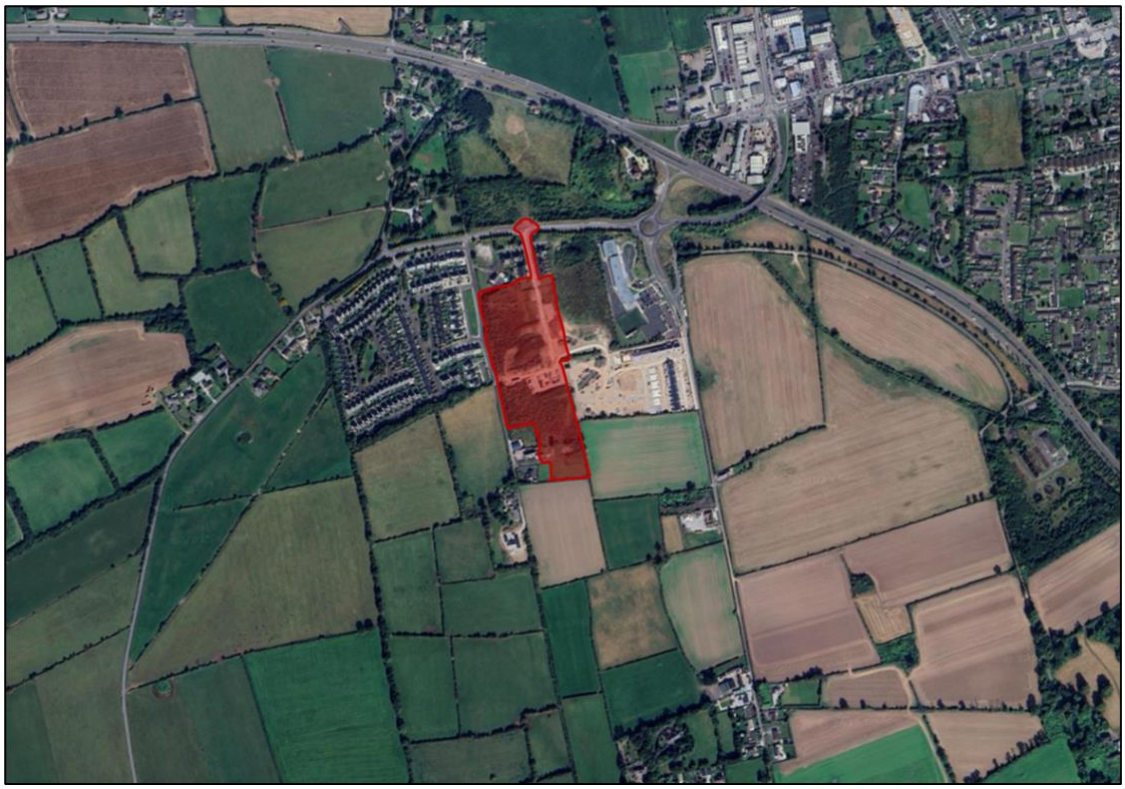

Figure 1.2 – Overview of the location of the proposed large-scale residential development.

Figure 1.3 – Layout of the proposed development near Baneshane, Midleton, Co. Cork.

1.3 Legislation

1.3.1 Birds Directive

The European Union (EU) Directive on the Conservation of Wild Birds (79/409/EEC) (hereafter called the 'Birds Directive') provides a framework for the conservation and management of wild birds in Europe. The relevant provisions of the Directive are the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex Haulbowline Harbour NIS P00014506 September 2025 Page 14 I of the Directive and for all regularly occurring migratory species (required by Article 4). The Directive requires national governments to establish SPAs and to have in place mechanisms to protect and manage them. The SPA protection procedures originally set out in Article 4 of the Birds Directive have been replaced by the Article 6 provisions of the Habitats Directive.

1.3.2 The Habitats Directive

The EU Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC) (hereafter called the 'Habitats Directive') provides a framework for the conservation and management of natural habitats, wild fauna (except birds) and flora in Europe. Adopted in 1992, transposed into Irish law in 1997 and as subsequently amended, its aim is to maintain or restore natural habitats and wild species at a favourable conservation status. The relevant provisions of the Directive are the identification and classification of Special Areas of Conservation (SACs) (Article 4) and procedures for the protection of SACs and SPAs (Article 6). SACs are identified based on the presence of natural habitat types listed in Annex I and populations of the species listed in Annex II. The Directive requires national governments to establish SACs and to have in place mechanisms to protect and manage them.

Together they form a coherent network of European protected areas (SACs and SPAs), called Natura 2000 sites (hereafter referred to as "European sites"), which are safeguarded against potentially damaging developments. The Irish legislation applicable to these European sites is found in the European Communities (Birds and Natural Habitats) Regulations 2011-2015 (hereafter called 'the Habitats Regulations').

1.3.3 Relevant Guidance

The Department of the Environment, Heritage and Local Government (DEHLG, 2010) published the Appropriate Assessment Guideline for Planning Authorities. In addition to this national guidance, the European Commission has issued a series of authoritative documents that provide extensive direction regarding the procedural and substantive requirements of Appropriate Assessment. Chief among these is the document entitled 'Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC' (EC, 2001), which articulates the foundational principles governing decision-making throughout the assessment process. The preparation of this report has been undertaken in accordance with these principal national and European guidelines. The following list identifies these and other pertinent guidance documents,

- Communication from the Commission on the Precautionary Principle, Office for Official Publications of the European Communities, Luxembourg (EC, 2000); Haulbowline Harbour NIS P00014506 September 2025 Page 15

- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Luxembourg (EC, 2001)
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission. Office for Official Publications of the European Communities, Luxembourg (EC, 2007)
- Estuaries and Coastal Zones within the Context of the Birds and Habitats Directives - Technical Supporting Document on their Dual Roles as Natura 2000 Sites and as Waterways and Locations for Ports. Office for Official Publications of the European Communities, Luxembourg (EC, 2009)
- Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, Dublin (DEHLG, 2010a)
- Department of Environment Heritage and Local Government Circular NPW 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities, Dublin (DEHLG, 2010b)
- Guidance document on the implementation of the birds and habitats directive in estuaries and coastal zones with particular attention to port development and dredging. Office for Official Publications of the European Communities, Luxembourg (EC, 2011a)
- European Commission Staff Working Document 'Integrating biodiversity and nature protection into port development' (EC, 2011b)
- Marine Natura Impact Statements in Irish Special Areas of Conservation: A working document, National Parks and Wildlife Service, Dublin (NPWS, 2012)
- Interpretation Manual of European Union Habitats. Version EUR 28. Office for Official Publications of the European Communities, Luxembourg (EC, 2013a)
- Guidelines on Climate Change and Natura 2000. Office for Official Publications of the European Communities, Luxembourg (EC, 2013b);
- Guidance on EIS and NIS Preparation for Offshore Renewable Energy Projects. Department of Communications, Climate Action and Environment, Dublin (DCCAE, 2017)
- European Commission Notice C (2018) 7621 'Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC', Office for Official Publications of the European Communities, Luxembourg (EC, 2019)
- Institute of Air Quality Management 'A guide to the assessment of air quality impacts on designated nature conservation sites (Version 1.1)', London (IAQM, 2020).

2 PROPOSED DEVELOPMENT DESCRIPTION

2.1 Overview

10 year permission is sought for a large-scale residential development (LRD). The proposed development will consist of the construction of 173 no. residential units comprising a mix of apartments, duplex units, semi-detached houses, terraced houses and bungalows. Specifically, the LRD will encompass,

- Apartments and Duplexes (74 no.):
    - Block E1: 11 × 2-bed and 6 × 1-bed
    - Block E2: 3 × 3-bed, 6 × 2-bed and 3 × 1-bed
    - Block E3: 9 × 2-bed and 6 × 1-bed
    - Duplex D1: 4 × 2-bed and 4 × 1-bed
    - Duplex D2: 5 × 2-bed and 5 × 1-bed
    - Duplex D3: 9 × 2-bed and 3 × 1-bed
- Houses (99 no.):
    - 11 × 4-bed semi-detached
    - 76 × 3-bed (33 semi-detached, 27 end-of-terrace, 16 mid-terrace)
    - 10 × 2-bed (3 end-of-terrace, 1 terraced, 6 bungalows)
    - 2 × 1-bed bungalows
- A crèche of c.137.5 sq.m gross floor area (59.22 sq.m dedicated childcare space and 78.28 sq.m ancillary/circulation), with capacity for c.20 children.
- The provision of a pumping station to serve the development.
- Alterations and improvements to the junction at Abbey Wood Estate and Ballintubber Road, .
- All associated car parking (273 spaces), bicycle parking (161 spaces), public open space, landscaping, and ancillary site development works.

2.2 Drainage Systems

The proposed development 'SuDS' features shall consist of:

- Rainwater Harvesting - For rainwater harvesting, each dwelling could be provided with a water butt located at the rear. This would collect runoff from the rear sloping roof of the dwelling and be used for watering plants. The intention is for homeowners to install these retrospectively.
- Permeable Paving – this system allows rainwater to be directed into carparking bays whereby the rainwater can filter through gaps in the paving blocks and percolate into the subsoil. The area which can be drained is subject to the infiltration characteristics of the subsoil.
- Tree Pits – Tree pits will be located along walkways, where possible, to capture runoff for the existing hard standing area. It is proposed that the tree pits will be connected and act like a detention basin where the water can then be released slowly into the storm network.
- Filter Drain – Trenches containing permeable material with a perforated collection pipe at the base, optionally capped with sandy topsoil, are designed to treat, convey, and store runoff at source. Where subgrade conditions

allow, they also facilitate infiltration, providing temporary storage for small rainfall events and promoting some evaporation and absorption, thereby reducing runoff and mimicking the natural catchment response. The LRD Application proposes these features along pedestrian and cycle pathways, enabling groundwater recharge. Although they may reduce the volume of runoff requiring attenuation, this potential has not been included in the attenuation calculations.

- Green/ Blue Roof - Green, blue, and sedum roofs consist of vegetation installed over a drainage and storage layer atop a waterproof membrane. They help intercept and retain rainwater, reducing surface water runoff. These systems are well-suited to the flat roofs proposed for the apartment buildings, with sedum roofs additionally offering ecological, aesthetic, and rainwater pollutant removal benefits.
- Bioretention Tree Pit - Bioretention tree pits are small, planted areas designed to collect and treat stormwater runoff. Shallow landscaped basins use soil and vegetation to remove pollutants, with the treated runoff forming part of the wider SuDS strategy for areas adjacent to the Main Distributor Road within the development.
- Attenuation Tanks – As noted above, for extreme storm events, a dedicated system to contain the storm water flows generated during a 1-in-100-year storm, increased by 20% for climate change are required. Elements such as blue/green roofs, filter drains, tree pits, infiltration basins whilst having a reducing effect of the attenuation volumes required have been ignored from the stormwater network and attenuation design. It is proposed to use an underground storage tank in one location for this purpose see CroCon drawing 22240-CRO-X-XXX-DR-CE-03810_Attenuation Tank Details. The tank is proposed to be constructed using a reinforced concrete underground tank.
- Oil Separator – An oil separator will be installed before the final disposal point at the existing storm water network. This ensures that hydrocarbon elements that are harmful to the environment are removed from the water before disposal.
- Low Water Usage Appliances – It is also worth highlighting that low water usage appliances should also be utilised to aid in the reduction of water usage on the development.

The combination of the above noted elements will allow the proposed development to adhere to the principles of sustainable drainage practices while enhancing overall storm water quality. Blue-green features such as swales and permeable paving are excluded from the simulation model storage calculations; therefore, the actual site storage provision will be greater than that represented in the analysis.

2.3 Storm Water Drainage System

To mitigate the impact of surface runoff on potential flooding, a Stormwater Management Plan will be implemented for surface water discharges to adjacent watercourses. This plan regulates the rate of runoff from the proposed development to ensure it does not exceed that of the existing greenfield site. This is achieved through the provision of attenuation storage. Attenuation methods require both a hydraulic control to limit downstream flows and sufficient upstream storage to retain excess runoff. In this case, the proposed approach involves incorporating a flood storage attenuation tank within the surface water drainage network, coupled with restricted outlet controls to regulate discharge. The required storage volume has been determined using Causeway Flow computer-aided design software. The site's attenuation strategy

consists of a single attenuation tank, preceded by hydrocarbon interceptors, which detains flows before discharging into the nearby Baneshane stream.

2.4 Surface Water Drainage Network

The proposed surface water drainage system has been designed using Causeway Flow software in accordance with the Department of Environment and Local Government's guidance document "Recommendations for Site Development Works for Housing Areas", with guidance taken from the "Greater Dublin Strategic Drainage Study" (GDSDS) and the Cork City Development Plan 2015-2021. More details on the specific layout, design and implementation of SuDS within the proposed development can be found within the "Drainage Impact Assessment Report" (CroCon Engineers Ltd., 2025)

3 METHODS

3.1 Development Site Habitat Assessment Methods

This NIS has been undertaken in accordance with National and European guidance documents: Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (DEHLG 2010) and *Assessment of Plans and Projects Significantly Affecting European sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats directive 92/43/EEC.* The following guidance documents were also adhered to during the preparation of this NIS:

- A guide for competent authorities. Environment and Heritage Service, Sept 2002. Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (2010). DEHLG.
- Assessment of Plans and Projects Significantly Affecting European Sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats Directive 92/42/EED. European Commission (2021).
- Managing European Sites – The provisions of Article 6 of the Habitats Directive 92/43/EEC. European Commission (2018).

The information provided in this NIS is also guided by European and Irish case law guiding the approach to Stage 2 Appropriate Assessment. It is noted that the consideration of impacts provided in Section 6 of this NIS has been undertaken in the absence of any regard to construction phase best practice measures and operation phase design measures that aim to safeguard the receiving environment and Natura 2000 Sites from potential adverse impacts.

3.2 Background to Habitats Directive Article 6 Assessments

The EC (2001) guidelines outline the stages involved in undertaking an assessment of a project under Article 6(3) and 6(4) of the Habitats Directive. The assessment process comprises the four stages outlined below. Stage 1 to 3 form part of the Article 6(3) process, while Stage 4 forms part of the Article 6(4) process. This NIS presents the findings of an examination, analysis, and evaluation of the Proposed Development to inform a Stage 2 Appropriate Assessment of the Proposed Development.

- Stage 1 – Screening: This stage defines the proposed plan, establishes whether the proposed plan is necessary for the conservation management of the European Site and assesses the likelihood of the plan to have a significant effect, alone or in combination with other plans or projects, upon a European Site.
- Stage 2 – Appropriate Assessment: If a plan or project is likely to have a significant effect an Appropriate Assessment must be undertaken. In this stage the impact of the plan or project to the Conservation Objectives of the European Site is assessed. The outcome of this assessment will establish whether the plan will have an adverse effect upon the integrity of the European Site.
- Stage 3 – Procedures under Article 6(4): Plans or projects for which the appropriate assessment could not conclude that they will not affect the integrity of the sites concerned may only be approved by the competent authorities if a derogation is sought in accordance with the provisions of Article 6(4). These provisions entail three key requirements that must be met and documented:
    - Alternatives have been considered

- There are imperative reasons of overriding public interest, including those of social or economic nature"; and
- All compensatory measures necessary to ensure that the overall coherence of European is protected are taken.

3.3 Stage 2: Appropriate Assessment

The EC Guidance Assessment Criteria for a Stage Two Appropriate Assessment seeks the following information:

- The collection of information on the Proposed Development and on the European Sites concerned.
- An assessment of the implications of the Proposed Development in view of the site's conservation objectives, individually or in combination with other plans or projects.
- An evaluation as to whether the Proposed Development can have adverse effects on the integrity of European Sites.
- The consideration of mitigation measures (including their monitoring).

3.3.1 Development Site Habitat Assessment Methods

General assessments of the site was carried out by Verde ecologist Dr. Jeff Hean in June and September 2025, as well as in February and March 2026. The site assessments were in line with the Heritage Council's Best Practice Guidance for Habitat Survey and Mapping (Smith et al., 2011) and habitats were classified to level 3 of the Fossitt (2000) classification system. To illustrate the general habitat quality, photographs were taken using a digital camera. Grid references were recorded using a GPS handset. Site evaluation is based on the guidelines of the Chartered Institute of Ecology and Environmental Management (CIEEM 2019). The site and immediate surroundings were inspected for the presence of invasive species, as listed in the First Schedule of the Birds and Natural Habitats Regulations (S.I. No. 477/2024). Regulation 49 (2) states that "any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place any plant listed in the Third Schedule, shall be guilty of an offence".

The determination of the presence or absence of Annex I habitats was carried out in consultation with the habitat descriptions provided in the most recent Article 17 Reports (NPWS, The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview., 2019). The Interpretation Manual of European Union Habitats (EUR 28, April 2013) was also consulted. In addition, the spatial GIS data for the Article 17 Reports were examined to determine the distribution of these habitats (as known to the NPWS) within the study area.

3.3.2 Key Ecological Receptors

Investigations completed with respect to biodiversity and that specifically relate to Natura 2000 Sites in the wider surrounding area include habitat surveys and an evaluation of the habitats occurring on site to function as suitable habitats for estuarine and marine bird species The habitat surveys were used to evaluate the potential for the proposed development site to offer suitable habitat for special conservation interest bird species or other birds associated with the Cork Harbour SPA.

3.3.3 Non-Volant Mammals

A search for field signs indicating the presence of non-volant mammals within and adjacent to the Proposed Development site was completed in June and September 2025, and in March 2026. These field signs, as described in Neal & Cheeseman (1996) and Bang & Dahlstrom (2006), include:

- Mammal breeding and resting places, such as setts, holts, lairs;
- Pathways & prints;
- Faecal deposits & latrines (and dung pits used as territorial markers);
- Feeding signs (snuffle holes);
- Hair; and
- Scratch marks.

The surveys for non-volant mammals were completed after periods of dry weather when field signs were more likely to be present.

3.3.4 Avifauna

Conditions on site have been surveyed for their potential to function as a foraging habitat for estuarine, marine and over-wintering bird species. Dedicated surveys for the presence of special conservation interest bird species or waterbirds of the above listed SPAs were completed during the 2025/2026 non-breeding bird season, when wintering special conservation interests of these SPAs are present. Certain special conservation interest bird species of these SPAs, as identified in the screening report, are known to rely on agricultural land such as grassland and stubble for foraging and roosting, especially during high tide when intertidal foraging habitats are inundated. For instance, golden plover and lapwing, both of which are special conservation interest bird species for the Cork Harbour SPA are considered to be examples of terrestrial waders (NPWS, 2012b). Given that the greatest likelihood of these species occurring at the Proposed Development site was during high tides, the majority of field surveys completed at the Proposed Development site were completed to coincide with high tide when waders and other waterbirds are most likely to use terrestrial habitats for foraging or roosting. Low-tide surveys were also completed so that baseline information relating to *ex-situ* waterbird movements from SPAs to the Proposed Development site and the vicinity of the Proposed Development site could be gathered. There is no formal methodology published for the surveying of wintering waterbirds on terrestrial sites. Surveys of waterbirds at low-tide to inform IWeBS surveys and surveys at coastal SPAs rely on 4 low-tide survey counts completed between the months of September and March. This is consistent with the British Trust for Ornithology (BTO) method of four surveys during the winter season, ideally during the months of November to February. Bird surveys were completed on the following dates:

Table 3.1 – Summary of bird surveys undertaken at the proposed development site.

Date	Survey Focus
29th January 2026	Winter Birds
12th February 2026	Winter Birds
27th February 2026	Winter Birds

2nd March 2026	Breeding Birds
14th March 2026	Breeding Birds

Surveys on the above listed dates were completed from several vantage points surrounding the proposed development site, where views of > 250 m were afforded. Additionally, the lands within the Proposed Development site were walked on each survey occasion at the end of the vantage point surveys to confirm presence/absence of waterbirds at the Proposed Development site. Based on the survey effort required for low tide surveys and the survey effort used to inform other large-scale projects, it is considered that the survey effort undertaken to establish the use of the Proposed Development site by terrestrial waders or other waterbirds provides a robust evidence base for the examination of this aspect in this NIS and is representative of best scientific information.

4 RESULTS

4.1 The Zone of Influence

Under the SPR model, works associated with the construction and the operation of the proposed development represent the source of potential impacts. Pathways that can arise as a result of develop projects and lead to offsite / downstream impacts are listed below and an appraisal of the potential for these pathways to connect the proposed development to Natura 2000 Sites and their qualifying features of interest (which represent the receptors under the SPR model) is also provided:

- Emissions to surface water: In the absence of a suitable design and control measures the proposed development will have the potential to result in emissions to surface waters. Where receiving surface waters establish a connection between the proposed development and Natura 2000 Sites downstream then a hydrological pathway will be established. EPA sub-catchment and rivers and streams digital baseline mapping was used to identify hydrological pathways between the proposed development and Natura 2000 Sites.
- Noise and vibration emissions: Noise and vibration emissions are considered to have the potential to result in negative impacts to biodiversity up to a maximum distance of 200m from the emission source.
- Emissions to air (dust): the proposed development will have the potential to result in dust emissions, specifically during the construction phase of works. Given the proximity of the proposed development to 2000 Sites, the potential for an air emission impact pathway is evident.
- Visual emissions: Certain qualifying species of Natura 2000 Sites can be sensitive to visual changes in the landscape and visual disturbance as a result of new structures. Examples of species that are sensitive to such disturbance are waders and wildfowl in the form of geese and swans of SPAs in the wider surrounding area. The potential for visual disturbance during the operation phase to result in a negative effect to Natura 2000 Sites.
- Mobile species pathway: Development projects that are located outside of Natura 2000 Sites can also result in ex-situ impacts to mobile species of Natura 2000 Sites that may rely on habitats occurring within / near the proposed development site (also known as “mobile species pathway”). When considering the mobile species pathways for over-wintering / migratory bird species, the following publications were used to identify their presence within the zone of influence of the proposed development.
- For bird species:
    - Scottish Natural Heritage (SNH, now Natural Scotland) guidance document “Assessing connectivity with Special Protection Areas (SPA) (2016) and McGuiness et al. (2015) for a range of waterbirds were used as the principal sources for establishing foraging range distances. Where no distances for certain species are reported in these two sources, the other sources listed below were used.
    - The Bird Foraging Table (version 6th Jan. 2020), prepared for DAFM, Forestry Division, available at https://assets.gov.ie/96741/2601fdba-420a-45da-948a-ac2b5b0babe3.docx
    - Thaxter et al. (2012) for seabirds.
    - Gillings & Fuller (1999) for golden plover and lapwing were used to identify connectivity between the Proposed Development site and SPAs in the wider surrounding area.

- Disturbance pathway: Human disturbance, *ex-situ* of a Proposed Development site, to a Natura 2000 Sites is representative of an indirect impact arising as a result of land use activities generated by a project. An example of such an indirect impact is an increase in human presence and associated pressures within a Natura 2000 Sites. New developments in areas outside of, but proximal to Natura 2000 Sites, can result in an increase in the presence of people within Natura 2000 Sites, such as for recreational activities. the potential for the Proposed Development to result in increased levels of human activity within surrounding Natura 2000 Sites is considered as a potential impact pathway under Table 4.1 below.

In light of all of the above listed considerations, as well as in consideration of the current state of the proposed development site, a **15km zone of influence** has been determined necessary for the proposed development works.

4.2 Summary of Natura 2000 Sites within the 15km Zone of Influence

Figure 4.1 provides an overview of Natura 2000 sites within the 15km ZoI. Table 4.1 provides a summary of the Natura 2000 sites and their associated qualifying interests (QIs) and species of conservation interest (SCIs) within the 15km ZoI, as well as a preliminary assessment of whether there is evidence of connectivity between the proposed development site and Natura 2000 sites, based on the site assessment and supported by desktop based available evidence.

The Oatencake stream (a.k.a. Baneshane stream) (IE_SW_19O030500) is located near the northeastern boundary of the proposed LRD site. Similarly, the Oatencake stream is a tributary of the Owennacurra River (IE_SW_19O030500), where the confluence of these two watercourses is located c. 1.35km southeast of the LRD site (from the nearest point). Moreover, the Oatencake and Owennacurra River flow into Cork Harbour and subsequently, Great Channel Island SAC and Cork Harbour SPA within the Cork harbour estuary. Cork Harbour is one of the most extensive and largest natural harbours in the world and subsequently supports a myriad of estuarine habitats and marine species. As such, several Natura 2000 sites have been established within the Cork Harbour, which include important estuarine habitats and bird species. Consequently, considering the volume, extent and nature of the proposed development, as well as the significant tidal influence experienced within the Cork Harbour, a ZoI of 15km was used, based on the extent and type of development proposed, as well as the location of the LRD in relation to the Cork harbour.

4.3 Natura 2000 Sites within the 15km Zone of Influence

The following Natura 2000 sites occur within the 15km ZoI designated for this proposed LRD site.

- Great Island Channel SAC (001058)
- Cork Harbour SPA (004030)

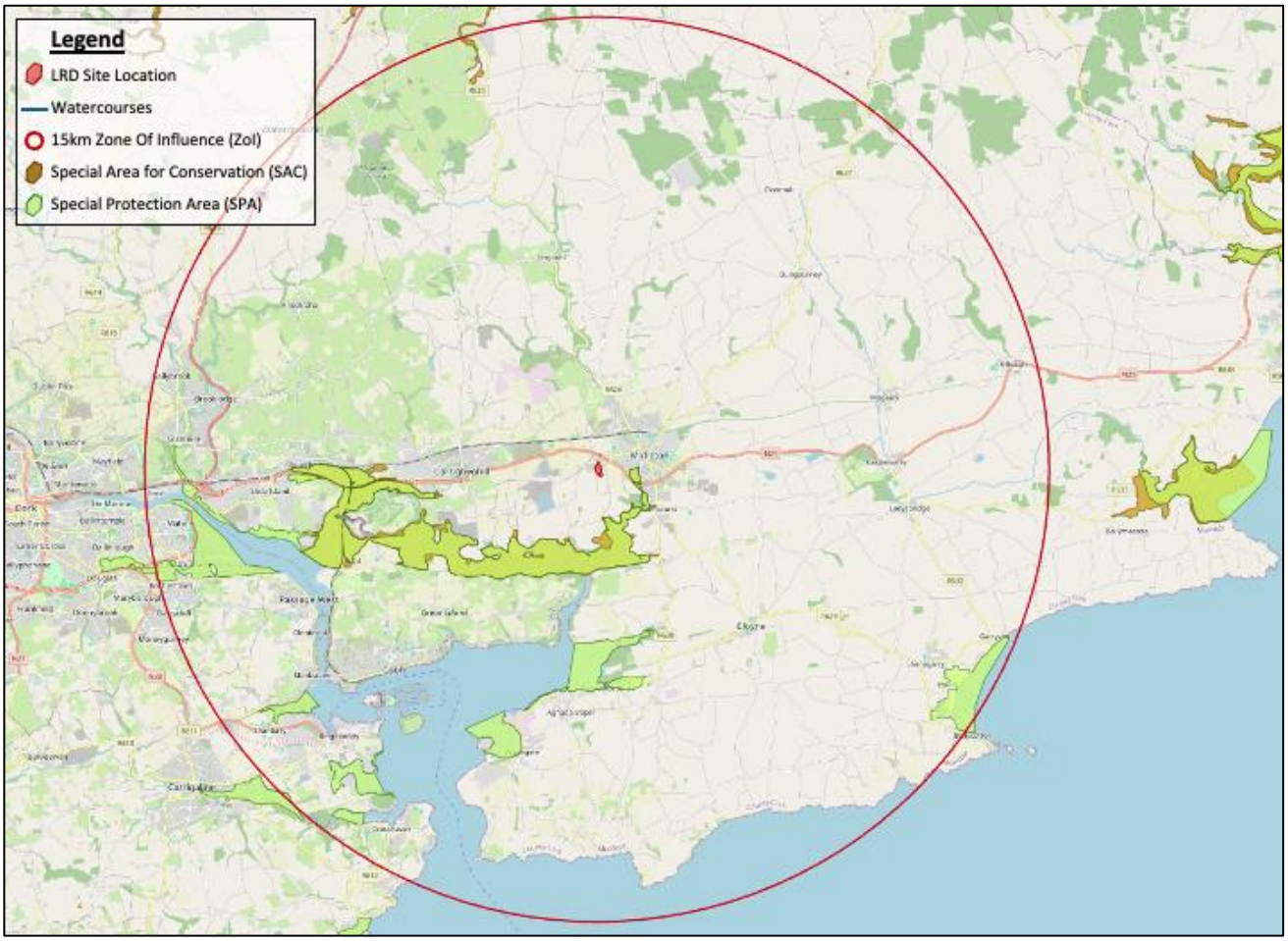

Figure 4.1 – Natura 2000 sites within the 15km zone of influence.

Table 4.1 – Habitats and / or species identified for Natura 2000 Sites within the 15km ZoI.

Natura 2000 Site	Habitats / Species	Connectivity to Development Site
Great Island Channel SAC (001058)	Mudflats and sandflats not covered by seawater at low tide [1140] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]	Downstream Hydrological -Yes Air (Noise & Dust)– Yes Land – No Mobile Species - Yes Human Disturbance - Yes
Cork Harbour SPA (004030)	Little Grebe (Tachybaptus ruficollis) [A004] Great Crested Grebe (Podiceps cristatus) [A005] Cormorant (Phalacrocorax carbo) [A017] Grey Heron (Ardea cinerea) [A028] Shelduck (Tadorna tadorna) [A048] Teal (Anas crecca) [A052] Pintail (Anas acuta) [A054] Red-breasted Merganser (Mergus serrator) [A069] Oystercatcher (Haematopus ostralegus) [A130]	Downstream Hydrological -Yes Air (Noise & Dust)– Yes

	Golden Plover (Pluvialis apricaria) [A140] Grey Plover (Pluvialis squatarola) [A141] Lapwing (Vanellus vanellus) [A142] Dunlin (Calidris alpina) [A149] Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa lapponica) [A157] Curlew (Numenius arquata) [A160] Redshank (Tringa totanus) [A162] Black-headed Gull (Chroicocephalus ridibundus) [A179] Common Gull (Larus canus) [A182] Lesser Black-backed Gull (Larus fuscus) [A183] Common Tern (Sterna hirundo) [A193] Wigeon (Mareca penelope) [A855] Shoveler (Spatula clypeata) [A857]	Land – No (c. 1.5km) Mobile Species – Yes Human Disturbance – Yes

4.4 Geology

The Bedrock Geology Map of Ireland produced by the Geological Survey of Ireland (GSI), describes the prevalent geology of the area. The Baneshane LRD site and surrounding lands are underlain by Waulsortian Mudbank and Pale-grey massive Limestone, with quaternary sediment type dominated by "till derived from Devonian sandstones" (IE GSI Geology Data, Ireland, 2026).

4.5 Hydrology

4.5.1 Surface Water

The Oatencake stream (IE_SW_19O030500), a depositing lowland watercourse (FW2) is located c.140m from the north-eastern corner of the proposed LRD development (at the nearest point). Moreover, the Oatencake stream is a tributary of the Owennacurra River (IE_SW_19O030500), which traverses through Midleton town. The confluence of these two watercourses is located c. 1,35 km south-east of the LRD site (from the nearest point). Ultimately, the Oatencake and Owennacurra River flow into Cork Harbour to the south of Midleton town.

4.5.2 Water Framework Directive Status

According to the WFD Riverbody status (2019-2024), the Oatencake stream is currently classified as having "Poor" water quality status. Similarly, the Owennacurra River is rated as having "Poor" water quality status (River Waterbody WFD Status 2019-2024). According to the most recent Q-values (2023), the Owenacurra River is rated as having "poor" water quality. The Dungourney stream, a tributary of the Owennacurra River, which traverses the landscape to the east of Midleton town, is recorded as having "Moderate" water quality (River Waterbody WFD Status 2019-2024). Furthermore, the latest Q-value water quality rating for the Dungourney stream suggested "Moderate" water quality (Q-value = 3-4; 2023)

Moreover, the Owenacurra estuary is recorded as having "moderate" water quality. The Cork Harbour has been assigned "*moderate*" water quality status (WFD, 2016-2021), whilst the EPA recognises that the Cork Harbour estuary is "*at risk*"

(Coastal Waterbodies Risk, 2019-2024). According to the EPA, Cork Harbour is of "*moderate*" ecological status/potential. Figure 4.2, below, provides an overview of the hydrological connectivity of the proposed development site.

4.6 Fauna – Desktop Study

4.6.1 Bird Species

The desktop review of available information obtained from the National Biodiversity Data Centre (NBDC) between 2015 and 2025 revealed the confirmed observation of 38 bird species within the 4km^2 grid squares. Of these 38 species, 20 are listed as protected species. Table 4.2 provides an overview of bird species observed within the 2km grid squares.

Table 4.2 – Summary of bird sighting records within grid squares O07M and O07S, 2015-2025.

Species	Count	Date of Last Record	Protections Status	BoCCI Status
Black-headed Gull (Chroicocephalus ridibundus)	10	23/09/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Red
Curlew (Numenius arquata)	2	10/12/2023	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Red
Grey Wagtail (Motacilla cinerea)	2	07/01/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Red
Herring Gull (Larus argentatus)	2	26/05/2024	Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Red
Meadow Pipit (Anthus pratensis)	1	10/12/2023	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Red
Pochard (Aythya ferina)	1	12/11/2022	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Red

Red Grouse (Lagopus lagopus)	1	25/08/2011	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Red
Redshank (Tringa totanus)	3	10/12/2023	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Red
Woodcock (Scolopax rusticola)	1	01/01/2024	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section III Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Red
Yellowhammer (Emberiza citrinella)	2	16/01/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Red
Black-tailed Godwit (Limosa limosa)	1	10/12/2023	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Amber
Common Sandpiper (Actitis hypoleucos)	2	05/08/2019	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Coot (Fulica atra)	1	13/11/2014	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Cormorant (Phalacrocorax carbo)	3	26/05/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Gadwall (Mareca strepera)	1	13/11/2014	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber

Goldcrest (Regulus regulus)	16	23/09/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Great Black-backed Gull (Larus marinus)	2	08/10/2023	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
House Martin (Delichon urbicum)	2	23/09/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
House Sparrow (Passer domesticus)	3	07/01/2024	Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Kestrel (Falco tinnunculus)	2	20/11/2023	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Amber
Kingfisher (Alcedo atthis)	1	07/01/2024	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Lesser Black-backed Gull (Larus fuscus)	1	26/05/2024	Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Linnet (Linaria cannabina)	2	25/01/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Mediterranean Gull (Ichthyaetus melanocephalus)	1	20/06/2023	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Mistle Thrush (Turdus viscivorus)	6	25/01/2024	Protected Species: Wildlife Acts	Amber
Mute Swan (Cygnus olor)	5	07/01/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Oystercatcher (Haematopus ostralegus)	3	05/11/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Amber

Shelduck (Tadorna tadorna)	1	13/11/2014	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Snipe (Gallinago gallinago)	1	07/01/2024	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section III Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Amber
Sparrowhawk (Accipiter nisus)	2	16/07/2022	Protected Species: Wildlife Acts	Amber
Swallow (Hirundo rustica)	1	26/05/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Swift (Apus apus)	2	26/05/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Amber
Teal (Anas crecca)	2	21/02/2024	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section II Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Amber
Blackbird (Turdus merula)	22	05/11/2024		Green
Blackcap (Sylvia atricapilla)	5	26/05/2024		Green
Blue Tit (Cyanistes caeruleus)	19	26/05/2024		Green
Brambling (Fringilla montifringilla)	1	17/02/2008	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >>	Green
Bullfinch (Pyrrhula pyrrhula)	4	31/12/2023		Green
Buzzard (Buteo buteo)	11	16/01/2024		Green
Chaffinch (Fringilla coelebs)	21	26/05/2024		Green
Coal Tit (Periparus ater)	6	26/05/2024		Green
Collared Dove (Streptopelia decaocto)	3	26/05/2024		Green
Dipper (Cinclus cinclus)	4	29/12/2024		Green
Dunnock (Prunella modularis)	14	26/05/2024		Green
Fieldfare (Turdus pilaris)	1	10/12/2023		Green
Goldfinch (Carduelis carduelis)	8	25/01/2024		Green
Great Tit (Parus major)	15	23/09/2024		Green
Greenshank (Tringa nebularia)	1	07/01/2024		Green

Grey Heron (Ardea cinerea)	12	26/05/2024		Green
Hooded Crow (Corvus cornix)	11	26/05/2024		Green
Jackdaw (Coloeus monedula)	13	23/09/2024		Green
Jay (Garrulus glandarius)	13	25/01/2024		Green
Little Egret (Egretta garzetta)	10	26/05/2024	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex I Bird Species	Green
Long-tailed Tit (Aegithalos caudatus)	9	25/01/2024		Green
Magpie (Pica pica)	13	25/01/2024		Green
Mallard (Anas platyrhynchos)	6	07/01/2024	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section I Bird Species || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Green
Moorhen (Gallinula chloropus)	3	07/01/2024		Green
Pheasant (Phasianus colchicus)	3	25/01/2024	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species || Protected Species: EU Birds Directive >> Annex III, Section I Bird Species	Green
Pied Wagtail (Motacilla alba)	4	26/05/2024		Green
Raven (Corvus corax)	1	16/07/2022		Green
Redwing (Turdus iliacus)	6	25/01/2024	Protected Species: Wildlife Acts || Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Red List	Green
Reed Bunting (Emberiza schoeniclus)	1	12/11/2023		Green
Robin (Erithacus rubecula)	24	05/11/2024	Protected Species: Wildlife Acts	Green
Rock Dove (Columba livia)	2	16/07/2022	Protected Species: Wildlife Acts || Protected Species: EU Birds Directive || Protected Species: EU Birds Directive >> Annex II, Section I Bird Species	Green
Rook (Corvus frugilegus)	8	26/05/2024		Green
Siskin (Spinus spinus)	2	18/02/2021		Green
Song Thrush (Turdus philomelos)	18	26/05/2024		Green
Starling (Sturnus vulgaris)	2	08/10/2023	Threatened Species: Birds of Conservation Concern || Threatened Species: Birds of Conservation Concern >> Birds of Conservation Concern - Amber List	Green
Treecreeper (Certhia familiaris)	4	23/09/2024		Green
Waxwing (Bombycilla garrulus)	1	06/03/2005		Green
Woodpigeon (Columba palumbus)	20	23/09/2024		Green
Wren (Troglodytes troglodytes)	18	23/09/2024		Green

4.6.2 Non-Volant Mammals

The desktop review of available information obtained from the NBDC revealed the confirmed observation of 15 mammal species within the 4km^2 grid squares, including 6 bat species. NBDC records include for the 2 grid squares include records of pine martin and red squirrel, both critically endangered mammals in Ireland. However, records of these species were last confirmed in 2020 and 2023, respectively. Table 4.3 provides an overview of records of mammal sightings within the 2km grid squares O07M and O07S.

Table 4.3 – Summary of mammal sighting records within grid squares O07M and O07S, 1981 – 2025.

Species	Count	Last Record	Conservation Status
Badger (*Meles meles*)	1	09/02/2014	Protected Species: Wildlife Acts
Brown Rat (*Rattus norvegicus*)	1	12/09/2015	Invasive Species: High Risk Invasive Species (2013 Report)
Hedgehog (*Erinaceus europaeus*)	3	11/07/2022	Protected Species: Wildlife Acts
Irish Stoat (*Mustela erminea subsp. hibernica*)	2	03/05/2024	
Otter (*Lutra lutra*)	2	24/04/2017	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex II || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Pine Marten (*Martes martes*)	1	11/07/2020	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex V || Protected Species: Wildlife Acts
Rabbit (*Oryctolagus cuniculus*)	1	24/11/2013	Invasive Species: Medium Risk Invasive Species (2013 Report)
Red Fox (*Vulpes vulpes*)	3	06/11/2012	
Red Squirrel (*Sciurus vulgaris*)	4	21/01/2023	Protected Species: Wildlife Acts
Brown Long-eared Bat (*Plecotus auritus*)	1	24/09/2021	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Common Pipistrelle (*Pipistrellus pipistrellus sensu stricto*)	4	20/09/2020	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Daubenton's Bat (*Myotis daubentonii*)	24	24/09/2021	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Leisler's Bat (*Nyctalus leisleri*)	2	20/09/2020	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Natterer's Bat (*Myotis nattereri*)	1	20/09/2020	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Pipistrelle (*Pipistrellus pipistrellus sensu lato*)	2	20/10/2015	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts
Soprano Pipistrelle (*Pipistrellus pygmaeus*)	6	20/09/2020	Protected Species: EU Habitats Directive || Protected Species: EU Habitats Directive >> Annex IV || Protected Species: Wildlife Acts

4.6.3 Herpetofauna

The desktop review of available information obtained from the NBDC revealed the confirmed that there have been no recent confirmed observations of herpetofauna within the 2km grid squares surrounding the proposed LRD site.

4.7 *In-Situ* Surveys

4.7.1 Habitats

The following habitats were observed on or in the immediate vicinity of the Baneshane LRD site:

- Buildings and Artificial Surfaces (BL3)
- Spoil and bare ground (ED2)
- Recolonising Bare Ground (ED3)
- Scrub (WS1)
- Hedgerows (WL1)
- Improved Agricultural Grassland (GA1)
- Amenity Grasslands (GA2)
- Ornamental shrub (WS3)
- Lowland/Depositing River (FW2)
- Artificial pond (FL8)

The site is primarily comprised of Buildings and Artificial Surfaces (BL3), typified by concrete surfaces, storage tanks, fences and ancillary facilities. Scrub (WS1) was the predominant habitat type observed within the boundaries of the LRD site, with patches of dray calcareous grassland (GS2) interspersed throughout. Typical species observed within scrub include Hawthorn, bramble (*Rubus fruticosus*), hedge bindweed (*Hypericum Calystegia sepium*), ivy (*Hedera spp*), ash (*Fraxinus excelsior*), grey willow (*Salix cinerea*). Typical species within dry calcareous grassland include bents (Agrostis spp.), meadow grass (*Poa spp*.), Cocks foot (*Dactylis glomerata*), clovers (*Trifolium spp*.), plantain (*Plantago spp*.), Yorkshire-fog (*Holcus lanatus*), thistle (*Cirsium vulgare*) and nettles (*Urtica dioca*).

Spoil and Bare Ground (ED2) and Recolonising bare ground (ED3) was observed along the north-western boundary of the LRS site, with common floral species observed included Herb Robert (*Geranium robertianum*), Broad leaved dock (*Rumex obtusifolius*), Spear thistle (*Cirsium vulgare*), Nettle (*Urtica dioica*), Willowherb (*Epilobium angustifolium*), Ragwort (*Jacobaea vulgaris*), Dandelion (*Taraxacum spp*.), Creeping buttercup (*Ranunculus repens*), and Ribwort plantain (*Plantago lanceolata*).

Lands surrounding the site to the South are dominated by improved agricultural grasslands, divided by hedgerows. A newly completed residential housing development ("The Orchards") is located on lands adjacent west of the proposed LRD, whilst a residential housing development is currently under construction on lands adjacent east of the proposed LRD site. Lands to the north of the proposed LRD sire are a mix of scrub and improved agricultural lands. Typical species observed within hedgerows include ash, grey willow, bramble, hedge bindweed, and Hawthorn. A series of ornamental

hedgerows (WS3) were observed along the RockBrook road and Ballintubber Road in the vicinity of the "The Orchards" residential estate.

4.7.2 Alien Invasive Species

No 'High Impact' invasive floral species listed on the First Schedule of the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011) were recorded within the boundaries of the Baneshane LRD site.

4.7.3 Fauna - Birds

A total of 21 bird species were observed on and near the proposed development site between January and March 2026, primarily comprised of common species resident within Ireland all year round. No rare / endangered species were observed within the boundary or on lands adjacent to the LRD site. The distribution of bird species was typically confined to lands comprised of arable cropland and improved agricultural grassland along near the south-western, southerly, and eastern boundaries of the LRD site. No ground nesting birds were flushed from arable land during transects through this habitat. The majority of the number of birds counted encompassed common bird species, such as pigeon, starling, crows, rook and blackbird. Wren, robin, blue tit, chaffinch, and chiffinch were typically observed along hedgerows bounding lands encompassing agricultural grassland. An observation of single Heron and three (3 No)Egret was made during a count completed in March 2026. Both of these species were observed flying overhead from east-west, whilst no other sightings of these species were made on near the LRD site on any other count completed in 2026.

Wintering wetland bird species such as golden plover, lapwing, greylag goose, herring gull, and lesser-black backed gull as well as other waterbirds are known to rely on and / or opportunistically use grassland and arable land for feeding and roosting. These species generally prefer to use areas of open and expansive grassland and arable land for feeding and roosting (FAS, 2017) and are less associated with enclosed and small field sizes (Milsom et al. 1998). Wintering waterbirds that forage on grassland habitats prefer short sward grassland, with the optimum height for species such as golden plover and lapwing reported to be c. 7cm tall (Gillings & Fuller, 1999). During all surveys (January – March 2026), no special conservation interest bird species of the Cork Harbour were observed foraging, roosting or loafing within the proposed development site or the surrounding area during all winter season and breeding bird season surveys. No other waterbird species were recorded at the Proposed Development site during all surveys. Based upon the results of the field surveys, the proposed development site does not function as a terrestrial habitat relied upon by special conservation interest bird species or waterbirds listed within the Cork Harbour SPA. Table 4.4, below, provides a summary of bird species confirmed to occur on / near the site during *in-situ* bird surveys in 2026.

Table 4.4 – Overview of bird count data compiled during surveys near the LRD site (Jan – March 2026).

Common Name	Species Name	Survey Date	BoCCI Status
Blackbird	*Turdus merula*	Jan; Feb; Mar 2026	Green
Blackbird	*Turdus merula*	Jan; Feb; Mar 2026	Green

Common Name	Species Name	Survey Date	BoCCI Status
Blackcap	*Sylvia atricapilla*	Feb; Mar 2026	Green
Blue Tit	*Cyanistes caeruleus*	Jan; Feb; Mar 2026	Green
Chaffinch	*Fringilla coelebs*	Jan; Feb; Mar 2026	Green
Chiffchaff	*Phylloscopus collybita*	Jan; Feb; Mar 2026	Green
Coal tit	*Periparusater hibernicus*	Jan; Feb; Mar 2026	Green
Common Gull	*Larus canus*	Jan; Feb; Mar 2026	Amber
Dunnock	*Prunella modularis*	March 2026	Green
Egret	*Egretta garzetta*	March 2026	Green
Goldfinch	*Carduelis carduelis*	March 2026	Amber
Heron	*Ardea cinerea*	March 2026	Green
Hooded Crow	*Corvus cornix*	Jan; Feb; Mar 2026	Green
Jackdaw	*Coloeus monedula*	Jan; Feb; Mar 2026	Green
Magpie	*Pica pica*	Jan; Feb; Mar 2026	Green
Robin	*Erithacus rubecula*	Jan; Feb; Mar 2026	Green
Rook	*Corvus frugilegus*	Jan; Feb; Mar 2026	Green
Song thrush	*Turdus philomelos*	Jan; Feb; Mar 2026	Green
Starling	*Sturnus vulgaris*	Jan; Feb; Mar 2026	Green
Wood pigeon	*Columba palumbus*	Jan; Feb; Mar 2026	Green
Wren	*Troglodytes troglodytes*	Jan; Feb; Mar 2026	Green

4.7.4 Fauna - Non-Volant Mammals

Badgers

The lands within and adjacent to the proposed LRD site were investigated between June – July 2025, and between January – March 2026 for evidence of the presence and / or use of nearby habitats, but no such definitive evidence indicating the presence of badgers was noted. Similarly, lands and likely nearby habitats (i.e., agricultural grassland, scrub and hedgerows) were investigated for the presence of setts, but no evidence to suggest the presence of badger setts was found during all site investigations.

Otters

The proposed development site does not provide nor offer suitable habitat for otters. The Oatencake stream traverses the landscape near the norther boundary of the proposed LRD site, but surveys completed along a 500m stretch of the watercourse between January – March 2026 found no evidence to suggest the presence or use of this watercourse by otter.

5 CONSIDERATION OF POTENTIAL IMPACTS TO NATURA 2000 SITES

The following pathways that have been identified as having the potential to give rise to adverse effects to Natura 2000 Sites relate to:

- Hydrological pathways arising from surface water and groundwater emissions.
- Noise emissions arising from construction phase works.
- Air emissions arising from construction phase works.
- Mobile species pathways, where the Proposed Development site was identified as supporting suitable habitat for special conservation interest bird species of SPAs listed in Section 1.0 above.
- Human distance pathways, where the operation phase of the proposed development will result in an increase in the human population in close proximity to the Cork Harbour SPA and Great Channel Island SAC, with potential consequences for relevant qualifying species of interest of these two Natura 2000 Sites.

The examination of potential adverse effects associated with these pathways is provided in the following subsections below.

5.1 Examination of Hydrological Pathway

The potential impacts that may arise as a result of the proposed development relate to the discharge of contaminated surface water from the proposed development site during the construction phase and operational phase to the Oatencake stream and ultimately into the Cork Harbour and associated Natura 2000 Sites.

Earthworks associated with the construction phase of the proposed development will denude surfaces and have the potential to generate silt-laden surface water runoff from the proposed development site. In the event that water generated at the construction footprint is of a poor water quality standard or becomes contaminated from construction works, its discharge will have the potential to result in the release of polluted surface water to the channel of the Oatencake Stream. Additionally, potentially contaminating materials such as oils, fuels, lubricants, other construction related solutions and cement-based products will be used on site during the construction phase and the accidental emission of such material via surface water runoff or groundwater base flows to the Oatencake stream and ultimately into the Cork Harbour will have the potential to undermine water quality within the river and contribute to existing water quality pressures to the transitional waters of the Owenacurra River and Cork. The exposure of lotic and estuarine fauna, including fish, birds, and mammals, to such contaminants can result in disturbance and stress effects. Upon detection of such contaminants mobile species such as fish, estuarine and wetland birds and / or marine mammals may simply move away from the affected area, with the potential to result in a decline in the distribution of these species within the Cork harbour SPA. For sessile benthic fauna, upon which numerous bird species listed as SCI for the Cork Harbour SPA rely upon as food resources, there is no potential for escape and their exposure to contaminants may result in biological changes designed to aid survival. In some cases, these benthic species may acclimatise to contaminated conditions, while in others the contaminants may lead to mortality and changes in the population and community structure of intertidal

wetland habitats. Such an effect would have the potential to undermine the conservation status of lotic and wetland habitats occurring downstream of the LRD site.

During the operation phase surface water generated at the proposed development site will discharge via appropriate stormwater channels into the municipal sewer and / or via SuDS infrastructure, diminishing the potential for contaminated surface water runoff into the nearby watercourse. It is noted that, given its location and current state, the uncontrolled release of contaminated surface drainage waters to the Oatencake stream is likely to be rapidly diluted and distributed along its length, and even more so downstream at the confluence with the Owenacurra River. However, it is also noted that any deposition of contaminants such as hydrocarbons or cement material to lentic habitats and consequently estuarine habitats further downstream could result in the contamination of benthic fauna and epifauna which function as a prey resource for bird species of the Cork Harbour SPA. The toxic effect of such contaminants, particularly hydrocarbons, on feeding, growth, development, and reproduction are known to cascade and bioaccumulate throughout the food chain affecting benthic fauna, fish, and birds (Ferrando, 2015).

However, specific note must be made of the location, volume, current state, and anthropogenic modifications made to the geomorphology of the Oatencake stream. The watercourse traverses near the northern boundary of the LRD site but does nor traverse within the boundary of the proposed LRD site nor near (< 30m of any specific construction works). Moreover, the Oatencake watercourse has been culverted and traverses underground near the norther boundary of the LRD site, and emerges to normal surface flows c. 220m east of the north-eastern corner of the proposed LRD site. As such, there is diminished opportunity for incidental spills and / or influxes of contaminated surface water and / or pollutants directly into the watercourse. Similarly, there is adequate groundcover vegetation along the length of the watercourse were surface flows occur, that would afford a significant natural buffer to surface water, sediment and / or contaminant run-off.

Nevertheless, given the location and geomorphology of the Oatencake stream, whilst considering the location and extent of the proposed development works, it is determined that in the absence of appropriate mitigation measures, likelihood still exists for the potential of a persistent surface water pathway to exist between the proposed Baneshane LRD site and the Cork Harbour SPA and salt meadows and intertidal mud- and sandflats within the Great Channel Island SAC.

5.2 Examination of Potential Noise & Vibration Disturbance

The potential noise impact of construction and operational phase activities of projects to disturbance of Natura 2000 sites, and specifically marine and waterbird species within the Cork Harbour SPA particularly susceptible to such disturbance. Their susceptibility to such disturbance has been identified on the basis of the proximity of the proposed LRD site to the Cork Harbour SPA and adjacent lands / habitats that may be used by bird species for roosting, breeding, foraging, and / or loafing.

The Cork Harbour SPA is located c. 990m from the LRD site at the nearest point, wherein noise and vibration effects may It is set back from the developable footprint of the Proposed Development site by approximately 135m. Specifically, it

must be noted that the N25 roadway is located c. 200 north of the LRD site, and is a persistent source of daily vehicle traffic and noise emissions throughout the surrounding landscape.

Vibration impacts are assumed to be limited because of the minimal requirement of groundbreaking and excavations required, and that no piling would be undertaken for the Baneshane LRD. In light of this vibration effects will be low, consistent with best practice guidance for residential development of this scale, and there will be no potential for the proposed development to result in vibration related effects to the Cork Harbour SPA nor to salt meadow and intertidal mud- and sandflats of the Great Channel Island SAC.

In light of the foregoing, it is concluded that noise and vibration generated during the construction phase will not have the potential to result in disturbance to marine and estuarine bird populations of the Cork Harbour, and that there is no functional noise/vibration impact pathway connecting the proposed development site to the features of interest of the Cork Harbour SPA and Great Channel Island SAC.

5.3 Examination of Potential Dust Emissions

The greatest potential impact on air quality during the construction phase of the proposed development is from construction dust emissions and the potential for nuisance dust and PM10/PM2.5 emissions. Transport Infrastructure Ireland (TII) (2011) provide guidance for the potential distance for significant effects associated with such emissions to air. This guideline specifies distances according to the scale of a project, which ranges from major (large construction sites, with high use of haul roads), to moderate (moderate sized construction sites, with moderate use of haul roads), to minor (minor construction sites, with limited use of haul roads). For the purposes of this examination a worst-case scenario is adopted with distances associated with a major development being used as part of the examination.

For a major development, the TII guidelines specify a potential distance for significant effects as associated with soiling, PM10 and Vegetation Effects at 100m, 25m and 25m, respectively. The boundaries of the Cork Harbour SPA and Great Channel Island are located within > 900m from the LRD construction footprint and will therefore not be susceptible to soiling from dust emissions. It is also noted that no qualifying habitats or habitats that are relied upon by qualifying bird species are located within or near the LRD development. As such the SCI of the Cork Harbour SPA and the QI habitats of the Great Channel Island (i.e.,. salt meadows and intertidal mud- and sandflats) will not be affected by air emissions during the construction phase. Notwithstanding this, mitigation measures for avoiding any potential dust soiling impacts to all areas within the Cork Harbour SPA and Great Channel Island SAC are set out in Section 6 below.

In light of the above, it is therefore concluded that the operation phase of the proposed development will similarly not have the potential to result in a function air impact pathway between the proposed development site and nearby Natura 2000 sites.

5.4 Examination of Wastewater Emissions Pathway

Wastewater will be generated during the operation phase of the proposed development, and this wastewater will be conveyed via a pumping station and sewerage pipelines to the Midleton Wastewater Treatment Plant (WwTP). Uisce

Éireann have provided confirmation that sufficient capacity is available at the Midleton WWTP to adequately treat all wastewater generated during the operation phase of the Baneshane LRD.

Similarly, during the construction phase, all wastewater generated at the proposed development site will be contained within impermeable portaloo tanks, which will be subject to routine maintenance during construction works. All wastewater held in portaloo tanks will be conveyed offsite by a licence operator for treatment at a suitably licenced wastewater treatment plant. It is therefore concluded that it is unlikely that wastewater will have any significant effects on the bird species and habitats identified within the Cork Harbour SPA and Great Channel Island SAC.

As such, it is concluded that there is no likelihood for wastewater emissions from the proposed Baneshane LRD to affect surface and groundwater water quality along the Oatencake Stream, the Cork Harbour estuary, and consequently no likelihood to affect salt meadows and intertidal flats habitats, as well as other supporting habitats for bird species within the Great Channel Island SAC.

5.5 Examination of Mobile Species Pathway

Targeted field surveys were completed in 2025 and 2026 within and surrounding the proposed development to identify whether or not mobile qualifying species of surrounding SAC and SPA rely on the proposed development, and whether or not the proposed development represent an *ex-situ* habitat for bird species. However, no wetland birds, waterbirds or marine such as Golden Plover, Lapwing, Greylag Goose, Oystercatchers, Sanderlings, Knots, Cormorants, Shearwaters, Herring gull, Common Gull, Lesser Black-backed Gull, Herring Gull, Great Black-backed Gull, or any other wetland, water, or marine birds identified within Natura SPA sites within the ZoI were recorded using the Proposed Development site as a foraging, roosting or loafing site during all bird surveys as detailed in (see Section 4).

In light of the targeted bird surveys completed at the proposed development site, it can be concluded that the proposed development site does not function as an *ex-situ* habitat for these species, whilst there is no mobile species pathway connecting the proposed development to SACs and SPAs in the wider surrounding area. Given the absence of a mobile species pathway between the proposed development site and nearby Natura 2000 sites, it is concluded that there will be no potential for the proposed development to result in adverse effects to the Cork Harbour SPA nor to the Great Channel Island SAC.

5.6 Examination of Human Disturbance Pathway

During the construction phase of works, human presence, and movement on and near the LRD site will be elevated and therefore increase the potential disturbance through human presence. Specifically, the construction phase of works will require the development and use of a site compound wherein human presence will be concentrated. Similarly, the operation phase of the proposed development will result in an increase in the human population within the Baneshane LRD and immediate surrounds. However, the following should be noted:

- There are no supporting habitats for bird species within or adjacent to the Baneshane LRD site

- The receiving environment surrounding the Baneshane LRD site is highly urbanised (residential estates, N25 roadway, walkways, access roads, schools, etc) that supports only low local biodiversity, with ecological communities already adapted to persistent human activity
- The boundaries of the Cork Harbour SPA and Great Channel Island SAC are located > 900 m from the Baneshane LRD site (at the nearest point),
- Moreover, lands located between the Baneshane LRD and the SPA/SAC primarily encompass agricultural lands which are typically inaccessible to local residents
- The southern portion of Midleton Town bounds the SPA and the SAC, with several roadways, walkways and greenways intersecting through the Natura 2000 sites, resulting in persistent human foot traffic and persistent daily exposure of bird species to human presence.

As a result, it is determined that there is no likelihood for significant effects on local biodiversity, particularly bird species identified as SCI of the Cork Harbour SPA

Similarly, it is also recognised that an increase in the resident human population will also likely result in an increase in the abundance of domestic pets, such as digs and cats. Domestic dogs and cats can influence local biodiversity through disturbance, predation, nutrient enrichment from faeces and, in some settings, disease transmission. However, these impacts are typically associated with access to natural or semi-natural habitats where sensitive species occur.

According to the most recent national statistics in Ireland, approximately 60% of households own a domestic pet, of which, dogs comprise 60% of pet ownership, whilst cats comprise only 17% of pet ownership, with up to 23% of households having both dogs and cats (Central Statistics Office, 2021[1]). These data were similarly published by local, non-governmental websites (Petmania Survey[2], 2023; Pet Sitters Ireland; 2025[3]) that reflect published statistics to pet-owner focus groups. These statistics also revealed that dog ownership is highest in rural areas, with cat ownership being greater in city centres and urban areas (Central Statistics Office, 2021). Consideration of the published statistics affords a conservative estimate of pet ownership within the proposed Baneshane LRD. Extrapolation of these data into the context of the proposed Baneshane LRD reveals that (based purely on average household pet ownership statistics), c. 150 homes will own pets, suggesting that there will be a conservative estimate of c. 90 dogs and 25 cats living within the proposed Baneshane LRD. By contrast, within a managed residential estate, such as the Baneshane LRD, the environmental conditions necessary for significant ecological effects are typically absent. The immediate area surrounding the LRD site is predominantly urban in nature, with agricultural lands further to the south, east and west of the LRD site. Residential areas consist predominantly of built structures, managed lawns and ornamental planting that support only common,

[1] Central Statistics Office (2021) Pulse Survey May-June 2021 - Life at Home: Snapshot of Results. Accessible at; https://www.cso.ie/en/releasesandpublications/fp/fp-pslahsr/pulsesurveymay-june2021-lifeathomesnapshotofresults/snapshotofresults/#:~:text=Over%20half%20(52%25)%20of,only%20a%20cat(s).

[2] Petmania (2023) Ireland's Pet Report: An Insight into the Lives of Irish Pets. October 2023. Accessible at; https://www.petmania.ie/wp-content/uploads/2023/10/Irelands-Pet-Report-October-2023_Web.pdf?srsltid=AfmBOoo80bfQxiwAjnTfsLRvENpRoLvbmQiAck5-o3XVXr6_eIJ1a_QV

[3] Pet Sitters Ireland (2023) 2023 Irish Pet Owners Survey Results. Accessible at; https://www.petsittersireland.com/pet-survey/#:~:text=By%20Kate%20McQuillan%20March%201,Do%20you%20have%20Pet%20Insurance?

disturbance-tolerant species and lack ground-nesting birds, priority habitats, or fauna of conservation concern. Moreover, the seasonal bird surveys completed at the proposed Baneshane LRD site did not identify any rare, protected, or endangered bird species listed under any Natura 2000 sites within the 15km ZoI. Similarly, there are no high value supporting habitats for protected bird or mammal species nearby, nor any Annex I habitats, within the boundaries of the LRD nor proximal to the LRD site. Consideration must be given to the typical setting of domestic pets within the proposed LRD site. Whereby dogs will be generally kept under control and walked along established paths, while cats, although sometimes free-roaming, will primarily utilise gardens and other urban features rather than high-value habitats.

The ecological carrying capacity of the LRD site and its immediate surrounds is already limited by high levels of human activity, lighting, noise, and regular maintenance, resulting in low local biodiversity. Pet faeces, which are a concern for potential nutrient loading into nearby ecosystems, will be routinely managed by owners, and any occasional nutrient inputs may occur within low-sensitivity amenity habitats within the LRD, where enrichment has no significant ecological consequence. Furthermore, considering the layout of the proposed LRD, there are no functional pathway for domestic pets to affect wildlife of conservation importance of the local area.

Given that domestic pets form part of the existing baseline in residential environments, and that the proposed LRD site does not currently support species susceptible to their presence, domestic dogs and cats are assessed as having no meaningful or significant impact on local biodiversity in this instance. Consequently, the threat of increased predation risk from domesticated dogs and cats, as well as increase nutrient enrichment to surrounding habitats through domestic pet faeces is considered unlikely.

5.7 Cumulative Effects

According to the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (Government of Ireland, 2018), "*There is no standard prescriptive method for assessing cumulative and combined effects and, in relation to cumulative effects, the extent to which the effects of other developments can be assessed quantitatively depends on the level of information available about the other developments. Such effects are, therefore,* ***assessed by professional judgment****, although matrices and modelling are used where appropriate and where enough information regarding the other developments exists. Where environmental assessment information regarding other developments is not available or uncertain, the assessment is necessarily qualitative*".

The potential exists for the proposed development to overlap with other construction projects that may consequently affect habitats and species of Natura 2000 sites contained within the Cork Harbour complex. A review of the Cork County Council planning portal was completed to identify other recently approved or live planning applications, with which the proposed development could combine to result in negative effects to the conservation objectives of habitats and species of nearby Natura 2000 sites via surface water and pollutants, dust, noise and vibration, and increased human presence. A number of planning applications were identified within a 2km radius of the proposed development site. Additionally, planning applications were assessed across the region, specifically along watercourses upstream of the proposed development as well as along the coastline of the Cork Harbour complex within 5km of the proposed Baneshane LRD site.

However, the majority of these planning applications relate to the minor project associated with changes to existing dwellings or commercial buildings. Such projects are of a small scale and are not considered to present a risk of likely significant effects, alone or in-combination with other plans or projects. This consideration is supported by the findings of the Local Authority Planners who state in the planners reports, "*for such projects that there will be no risk of likely significant effects to European Sites*". Given the above such projects are not itemised in this section. As such only three larger scale projects were identified as occurring in the vicinity of or downstream of the proposed development site. These projects are listed below and the potential for the proposed development to combine with these projects is also examined.

Table 5.1 – Summary of approved planning applications proximal to the proposed development.

Applicant [Application Number]	Status [Approval Date]	Development Description	Likelihood for in-Combination Effects
Seamus & Clare Burke [254442]	Approved – Conditional [24/03/2025]	Permission to remove from existing residential dwelling the existing dormer roof and construct a new first floor two storey extension onto the existing dwelling along the external window and door alterations, a new single storey side and rear extensions onto the existing dwelling, a detached single storey domestic garage and all associated site works and services	The proposed development has potential to generate low-moderate volumes of dust, sediment and surface water run-off, as well as noise and vibration emissions. As such, the following should be considered: • The proposed development is located c. 670m west of the Baneshane LRD site, whereby noise and vibration emissions will be completely dissipated. Moreover, the N25 roadway transects the landscape between the planning permission and the Baneshane LRD site, resulting in ambient noise levels already being elevated. • The approved planning development is located within a peri-urban setting and is surrounded by amenity grassland and agricultural lands which offer a natural buffer to sediment and surface water run-off. • Moreover, municipal drainage and stormwater management infrastructure will be found along the adjacent and nearby roadways, further reducing uncontrolled surface water and sediment influx into the Oatencake stream and ultimately Cork Harbour. Consequently, it is determined that the proposed planning development has low likelihood for in-combination effects with the Baneshane LRD site to nearby Natura 2000 sites during the construction or operational phase of the projects.
Margaret McDonnell [246072]	Approved – Conditional [27/02/2025]	Permission to extend an existing two-storey dwelling by the conversion of an existing attached single-storey outhouse to a two-storey habitable space with a single storey extension to the front, elevational changes to the existing to include 1 no. new roof light as well as all associated site works	The proposed development has potential to generate low-moderate volumes of dust, sediment and surface water run-off, as well as noise and vibration emissions. As such, the following should be considered: • The proposed development is located c. 430m southwest of the Baneshane LRD site, whereby noise and vibration emissions will be completely dissipated. Moreover, the N25 roadway transects the landscape between the planning permission and the Baneshane LRD site, resulting in ambient noise levels already being elevated. • The approved planning development is located within a peri-urban setting and is surrounded by amenity grassland and agricultural lands which offer a natural buffer to sediment and surface water run-off. • Moreover, municipal drainage and stormwater management infrastructure will be found along the adjacent and nearby roadways, further reducing uncontrolled

			surface water and sediment influx into the Oatencake stream and ultimately Cork Harbour. Consequently, it is determined that the proposed planning development has low likelihood for in-combination effects with the Baneshane LRD site to nearby Natura 2000 sites during the construction or operational phase of the projects.
Rock Gate Property Developments Ltd [235170]	Approved – Conditional [01/08/2023]	Construction of 65 no. dwelling units and all associated ancillary development works including access, parking, drainage (including pumping station) and landscaping. Extension of Duration of Planning Reference Number 17/6604	The proposed development has potential to generate moderate volumes of dust, sediment and surface water run-off, as well as noise and vibration emissions. As such, the following should be considered: • The proposed development is located c. 50m east of the Baneshane LRD, whereby noise and vibration emissions will be completely dissipated. • The approved planning development is located within a peri-urban setting and is surrounded by amenity grassland and agricultural lands which offer a natural buffer to sediment and surface water run-off. • Several appropriate sediment and dust control measures have been observed within the approved planning development site, which assist in mitigating likely significant effects from sediment, surface water and dust emissions. Consequently, it is determined that the proposed planning development has low likelihood for in-combination effects with the Baneshane LRD site to nearby Natura 2000 sites during the construction or operational phase of the projects.
Uisce Éireann	Approved – Conditional [15/05/2025]	Permission for the Midleton Wastewater Loading Diversion Project which will consist of the provision of a new foul pumping station and rising main connection to Water-Rock WWPS. The works include: 1. New foul pumping station (Midleton South) located within the existing Bailick No.1 wastewater pumping station site, to include wet well, valve chamber, flowmeter chamber, mcc kiosk, wash water kiosk, lighting, vent stack and all necessary mechanical and civil works to accommodate the proposal. 2. Alterations to the existing site access at Bailick No.1 WWPS site will require removal of sections of the existing wall / hedgerow. To be replaced with a new fence behind the visibility lines. 3. Approximately 1,800m of rising main connecting the Midleton South WWPS to the Water-Rock WWPS, to include air / scoure valve chambers and 6m vent stack at Kennedy Park. The route will travel along Bailick Road, Kennedy Park and Riverside Way. Adjacent to Midleton Gyratory, the route will cross the Owenacurra river using trenchless methods and run along Market Green Plaza to Market Green. A Natura	The proposed development has potential to generate moderate - high volumes of dust, sediment and surface water run-off, as well as noise and vibration emissions. As such, the following should be considered: • The proposed development is located c. 1.3km east of the Baneshane LRD site, whereby noise and vibration emissions will be completely dissipated. • The approved planning development is located within a urban setting and is surrounded by amenity grassland, urban drainage and stormwater management infrastructure, and agricultural lands which offer a natural buffer to sediment and surface water run-off. • Several appropriate sediment and dust control measures have been observed within the approved planning development site, which assist in mitigating likely significant effects from sediment, surface water and dust emissions. • The approved planning permission for the Uisce Éireann development is accompanied by an AA Screening and NIS report, that provides appropriate

		Impact Statement will be submitted to the planning authority with the application. The Natura Impact Statement will be available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy during office hours at the office of the relevant planning authority.	mitigation measures to avoid impacts to the Cork Harbour complex and Natura 2000 sites within. Consequently, it is determined that the proposed planning development has low likelihood for in-combination effects with the Baneshane LRD site to nearby Natura 2000 sites during the construction or operational phase of the projects.

With regard to the existing threats and pressures to the Cork Harbour complex and the Natura 2000 sites, as documented by the NPWS it is noted that most of the threats/pressures are not related to the activities that will arise during the construction phase or operation phase of the proposed development and that the LRD will not have the potential to result in activities that could exacerbate the risks posed by the majority of the threats and pressures listed for the SAC and SPA above. However, the existing threats and pressures to the Cork Harbour SPA and Great Channel Island SAC that are of relevance to the proposed development could combine to result in adverse cumulative effects include,

- H01 - Pollution to surface waters (limnic, terrestrial, marine & brackish)
- J02.11 - Siltation rate changes, dumping, depositing of dredged deposits
- E05 - Storage of materials
- E03.04 - Other discharges
- E01 - Urbanised areas, human habitation

In the absence of appropriate design and mitigation measures, the Baneshane LRD will have the potential to combine with these existing threats and pressures to result in adverse cumulative effects to the Cork Harbour SPA and Great Channel Island SAC.

5.8 Consideration of Potential Impacts to Conservation Objectives

An NIS is required to assess the potential for impacts to the integrity of a Natura 2000 site, with respect to the site's structure and function and its Conservation Objectives. The structural and functional elements of a Natura 2000 Site to maintain the favourable conservation status of qualifying features of interest/special conservation interests are embedded into the list of detailed site-specific conservation objectives (SSCOs) for each of the site's interest features. As such, a Natura 2000 Sites' SSCOs represent the parameters against which a project's potential to adversely affect the integrity of a Natura 2000 Sites should be considered. Natura 2000 sites within the ZoI are located < 1km from the LRD site, and these Natura 2000 sites include numerous bird species that are highly mobile and utilise a range of habitats across the region. Several seasonal bird surveys have been completed at the LRD site and revealed that the LRD site offers low value habitat for estuarine, coastal, and marine bird species. Moreover, none of the seasonal bird surveys (2025 - 2026) observed any rare, protected, or endangered bird species listed under any of the Natura 2000 sites within the ZoI. The Cork Harbour SPA exhibits regular communities of common aquatic, estuarine, coastal bird species that appear to be acclimatised to the persistent anthropogenic disturbance (human presence, domestic pets, private and commercial vehicles, etc) imparted by the ubiquitous human activities of the Cork Harbour, Cork City, coastal industrial centres, manufacturing outlets and coastal suburbs. It should also be noted that the N25 roadway is located within 100m of the northern boundary of the Baneshane LRD site, wherein persistent daily traffic has elevated the ambient noise levels of the area. Furthermore, although lands within and adjacent to the LRD site do not offer significant supporting habitat for bird, mammal or amphibian species, lands further to the south, east, and west are primarily agricultural in nature, and may offer potential suitable refuge for local mammal and bird species. As such, considering the existing state of the LRD site and its immediate surrounds, it is determined that the proposed LRD will not result in any significant impacts to local biodiversity.

6 MITIGATION MEASURES OF POTENTIAL IMPACTS TO NATURA 2000 SITES

Targeted mitigation measures are outlined in this section to ensure that adverse effects to the qualifying features of interest and special conservation interests of the Cork Harbour SPA and Great Channel Island SAC, avoided during the construction phase and operation phase of the project.

6.1 Construction Phase Mitigation Measures

6.1.1 Mitigation Measures: Land Pathways

- Hydrocarbons or any hazardous chemicals must be stored in specified bunded areas.
- Refuelling of plant machinery must be carried out in bunded areas, to minimise the risk of any potential pollutants being discharges from the site.
- Pollution control measures must be implemented to control any runoff from the site and prevent any runoff potentially contaminated with sediments or hazardous chemicals entering the drainage network.
- Pouring of cement-based materials for works will only be carried out in dry conditions.
- Pumped concrete must be monitored to ensure there is no accidental discharge.
- Mixer washings and excess concrete must not be discharged directly into the existing drainage network.
- Concrete washout areas must be created to avoid any accidental discharge from the proposed development site.
- Foul drainage from site offices and compounds, where not directed to the existing wastewater network, must be contained and disposed of off-site in an appropriate manner and in accordance with the relevant statutory regulations, to prevent any pollution to watercourses.
- An appropriate response procedure must be put in place to deal with any accidental pollution events and spillage kits will be available.
- Construction staff Must be made familiar with the emergency response procedure and use of the equipment.

6.1.2 Mitigation Measures: Water Quality

The potential for the construction phase of the proposed development to result in the discharge of polluted surface water to the Oatencake Stream and ultimately into the Cork has been identified as a potential impact pathway that could result in adverse effects to the Cork Harbour SPA and Great Channel Island SAC. To minimise the generation of polluted waters in the first instance and avoid the discharge of polluted surface water to the Oatencake Stream, the following measures will be implemented:

- The main contractor will appoint a suitably qualified person to oversee the implementation of measures for the prevention of pollution to the receiving surface water environment.
- A surface water catch-trenches will be provided along the northern, western, and eastern boundary of the construction footprint prior to stripping topsoil. The surface water catch-trenches will have a settlement pond silt trap at the end of each trench with an overflow. The surface water catch-trenches will be discharged via a buffered outfall overland to the north of the site. Straw bales will be placed within the catch-trenches at strategic locations and at the outfall of the settlement ponds to the overflow. These measures will be implemented and

maintained during the construction phase to prevent surface water runoff from discharging directly into the local water course.

- A clean water diversion drain will be provided for in advance of the stripping of topsoil (if any). The clean water diversion drain will be provided to the north and up-gradient of the construction footprint. This will divert surface water runoff overland from areas to the north and upgradient of the construction footprint away from this footprint, thereby minimising the volume of runoff occurring within this footprint.
- A silt fence will be installed in accordance with CIRIA guidelines along the northern, northeastern, and eastern boundary of the construction footprint. The provision of the silt fence, particularly along the northern and eastern boundary of the construction footprint will eliminate the potential for the untreated release of silt-laden surface water from the proposed development site
- Settlement ponds/silt traps will be provided to prevent silt runoff into any existing ditches, the Uisce Éireann settlement pond, and the Oatencake Stream watercourse during the drainage works
- In the unlikely and unexpected event that silt control measures are noted to be failing or not working adequately, works will cease in the relevant area. The project ecologist will review and agree alternative pollution control measures, such as deepening or redirecting trenches as appropriate, before works may recommence.
- All fuels and chemicals will be bunded, and where applicable, stored within double skinned tanks / containers with the capacity to hold 110% of the volume of chemicals and fuels contents. Bunds will be located on flat ground a minimum distance of 50m from any watercourse or other water conducting features. These measures will prevent the discharge of such substances to ground and eliminate the potential for groundwater base flow contamination with such substances.
- Any re-fuelling and maintenance of equipment will be done at designated bunded areas with full attendance of plant operative(s) within contained areas at least 50m from any surface water drain to be provided on site as part of the construction phase drainage management. Re-fuelling in such areas will prevent the discharge of such substances to ground and eliminate the potential for groundwater base flow contamination with such substances.
- Spill kits will contain 10hr terrestrial oil booms (80mm diameter x 1000mm) and a plastic sheet, upon which contaminated soil can be placed to prevent leaching to ground water.
- A designated wash down area within the Contractor's compound will be used for cleaning of any equipment or plant, with the safe disposal of any contaminated water.
- Surface water drainage and SUDS features will be monitored and maintained by the Developer.
- The water usage within the proposed development must be monitored via the bulk water meters.
- Records will be maintained and supplied to Uisce Éireann to ensure any excess usage is identified and investigated as necessary.
- The developer / estate manager will monitor the operation of the foul drainage network including the receiving environment and report provide updates to Uisce Éireann.
- The construction and waste management plans will be adhered to.

6.1.3 Best Practice Measures to Control Noise Emissions

Whilst this NIS found no functional noise impact pathway connecting the proposed development site to Natura 2000 sites, a series of best practices will be implemented to control noise emissions during the construction phase. The scheme contractor will be obliged to give due regard to BS5228, which offers detailed guidance on the control of noise from construction activities. In particular, it is proposed that various practices be adopted during construction, including:

- The provision of site / noise hoarding along the western and northern boundary of the proposed development site so that a barrier for noise emissions from the development works. The site / noise hoarding will be installed at the start of the construction phase.
    - Screening is an effective method of reducing the noise level at a receiver location and can be used successfully as an additional measure to all other forms of noise control.
    - Standard construction site hoarding (2.4 m in height) with a mass per unit of surface area greater than 7 kg/m^2 can provide adequate sound insulation.
- Limiting the hours during which site activities likely to create high levels of noise are permitted.
- Selection of quiet plant should be preferred during the construction phase
    - This practice is recommended in relation to static plant such as compressors and generators.
    - It is recommended that these units be supplied with manufacturers' proprietary acoustic enclosures. The potential for any item of plant to generate noise will be assessed prior to the item being brought onto the site.
    - Where possible, the least noisy item should be selected wherever possible.
    - Should a particular item of plant already on the site be found to generate high noise levels, the first action should be to identify whether or not said item can be replaced with a quieter alternative.
- The use of lifting bulky items, dropping and loading of materials within these areas should be restricted to normal working hours.
- For mobile plant items such as dump trucks, excavators and loaders, maintaining enclosure panels closed during operation can reduce noise levels over normal operation.
- Mobile plant will be switched off when not in use and not left idling.
- For steady continuous noise, such as that generated by diesel engines, noise reduction will be affected where practicable by fitting a more effective exhaust silencer system.
- For all materials handling ensure that materials are not dropped from excessive heights, lining drops chutes and dump trucks with resilient materials.
- For compressors, generators and pumps, these can be surrounded by acoustic lagging or enclosed within acoustic enclosures providing air ventilation.
- Establishing channels of communication between the contractor/developer, local authority, and residents.
- Appointing a site representative responsible for matters relating to noise.
- Ensuring all site access roads are kept as even as possible so as to mitigate the potential for vibration from lorries.
- Monitoring typical levels of noise during critical periods at sensitive locations.

6.1.4 Mitigation Measures: Dust & Soiling

The construction phase has been identified as having the potential to generate soiling and dust within a potential 100m buffer zone surrounding the construction footprint. Although the Cork Harbour SPA and Great Channel Island SAC lie outside this 100m boundary, the mitigation measures provided hereunder will assist in minimising dust and soiling effects to other nearby habitats that may afford suitable supporting *ad-hoc* habitat to SCI of the Cork harbour SPA. Dust and fine particle generation from construction and demolition activities on the site can be substantially reduced through carefully selected mitigation techniques and effective management. Once particles are airborne it is very difficult to prevent them from dispersing into the surrounding area. The most effective technique is to control dust at source and prevent it from becoming air borne, since suppression is virtually impossible once it has become air borne.

The following are techniques and methods which are widely used currently throughout the construction industry, and which shall be used in the construction of the proposed development, where appropriate:

- The roads around the site are all surfaced, and no dust is anticipated arising from unsealed surfaces.
- Vehicles travelling on any unsurfaced site roads shall have their speed restricted to 20km/h.
- A regime of 'wet' road sweeping will be set up to ensure the roads around the immediate site areas clean and free from dirt / dust arising from the site, as is reasonably practicable. This cleaning will be carried out by approved mechanical sweepers.
- Footpaths immediately around the site will be cleaned by hand regularly, with damping, as necessary.
- High level walkways and surfaces such as scaffolding shall be cleaned regularly using safe 'wet' methods, as opposed to dry methods.
- Vehicle waiting areas or hard standings will be regularly inspected and kept clean by brushing or vacuum sweeping and will be regularly sprayed to keep moist, if necessary.
- Vehicle and wheel washing facilities will be provided at site exit(s) where practicable. If necessary, vehicles shall be washed down before exiting the site.
- Netting will be provided to enclose scaffolding in order to mitigate escape of air borne dust from the existing and new buildings.
- Vehicles and equipment shall not emit black smoke from exhaust system, except during ignition at start up.
- Servicing of vehicles and plant shall be carried out regularly, rather than just following breakdowns.
- Internal combustion plant shall not be left running unnecessarily.
- Exhaust direction and heights shall be such as not to disturb dust on the ground and to ensure adequate local dispersal of emissions.
- Where possible fixed plant such as generators shall be located away from residential areas.
- The number of handling operations for materials will be kept to a minimum in order to ensure that dusty material is not moved or handled unnecessarily.
- The transport of dusty materials and aggregates shall be carried out using covered / sheeted lorries.
- Material handling areas shall be clean, tidy, and free from dust.
- Vehicle loading shall be dampened down and drop heights for material to be kept to a minimum.
- Drop heights for chutes / skips shall be kept to a minimum.

- Dust dispersal over the site boundary shall be minimised using static sprinklers or other watering methods, as necessary.
- Stockpiles of materials shall be kept to a minimum and if necessary, they shall be kept away from sensitive receptors such as residential areas etc.
- Stockpiles were necessary, shall be sheeted or watered down.
- Methods and equipment shall be in place for immediate clean-up of spillages of dusty material.
- No burning of materials will be permitted on site.
- Earthworks excavations shall be kept damp where necessary and where reasonably practicable.
- Cutting on site shall be avoided where possible by using pre-fabrication methods.
- Equipment and techniques for cutting / grinding / drilling / sawing / sanding etc, which minimise dust emissions and which have the best available dust suppression measures, shall be employed.
- Where scabbling is to be employed, tools shall be fitted with dust bags, residual dust shall be vacuumed up rather than swept away, and areas to be scabbled shall be screened off.
- Wet processes shall be used to clean building facades if possible. If dry grit blasting is unavoidable then ensure areas of work are sealed off and dust extraction systems used.
- Where possible pre-mixed plasters and masonry compounds shall be used to minimise, dust arising from onsite mixing.
- The main contractor shall allocate suitably qualified personnel to be responsible for ensuring the generation of dust is minimised and effectively controlled.
- The name and contact details of a person to contact regarding air quality and dust issues shall be displayed on the site boundary, this notice board shall also include head/regional office contact details.

6.2 Operational Phase Mitigation Measures

6.2.1 Surface Water Run-off

Surface water contamination via the Oatencake Stream is identified as the primary pathway through which likely significant effects may occur to nearby Natura 2000 sites. Measures have been incorporated into the design of the proposed development to ensure that surface water discharging from the proposed development site is clean and does not have the potential to result in pollution to the estuary at the surface water outfall location. These design measures included the provision of onsite attenuation so that all surface water draining from the proposed development site is restricted to green field runoff rates. This will be achieved by providing attenuation storage for the project, as described in Section 2 above.

- Hydrobrakes will be installed at each of the attenuation tanks provided for as part of the development.
- A full hydrocarbon and silt interceptor will be provided at the outlet of the attenuation pond so that all water being directed to the rising main first passes through the interceptor prior to its release from the site.
- A range of SuDS measures will be implemented that will further treat and manage surface water generated on site during the operation phase.

6.3 Evaluation of Mitigation Measures

The mitigation measures outlined above are based on established best practice guidelines and will provide effective screening of the proposed development primarily for surface water and noise emissions generated during the construction phase, and primarily for surface water emissions generated during the operational phase of the project. The mitigation measures and environmental safeguards outlined above for the construction phase of the proposed development are taken from established best practice guidelines that have been successfully implemented for a wide range of project-level infrastructural developments. These measures have undergone extensive and rigorous monitoring for their effectiveness at development sites where they have previously been applied to ensure adverse environmental impacts are avoided.

It is further noted that the range of mitigation measures outlined in this NIS to avoid perturbations to water quality, air quality, and noise emissions, which thereby avoid disturbance to protected fauna and habitats within the Cork Harbour SPA and Great Channel Island SAC have been successfully implemented for a range of other development projects within the Cork harbour complex. The results of this monitoring and the recommendation of these measures as standard best practice guidelines is based upon their high degree of success in ensuring negative environmental impacts are avoided.

The best practice guidance that have informed the mitigation measures and environmental safeguards proposed in this NIS and that will be adhered to throughout the construction and operation of the Proposed Development include,

- The Good Practice Guidance notes proposed by EA/SEPA/EHS:
- PPG 1: Understanding your environmental responsibilities - good environmental practices
- GPP 2: Above ground oil storage tanks
- PPG 3: Use and design of oil separators in surface water drainage systems
- GPP 4: Treatment and disposal of wastewater where there is no connection to the public foul sewer
- GPP 5: Works and maintenance in or near water
- PPG 6: Working at construction and demolition sites
- PPG 7: Safe storage - The safe operation of refuelling facilities
- PPG 8: Safe storage and disposal of used oils
- PPG 19: Vehicles: Service and Repair
- PPG 21: Pollution incident response planning
- PPG 22: Dealing with spills
- PPG 26 Safe storage - drums and intermediate bulk containers
- PPG 27: Installation, decommissioning, and removal of underground storage tanks
- CIRIA Environmental Good Practice on Site.
- CIRIA Control of Water Pollution from Construction Sites. Technical Guidance C648
- CIRIA SuDS Manual Technical Guidance C697
- Development on Unstable Land. Department of Environment (DOE), UK

7 CONCLUSIONS

This NIS presents an analysis of the potential for the proposed development to result in adverse impacts to 2 Natura 2000 sites identified during the Appropriate Assessment Screening, as occurring within the zone of influence of the proposed development and requiring further examination as part of this NIS.

Potential impacts to the features of interest of the Cork Harbour SPA and Great Channel Island were identified with regard to the potential for the proposed development to result in the emission of polluted waters, via hydrological pathways to the Cork Harbour complex. Other pathways that were identified during the screening as requiring examination as part of this NIS, such as air, noise and vibration and human disturbance pathways, were found not to have the potential to result in adverse effects to features of interest of the Cork Harbour SPA and Great Channel Island SAC. An evaluation of the potential impact of discharges of waters via surface or groundwater pathways during the construction phase and/or operation phase has been completed. During the evaluation of potential impacts associated with the discharge of drainage waters it was found that, in the absence of mitigation measures, the potential will exist for sediment and contaminants to be released from the proposed development site to the Cork Harbour SPA and Great Channel Island SAC.

A range of mitigation measures have been prescribed in this NIS that aim to avoid the discharge of contaminated surface drainage waters from the proposed development site during the construction and operational phases. These mitigation measures have been evaluated, and reference has been made to the best practice measures upon which they are based. It has been concluded that, provide all mitigation measures that aim to avoid the discharge of contaminated surface drainage waters are implemented, the potential for negative impacts to water quality and associated adverse effects to qualifying features of interest along the Cork Harbour SPA and Great Channel Island SAC will be eliminated, and will consequently eliminate the potential for adverse effects to the conservation objectives and integrity of these Natura 2000 sites. Additionally, best practice mitigation measures have been outlined in this NIS and will be implemented to avoid disturbance from other pathways such as air, dust, and human disturbance to non-qualifying habitats occurring to the east, west, and south of the proposed development site.

Based upon the information provided in this NIS report, it is the considered view of the authors that it can be concluded that the proposed development **will not, alone or in-combination with other plans or projects, result in adverse effects to the integrity and conservation status of Natura 2000 Sites in view of their conservation objectives and on the basis of best scientific evidence, and there is no reasonable scientific doubt as to that conclusion**.

8 REFERENCES

- Brown, D.M., Bonte, M., Gill, R., Dawick, J. and Boogaard, P.J., 2017. Heavy hydrocarbon fate and transport in the environment. Quarterly Journal of Engineering Geology and Hydrogeology, 50, 333-346.
- CIEEM. (2018). The Guidelines for Ecological Impact Assessment in the UK and Ireland. CIEEM.
- EC. (2018). Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
- Environmental Impact Assessment (EIA) Guidance for Consent Authorities regarding Sub-threshold Development, DoEHLG, December 2020.
- Enviromental Protection agency (EPA) (2023). Annual Environmental Report – Midleton Wastewater Treatment Plant (D0056-01). Accessable at https://www.water.ie/sites/default/files/2025-02/D0056-01_2023_AER.pdf
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 S.I. No. 296 of 2018.
- Environmental Impact Assessment Screening OPR Practice Note PN02, OPR, June 2021
- European Union (Environmental Impact Assessment) (Planning and Development) Regulations 2014.
- European Communities (Birds and Natural Habitats) Regulations 2011 S.I. No. 477 of 2011.
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment, Environmental Protection Agency, May 2022.
- National Biodiversity Data Centre (NBDC). https://biodiversityireland.ie/. Accessed 26/03/2025.
- National Parks and Wildlife Service. (2013). The status of EU Habitats and Species in Ireland. ed. D. Lynn.
- NPWS (2019) The Status of EU Protected Habitats and Species in Ireland. Volume 3 - Species assessments. Department of Culture, Heritage and the Gaeltacht.
- NPWS. (2014). Conservation Objectives: Great Channel Island SAC 001058. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS. (2013). Site Synopsis: Great Channel Island SAC 001058. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS. (2014). Conservation Objectives: Cork Harbour SPA 004030. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS. (2015). Site Synopsis: Cork Harbour SPA 004030. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

APPENDIX A – CONSERVATION OBJECTIVES

Conservation Objectives – Great Channel Island SAC (NPWS, 2014b)			
1140 Mudflats and sandflats not covered by seawater at low tide			
Conservation Objective	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Great Island Channel SAC, which is defined by the following list of attributes and targets:		
Attribute	**Measure**	**Target**	**Notes**
Habitat	Hectares	The permanent habitat area is stable or increasing, subject to natural processes	Habitat area was estimated as 723 ha
Community distribution	Hectares	Conserve the following community type in a natural condition: Mixed sediment to sandy mud with polychaetes and oligochaetes community complex	
1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)			
Conservation Objective	To restore the favourable conservation condition of Atlantic salt meadows (Glauco-Puccinellietalia maritimae) in Great Island Channel SAC, which is defined by the following list of attributes and targets:		
Attribute	**Measure**	**Target**	**Notes**
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Bawnard - 0.29ha; Carrigatohil - 1.01ha.	Based on data from Saltmarsh Monitoring Project (SMP) (McCorry and Ryle, 2009). Two sub-sites that supported Atlantic salt meadow were mapped (1.30ha) and additional areas of potential saltmarsh (17.60ha) were identified from an examination of aerial photographs, giving a total estimated area of 18.90ha. Saltmarsh habitat has also been recorded at two other sub-sites within the SAC (Curtis and Sheehy Skeffington, 1998). NB further unsurveyed areas maybe present within the SAC.
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes.	Based on data from McCorry and Ryle (2009). Within the sites surveyed by the SMP, estuary type saltmarsh over a mud substrate is most common and ASM is the dominant saltmarsh habitat. NB further unsurveyed areas maybe present within the SAC.
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions	Based on data from McCorry and Ryle (2009). At Bawnard there is a seawall that was constructed in the 18th-19th centuries. At Carrigatohil the northern and eastern shorelines have been significantly modified by road construction. Part of the saltmarsh has also been infilled

Physical structure: creeks and pans	Occurrence	Maintain/restore creek and pan structure, subject to natural processes, including erosion and succession	Based on data from McCorry and Ryle (2009). The ASM at Carrigatohil is poorly developed, though some of the larger sections contain salt pans. The smaller sections, however, tend to be quite uniform in topography. The saltmarsh topography at Bawnard is poorly developed with few typical saltmarsh features. See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	Based on data from McCorry and Ryle (2009). At Bawnard, the entire bay empties at low tide to expose soft intertidal mudflats.
Vegetation structure: zonation	Occurrence	Maintain range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from McCorry and Ryle (2009). Zonations to Salicornia flats and intertidal mudflats occurs at Carrigatohil. At Bawnard, there is succession from saltmarsh to brackish saltmarsh and wet grassland as well as zonation to intertidal mudflats at the lower saltmarsh boundary.
Vegetation structure: vegetation height	Centimetres	Maintain structural variation within sward	Based on data from McCorry and Ryle (2009). At Carrigatohil, the sward height is quite tall due to lack of grazing. At Bawnard only part of the site is grazed.
Vegetation structure: vegetation cover	Percentage cover at a representative number of monitoring stops	Maintain more than 90% area outside creeks vegetated	Based on data from McCorry and Ryle (2009). Some poaching was noted in places at Bawnard.
Vegetation composition: typical species and subcommunities	Percentage cover at a representative number of monitoring stops	Maintain range of subcommunities with typical species listed in SMP (McCorry and Ryle, 2009)	
Vegetation structure: negative indicator species - Spartina anglica	Hectares	No significant expansion of common cordgrass (Spartina anglica), with an annual spread of less than 1% where it is known to occur	Based on data from McCorry and Ryle (2009). Spartina occurs at both subsites in this SAC.
Conservation Objectives – Cork harbour SPA (NPWS, 2014a)			
A004 Little Grebe Tachybaptus ruficollis A005 Great Crested Grebe Podiceps cristatus A017 Cormorant Phalacrocorax carbo A028 Grey Heron Ardea cinerea A048 Shelduck Tadorna tadorna A050 Wigeon Anas penelope A052 Teal Anas crecca A054 Pintail Anas acuta A056 Shoveler Anas clypeata A069 Red-breasted Merganser Mergus serrator A130 Oystercatcher Haematopus ostralegus			

A140 Golden Plover Pluvialis apricaria A141 Grey Plover Pluvialis squatarola A142 Lapwing Vanellus vanellus A149 Dunlin Calidris alpina alpina A156 Black-tailed Godwit Limosa limosa A157 Bar-tailed Godwit Limosa lapponica A160 Curlew Numenius arquata A162 Redshank Tringa totanus A179 Black-headed Gull Chroicocephalus ridibundus A182 Common Gull Larus canus A183 Lesser Black-backed Gull Larus fuscus A193 Common Tern Sterna hirundo A999 Wetland			
Conservation Objective	To maintain the favourable conservation condition of each species in Cork Harbour SPA, which is defined by the following list of attributes and targets:		
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by each species, other than that occurring from natural patterns of variation	Waterbird distribution from the 2010/2011 waterbird survey programme is discussed in part five of the conservation objectives supporting document