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Ecological Impact Assessment Report

PRESENTED TO

Fingal County Council

Proposed Development at New Road, Donabate, Co. Dublin

May 24

Environmental Consultancy Services

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1 INTRODUCTION

Enviroguide Consulting was commissioned by Fingal County Council to undertake an Ecological Impact Assessment (EclA) in relation to a Proposed Development at New Road, Donabate, Co. Dublin, hereafter referred to as 'Proposed Development' or 'Site', when referring to the application Site area of the Proposed Development.

This EclA assesses the potential effects of the Proposed Development on habitats and species; particularly those protected by national and international legislation or considered to be of particular nature conservation importance on or adjacent to the Site. This report will describe the ecology of the Site, with emphasis on habitats, flora and fauna, and will assess the potential effects of the Construction and Operational Phases of the Proposed Development on these ecological receptors. The report follows Guidelines for Ecological Impact Assessment in the UK and Ireland, by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) and supplemented by the National Roads Authority (2009) guidelines for Assessment of Ecological Impacts of National Road Schemes. The purpose of this EclA is to:

- Set out the methodologies used to inform the assessment.
- Identify Key Ecological Receptors (KERs) within the Zone of Influence (ZOI).
- Assess the impacts from the Proposed Development on the KERs and the resulting significant effects.
- Set out measures to avoid or mitigate negative impacts.
- Assess the residual effects after the incorporation of agreed avoidance or mitigation measures to ensure legal compliance.
- Set out agreed measures to offset significant residual effects.
- Set out opportunities for ecological enhancement.

1.1 Quality Assurance and Competence

Enviroguide Consulting is a multi-disciplinary consultancy specialising in the areas of the Environment, Waste Management and Planning. All of our consultants carry scientific or engineering qualifications and have a wealth of experience working within the Environmental Consultancy sectors, having undergone extensive training and continued professional development.

Enviroguide Consulting as a company remains fully briefed in European and Irish environmental policy and legislation. Enviroguide staff members are highly qualified in their field. Professional memberships include the Chartered Institution of Wastes Management (CIWM), the Irish Environmental Law Association and Chartered Institute of Ecology and Environmental Management (CIEEM).

All surveying and reporting have been carried out by qualified and experienced ecologists and environmental consultants. SOB undertook the ecological surveys and desktop research and authored this report.

SOB has a B.A. in Zoology from Trinity College Dublin and a M.Sc. Hons. in Wildlife Conservation and Management from University College Dublin, and has experience in

desktop research, report writing, and literature scoping-review, as well as practical field and laboratory experience (Pollinator surveying, sampling and identification, habitat surveying, invasive species surveying, etc.). SOB has prepared Stage I and Stage II Appropriate Assessment (AA) Reports, Invasive Species Surveys, Ecology Statements, EclAs, and Biodiversity Chapters of Environmental Impact Assessment Reports (EIARs).

1.2 Relevant Legislation and Policy Context

An EclA is a process of identifying, quantifying, and evaluating potential effects of development-related or other actions on habitats, species and ecosystems (CIEEM, 2018). The Proposed Development is a sub-threshold for an Environmental Impact Assessment (EIA) under the Planning and Development Regulations 2001-2021, as amended.

When an EclA is undertaken as part of an EIA process it is subject to the EIA Regulations (under the EU Planning and Development Regulations 2001-2021). An EclA is not a statutory requirement, however it is a best practice evaluation process. This EclA is provided to assist the Competent Authority with its decision making in respect of the Proposed Development.

There is a number of pieces of legislation, regulations and policies specific to ecology which underpin this assessment. These may be applicable at a European, National or Local level. Legislation at the International level relevant to the Proposed Development are listed below:

- *Council Directive 92/43/EEC* on the Conservation of Natural Habitats and of Wild Fauna and Flora; hereafter the 'Habitats Directive'.
- *Directive 2009/147/EEC*, hereafter the 'Birds Directive'.
- *Directive 2011/92/EU*, hereafter the 'EIA Directive'.
- EU Regulation 1143/2014, on Invasive Alien Species.
- *Convention on the Conservation of European Wildlife and Natural Habitats 1982*, hereafter the 'Bern Convention'.
- *The Convention on the Conservation of Migratory Species of Wild Animals 1983*, hereafter the 'Bonn Convention'.
- *Ramsar Convention on Wetlands 1971*, hereafter referred to as 'Ramsar'.
- *Water Framework Directive 2000/60/EC*, hereafter the 'WFD'.

National legislation and policy relevant to the Proposed Development are listed below:

- Wildlife Act 1976, as amended in 2000.
- Flora (Protection) Order 2015.
- The Planning and Development Act 2000.
- National Biodiversity Plan 2023-2030.

Additionally, Natural Heritage Areas (NHAs) are designations under the Wildlife Acts to protect habitats, species, or geology of national importance. The boundaries of many of the NHAs in Ireland overlap with Special Areas of Conservation (SAC) and/or Special Protection Area (SPA) sites. Although many NHA designations are not yet fully in force under this legislation (referred to as 'proposed NHAs' or pNHAs), they are offered protection in the meantime under planning policy which normally requires that planning authorities give recognition to their ecological value.

Local plans and policies relevant to the Proposed Development are listed below:

- Fingal Development Plan (CDP) 2023-2029.
- Fingal Biodiversity Action Plan (BAP) 2023-2030.

Further details on legislation and policy relevant to the Proposed Development are detailed in Appendix I.

2 DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Site Location

The Site of the Proposed Development, as seen in Figure 1, is 4.72 hectares and is located along New Road (L2170), which lies along the south of the Site, 140m west of the New Road/Donabate Distributor Road (R126) intersection. Residential properties border the east and west boundaries of the Site, with an active construction site abutting the north of the Site. The landscape to the north and west of the Site is primarily urban in nature, with agricultural lands and Donabate Gold Club comprising the remaining environment surrounding the Site.

2.2 Proposed Development Description

The Proposed Development is proposed at a site of 4.72 hectares at New Road, Donabate, Co. Dublin. The Site is generally bound by: a site which is currently being developed to the north; Lanestown View residential development to the east; New Road and existing residential dwellings fronting same to the south; and Saint Patrick's Park residential development to the west. The Site includes: part of New Road for road junction, cycle track, footpath and water service connection works; and part of the site to the north for water service connection works.

The Proposed Development will principally comprise the construction of 175 No. residential dwellings (123 No. houses and 52 No. apartments) and a single-storey crèche of 365 sq m (with outdoor play area and external stores). The 123 No. houses, which are part-1-/part-2-storey and 2-storey in height, include 30 No. 2-bed units, 82 No. 3-bed units and 11 No. 4-bed units. The 52 No. apartments include 26 No. 1-bed units, 20 No. 2-bed units and 6 No. 3-bed units and are contained in a single block ranging in height from 1 No. to 4 No. storeys.

The Proposed Development will also include the following: 2 No. new multi-modal entrances/exits at New Road; 2 No. multi-modal connections to existing and under construction residential developments to the east and north respectively; cycle track and footpath along New Road; 139 No. car parking spaces; 4 No. set down bays; 6 No. motorcycle parking spaces; cycle parking; hard and soft landscaping, including public open space, communal amenity space and private amenity spaces (which include gardens, balconies and terraces facing all directions); boundary treatments; 1 No. sub-station; bin stores; lighting; PV panels atop houses; green roofs, PV panels, lift overruns and plant atop the apartment block; green roofs and PV panels atop the crèche building; and all associated works above and below ground.

The proposed Site layout can be seen in Figure 2.

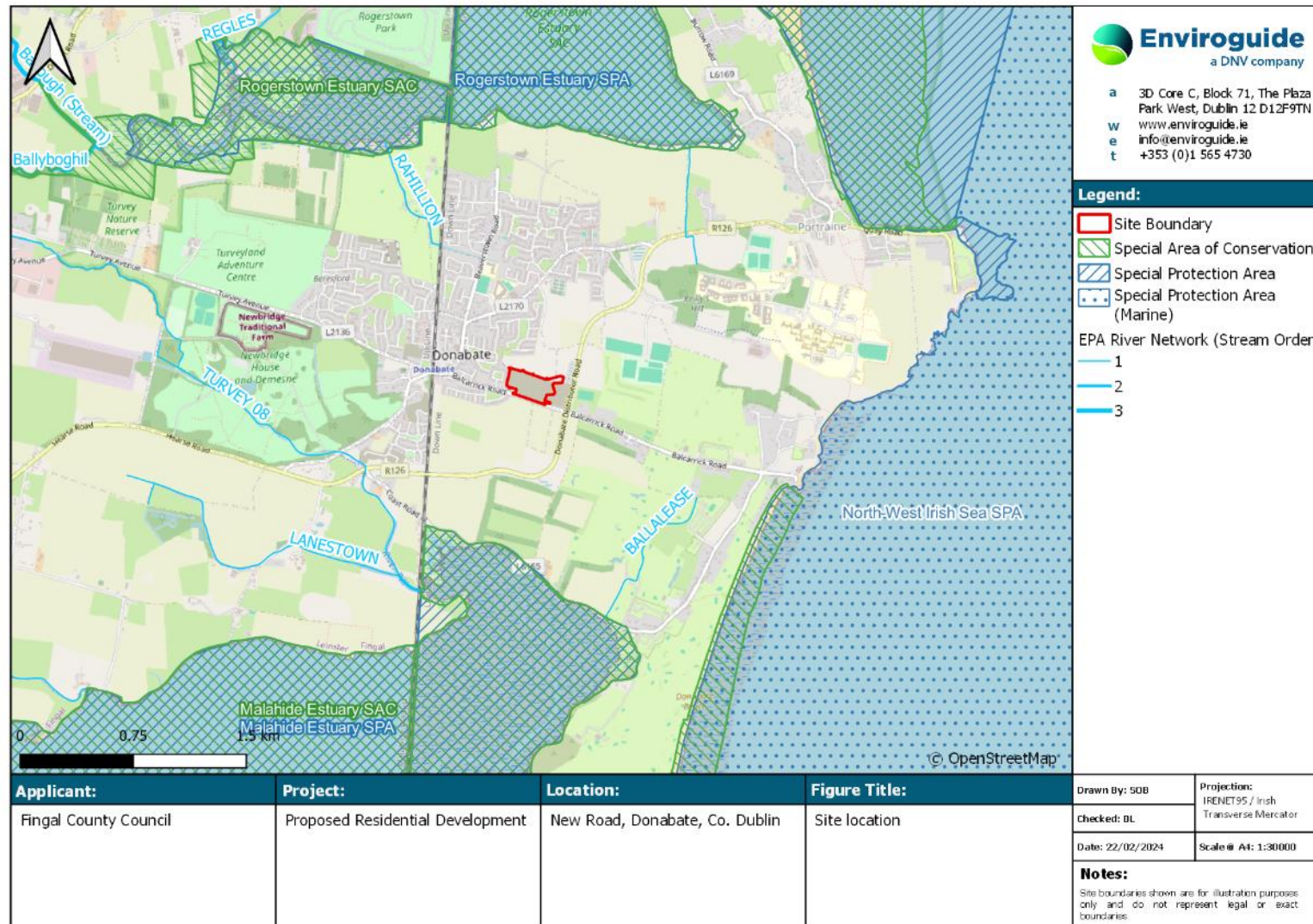


FIGURE 1. SITE LOCATION.

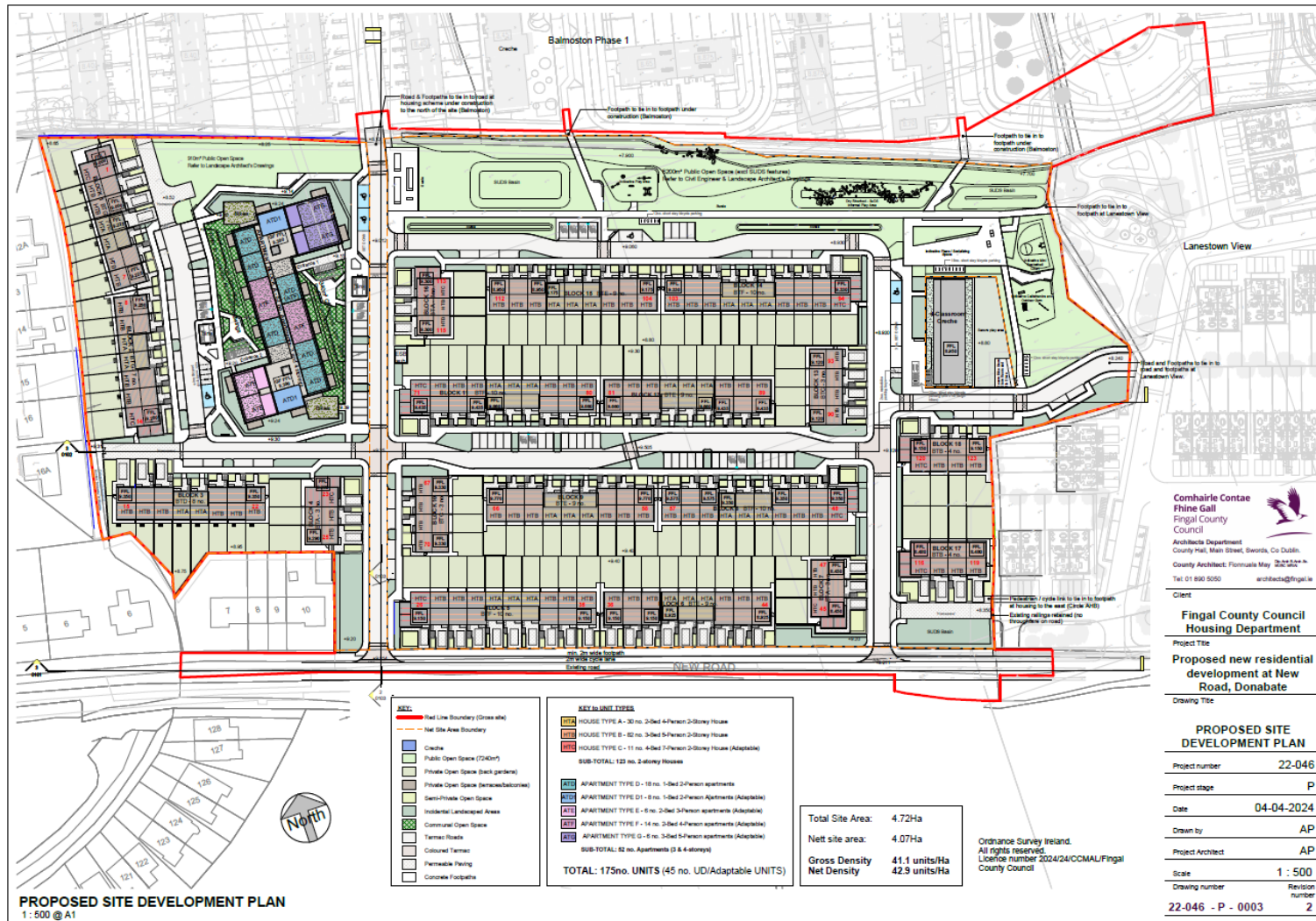


FIGURE 2. PROPOSED SITE LAYOUT (FINGAL COUNTY COUNCIL, 2024. DRAWING NO. 22-046-PP-0003).

2.2.1 Drainage and Water Supply

2.2.1.1 Surface water

As outlined in the Engineering Services Report (Waterman Moylan, 2024) accompanying this application, the existing greenfield Site slopes generally towards the north, with a partially infilled ditch falling east along the north boundary of the Site. The majority of the ditch along the north of the Site has been infilled and replaced with a land drain to facilitate the development to the north of the Site (Planning Reg. Ref. LRD0008/22-S3 / ABP-315288-22). A drain to the north east of the Site connects to the local surface water network which ultimately enters the Irish Sea. The existing drainage ditch along the west boundary of the Site originally flowed into this north ditch, however the adjacent construction works has severed this connection and there is currently no outfall.

It is proposed that the Proposed Development will be separated into three catchments. Catchment 1, along the south of the Site, which is comprised of half of the New Road carriageway, the proposed cycle lane, the footpath and proposed units fronting onto New Road, will discharge at greenfield run-off rates to the existing surface water network located along New Road.

Catchments 2 and 3 will be served by a newly construction surface water drainage network before discharging at the current greenfield rates to the local natural drainage ditch systems surrounding the Site. It is also proposed to create a new drainage ditch along the north boundary of the Site to connect to the existing drainage ditch to the northeast of the Site.

A number of Sustainable Drainage Systems (SuDS) measures have been incorporated into the design of the Proposed Development, and include:

- Permeable paving at all private driveways and parking courts throughout the Proposed Developments.
- Filter drains to the rear gardens of residential units and adjacent footpaths in open spaces.
- Green / sedum roofing covering a minimum of 60% of the apartment block to reduce annual percentage rainwater run-off by between 40% and 80% through retention and evapotranspiration and to filter this water to reduce potential pollutants.
- Bio-retention tree pits on roadsides throughout the Proposed Development for the retention and infiltration of stormwater run-off.
- Swales along selected roads throughout the Proposed Development for the retention and infiltration of surface water run-off from the Site to the local drainage system.
- Detention basins will serve Catchments 2 and 3, and will typically remain dry except for during extreme rainfall events. These detention basins have been designed to incorporate an underlying stone mattress, so attenuated water volumes will not flood to the surface level of the basin, allowing for the basin to remain usable during lesser rainfall events. Catchment 1 will be served by an underground system with an above ground engineering depression in the open space to form a typical style of detention basin.

- Flow control devices, such as Hydrobrakes or similar approved, are proposed at each catchment attenuation feature to limit flows to the existing greenfield run-off rate.
- Class 1 petrol interceptors will be provided prior to the discharge of the surface water from the Site to the local water courses.

The proposed drainage layout can be seen in Figure 3.

2.2.1.2 Foul Drainage

As outlined in the Engineering Services Report (Waterman Moylan, 2024) accompanying this application, it is proposed the Proposed Development will be served by a newly constructed series of 150mm and 225mm diameter networks, which will outfall to the adjacent Ballymastone development (Planning Reg. Ref. LRD0008/22-S3 / ABP-315288-22) to the north, which is currently under construction and under the ownership of Fingal County Council.

Foul water from the Site will discharge to Portrane, Donabate, Rush & Lusk Wastewater Treatment Plant (WwTP) prior to treatment and discharge to the Irish Sea.

2.2.2 Landscape Plan

As outlined in the Landscape Sketch Design Report (Áit Urbanism + Landscape Ltd, 2024) accompanying this application, the proposed public open space is approximately 0.6ha and is considered the scale of a small park. This park will also be directly connected with the existing public open space to the east and with the green spaces including as part of the development under construction to the north of the Site.

The park will likely function as a linking corridor for people to move from the neighbouring residential areas through the Site towards Donabate Village and the Rail Station. The vision of the park is one that provides ecosystem services by creating habitat for flora and fauna and accommodates nature-based features for attenuating and filtering stormwater, whilst also providing for a wide range of active recreation.

It is proposed that the park can accommodate recreation and play facilities for all age groups of children with play areas aimed at under 12s and a skate plaza, social space and all weather sports court providing for older teenage children. The park design will also include seating areas for sitting out and associated small pockets of pollinator planting. A long tree lined spine path will run the full length of the park.

The tree, hedgerow and ground flora planting on Site include an assortment of native and pollinator-friendly species recommended in the Pollinator Planting Code included as part of the All-Ireland Pollinator Plan (NBDC, 2022).

The proposed landscape masterplan can be seen in Figure 4.

2.3 Description of the Construction Phase

As outlined in the Construction Environmental Management Plan (CEMP) (Waterman Moylan, 2024b) accompanying this application, prior to the commencement of construction works, the trees and hedgerows to be retained, along with any other ecological sensitivities at the Site will be identified and appropriate protective fencing will be erected. Hoarding lines and Site security will also be put in place as required.

Site clearance will involve the scraping and stockpiling of topsoil from the Site, and any excavated topsoil, which will be kept separate from other construction waste and kept as dry as possible in <2m high stockpiles, and will be reused for landscaping purposes across the Site.

During excavation works, it is estimated that the infrastructure and groundworks will generate approximately 3,200m³ of subsoil. All excavated subsoil will be stored on Site in the spoil heap/stockpile area of the construction compound. The excavation subsoil materials will be incorporated into the Site as part of the final reinstatement and regrading works to minimise the requirement for offsite disposal.

Spoil heap/stockpiles will not be located within 20m of the existing surface water networks. Drainage diversion ditches will be constructed between the stockpile area and local surface water networks and will flow through a sedimentation/settlement pond prior to discharging to the local surface water network.

The following hierarchy of groundwork/piling methods will be used if ground conditions, design and safety allow:

- Pressed in methods, e.g., hydraulic jacking.
- Auger/bored piling.
- Diaphragm walling.
- Vibratory piling or vibro-replacement.
- Driven Piling or dynamic consolidation.

Regular on-site observation monitoring and checks/audits will be carried out and will include:

- Hours of work
- Presence of mitigation measures
- Number and type of plant
- Construction methods

2.4 Description of the Operational Phase

The Operational Phase of the Proposed Development will act as a residential estate with a crèche and will result in an increase in human presence at the Site.

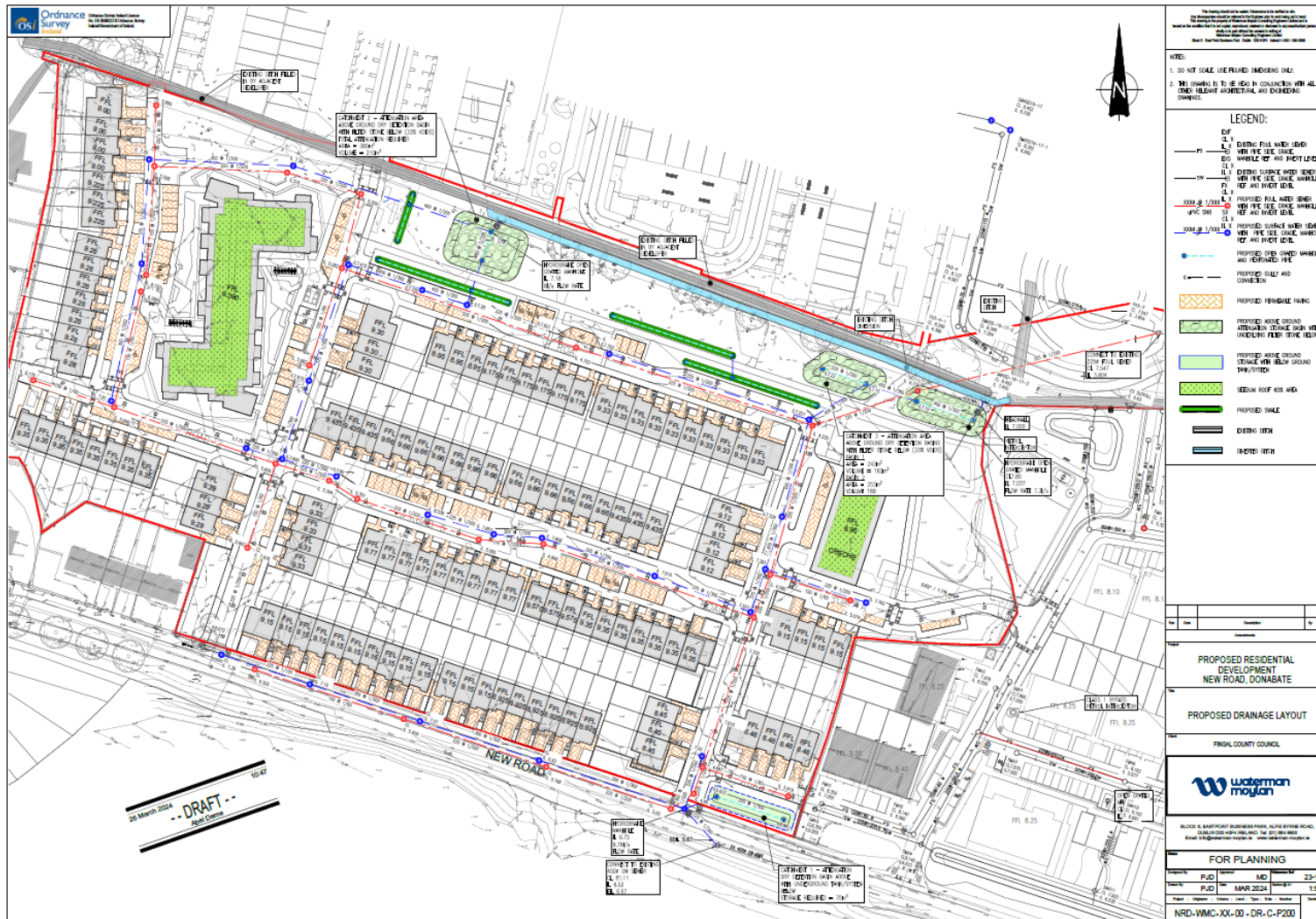


FIGURE 3. PROPOSED DRAINAGE LAYOUT. DRAWING NO. NRD-WMC-XX-00-DR-C-P200 (WATERMAN MOYLAN, 2024)

3 METHODOLOGY

This EclA has been undertaken to assess the potential ecological impacts that the Proposed Development may have on the site and its environs. Where potential for a risk to the environment is identified, mitigation measures are proposed on the basis that by deploying these mitigation measures the risk is eliminated or reduced to an insignificant level.

This section details the steps and methodology employed to undertake an ecological impact assessment of the Proposed Development.

3.1 Scope of Assessment

The specific objectives of the study were to:

- Undertake baseline ecological surveys and evaluate the nature conservation importance of the Site;
- Identify and assess the direct, indirect and cumulative ecological implications or impacts of the Proposed Development during its lifetime; and
- Where possible, propose mitigation measures to remove or reduce those impacts at the appropriate stage of the development.

3.2 Desk Study

A desktop study was carried out to collate and review available information, datasets and documentation sources pertaining to the Site's natural environment. The desk study, completed in March 2024, relied on the following sources:

- Information on species records¹ and distributions, obtained from the National Biodiversity Data Centre (NBDC) at maps.biodiversityireland.ie;
- Information on Floral Protection Order (FPO) Bryophytes database at dahq.maps.arcgis.com;
- Information on waterbodies, catchment areas and hydrological connections obtained from the Environmental Protection Agency (EPA) at gis.epa.ie;
- Information on bedrock, groundwater, aquifers and their statuses, obtained from Geological Survey Ireland (GSI) at www.gsi.ie;
- Information on the network designated conservation sites, site boundaries, qualifying interests and conservation objectives, obtained from the National Parks and Wildlife Service (NPWS) at www.npws.ie;
- Satellite imagery and mapping obtained from various sources and dates including Google, Digital Globe, Bing and Ordnance Survey Ireland;
- Information on the existence of permitted development, or developments awaiting decision, in the vicinity of the Proposed Development from the National Planning Application Database available at: <https://housingqgovie.maps.arcgis.com/apps/webappviewer/index.html?id=9cf2a09799d74d8e9316a3d3a4d3a8de>; and

¹ The Site of the Proposed Development lies within the 10km grid square O24, the 2km grid square O24J and the 1km grid square O2349. Records from the last 20 years from available datasets are given in the relevant sections of this report.

- Information on the extent, nature and location of the Proposed Development, provided by the applicant and/or their design team.

A comprehensive list of all the specific documents and information sources consulted in the completion of this report is provided in Section 10, References.

3.3 Zone of Influence

The ZOI for a project is the area over which ecological features may be affected by changes as a result of the Proposed Development and associated activities. This is likely to extend beyond the development site, for example where there are ecological or hydrological links beyond the site boundaries (CIEEM, 2018). The ZOI will vary with different ecological features, depending on their sensitivities to an environmental change.

Furthermore, ZOI in relation to European sites is described as follows in the 'OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management' (OPR, 2021):

"The zone of influence of a proposed development is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework and not by arbitrary distances (such as 15 km)."

3.4 Identification of Relevant Designated Sites

To determine the ZOI of the Proposed Development for designated sites, reference was made to the OPR Practice Note PN01 - Appropriate Assessment Screening for Development Management' (OPR, 2021), a practice note produced by the Office of the Planning Regulator, Dublin. This note was published to provide guidance on screening for AA during the planning process, and although it focuses on the approach a planning authority should take in screening for AA, the methodology is also readily applied in the preparation of EclA reports such as this to identify all relevant designated sites potentially linked to the Proposed Development.

As noted above, the most recent guidance advises against the use of arbitrary distances that serve as precautionary ZOI (e.g., 15km), and instead recommends the application of the Source-Pathway-Receptor (S-P-R) model in the identification of designated sites, stating that *"This should avoid lengthy descriptions of European sites, regardless of whether they are relevant to the proposed development, and a lack of focus on the relevant European sites and issues of importance"*. Although this statement refers to European sites, it is also applicable to other designated sites.

Thus, the methodology used to identify relevant designated sites comprised the following:

- Identification of potential sources of effects based on the Proposed Development description and details;
- Identification of potential pathways between the Site of the Proposed Development and any designated sites within the ZOI of any of the identified sources of effects.
 - Water catchment data from the EPA (www.epa.ie) were used to establish or discount potential hydrological connectivity between the Proposed Development and any designated sites.

- Groundwater and bedrock information used to establish or discount potential hydrogeological connectivity between the Proposed Development and any designated sites.
- Air and land connectivity assessed based on Proposed Development details and proximity to designated sites.
- Consideration of potential indirect pathways, e.g., impacts to flight paths, *ex-situ* habitats, etc.
- Review of Ireland's designated sites to identify those sites which could potentially be affected by the Proposed Development in view of the identified pathways, using the following sources;
 - European sites and nationally designated sites (e.g., NHAs and pNHAs) from the NPWS (www.npws.ie);
 - Ramsar sites from the Irish Ramsar Wetland Committee (<https://irishwetlands.ie/irish-sites/>);
 - Other internationally designated sites e.g., UNESCO Biosphere's; and
- Regional development plans to identify any remaining sites or areas designated for nature conservation at a local level.

3.5 Field Surveys

3.5.1 Habitat Surveys

A preliminary habitat survey of the Site was conducted by Enviroguide on the 19th of January 2024, with an additional survey carried out on the 12th of March 2024. Habitats were categorised according to the Heritage Council's 'A Guide to Habitats in Ireland' (Fossitt, 2000) to level 3. The habitat mapping exercise had regard to the 'Best Practice Guidance for Habitat Survey and Mapping' (Smith *et al.*, 2010) published by the Heritage Council. Any incidental observations of evidence for rare and/or protected flora were recorded.

In addition, the Site was searched for invasive flora with a particular focus on those listed on the Third Schedule of SI No. 477/2011, and their location and extent recorded.

3.5.2 Bat Surveys

3.5.2.1 Preliminary Bat Roost Assessment

A daytime inspection of the Site was undertaken on the 19th of January 2024. The aim of the inspection was to search for indication of the presence of roosting bats, and to assess the habitat for its ability to support commuting and foraging bats. Any trees on Site were visually assessed from the ground with the aid of a torch and binoculars. The roost inspection comprised a detailed inspection of structures and trees on Site. These were subject to exterior inspections (where possible) to search for evidence of bat use. This includes live and dead specimens, droppings, feeding remains, oil staining and noise (Collins 2023). Trees were searched for Potential Roosting Features (PRFs) such as hollow trunks, knot holes, peeling bark, splits, cracks, and crevices (Collins 2023; Andrews 2018). Collins (2023) recommends that structures and trees are assessed for their ability to support roosting bats under separate

categorisations using professional judgement and sub-categories as presented in Table 4.1 (Collins, 2023):

- Negligible – No suitable features observed, however, a small element of uncertainty remain;
- Low – A structure with one or more roost features as used by individual bats opportunistically at any time of year;
- Moderate – A structure with one or more roost features that could be used by bats on a regular basis or by a larger number of bats; and
- High – A structure with one or more roost features that are obviously suitable for use by a larger number of bats on a regular basis, and potentially for longer periods of time. These features have the potential to support high conservation status roosts.

Trees are categorized separately accordingly to Table 4.2 of Collins (2023). These classifications are:

- NONE – Either no PRFs in the tree or highly unlikely to be any;
- FAR – Further assessment required to establish if PRFs are present in the tree; and
- PRF – A tree with at least one PRF present.

Where a tree contains at least one PRF, each PRF is further assessed according to Table 6.2 (Collins 2023). PRF's are scored as either:

- PRF-I – PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
- PRF-M – PRF is suitable for multiple bats and may therefore be used by a maternity colony.

For trees with PRF-I's only, no further surveys may be required, but appropriate compensation for all PRF-I's must be designed and incorporated in advance of impacts along with a Precautionary Working Method Statement (PWMS). As the Site increases in suitability for roosting bats e.g., PRF-M's present, the survey effort increases accordingly. A PRF-M will require a detailed inspection, such as aerial inspection, conducted over three survey visits, a minimum of three weeks apart, which should be carried out between May and September with at least two in the period May to August. Where features are inaccessible by ladder, climbing, or MEWP, or too extensive for a PRF inspection, the aerial inspection should be replaced with emergence surveys carried out between May and September with Night Vision Aids (NVA) where possible or otherwise surveyed using Advanced Licence Bat Survey Techniques (ALBST), such as trapping, tagging, and radio-tracking to inform of the importance of a roost.

3.5.2.2 Preliminary Bat Habitat Suitability Assessment

A Bat Habitat Suitability Assessment was carried out in conjunction with the roost assessment on the 19th of January 2024 as per the guidance outlined in Collins (2023). This assessment evaluated the habitats present on Site and in the wider area for bat foraging and commuting suitability. Habitat suitability is assessed qualitatively from Negligible to High:

- Negligible – No suitable foraging or commuting habitats on Site
- Low – Suitable but isolated habitats that could be used by small numbers of commuting and/or foraging bats, such as poorly connected gappy hedgerows, lone trees, unvegetated streams, etc.
- Moderate – Suitable continuous habitat connected to the wider landscape that could be used by commuting and/or foraging bats, such as treelines, scrub, grassland, water, etc.
- High – Continuous high-quality habitat that is well-connected to the wider landscape, and is likely used regularly by commuting and/or foraging bats, such as river valleys, broadleaved woodland, woodland edge, grazed parkland, etc.

3.5.2.3 Bat Landscape Suitability

The Bat Conservation Ireland Landscape Suitability Model (Lundy *et al.*, 2011) provides a habitat suitability index for bat species across Ireland. The model divides the country into 1 km grid squares and ranks the habitat within the squares according to its suitability for various bat species. The scores are divided into five qualitative categories of suitability, namely:

- 0.0000000 - 13.0000000: Low
- 13.0000001 - 21.3333000: Low – Medium
- 21.3333001 - 28.1110999: Medium
- 28.1111000 - 36.4444001: Medium – High
- 36.4444002 - 58.5555999: High

3.5.3 Bird Surveys

The survey methodology employed was based on that recommended in standard literature used by for example the British Trust for Ornithology (BTO) (Gillings *et al.*, 2007; Bibby *et al.*, 1992 and Gilbert *et al.*, 1998), which has subsequently been adapted into guidelines for ecological consultants by the Bird Survey & Assessment Steering Group. (2022). During the surveys, the Site was walked slowly, approaching all habitat within and adjacent to the Proposed Development and scanning and listening for birds.

3.5.4 Badger Survey

A systematic search for signs of badgers (*Meles meles*) was conducted on 19th of January 2024 and the 12th of March 2024. Furthermore, any incidental observations of evidence for badgers were recorded whenever on Site. The surveys followed standard guidelines (Harris, Cresswell & Jeffries, 1989 and NRA, 2005) and included a thorough search for setts or for signs of badger activity, including tracks, latrines, hairs and snuffle holes.

3.5.5 Otter Survey

All watercourses within 150m of the Site were assessed for the presence of otter (*Lutra lutra*) and for the suitability to support otters. This involved searching for associated field signs, such as spraints, footprints, anal jelly, holts and couches to best practice guidelines (NRA, 2008). An initial assessment was undertaken on 19th of January 2024 by a suitably experienced ecologist.

3.5.6 Other Fauna

General fauna surveys of the Site were carried out in conjunction with the other field surveys on the 19th of January 2024 and the 12th of March 2024. The March 2024 survey primarily focussed on the drainage ditches on Site, which were partially frozen in January 2024. The habitat types recorded throughout the survey area were used to assist in identifying the fauna considered likely to utilise the area. Furthermore, the Site was searched for tracks and signs of mammals as per Bang and Dahlstrom (2001) and the National Road Authority (NRA, 2005). This survey considers protected or notable fauna that may occur within the Site or in the adjacent lands, but for which no historical records from the relevant grid square(s) exist or no targeted surveys were carried out.

3.6 Ecological Assessment

This EclA has been undertaken following the methodology set out in Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2018); and with reference to the National Roads Authority 'Guidelines for Assessment of Ecological Impacts of National Road Schemes' (NRA, 2009) and the Environmental Protection Agency (EPA) 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' (EPA, 2022) and BS 42020:2013 Biodiversity: Code of practice for planning and development (BSI, 2013).

The evaluation of significant effects should be based on available scientific evidence. Based on the precautionary principle, if the available information is not sufficient, then a significant effect may be assumed likely to occur.

3.6.1 Evaluation of Ecological Features

The value of the ecological features, i.e., the habitats and species present or potentially present, was determined using the ecological evaluation at different geographical scales (NRA, 2009), presented in Appendix II. This evaluation scheme, with values ranging from locally important to internationally important, seeks to provide value ratings for habitats and species present that are considered ecological receptors of impacts that may ensue from a proposal. Based on best practice (CIEEM, 2018), any features considered to be less than of local value are not assessed within this EclA.

3.6.2 Impact Assessment

As per the NRA guidelines, impact assessment is only undertaken of Key Ecological Receptors (KERs). The assessment of the potential impact of the Proposed Development on the identified KERs was carried out with regard to the criteria outlined in the EPA Guideline (EPA, 2022), presented in Appendix III. These guidelines set out a number of parameters that should be considered when determining which elements of the Proposed Development could constitute impact or sources of impacts. These include;

- Positive, neutral or negative effect;
- Significance;
- Extent;
- Probability;
- Duration;
- Timing;

- Frequency; and
- Reversibility.

The impact assessment process considers both direct and indirect impacts: direct ecological impacts are changes that are directly attributable to a defined action, e.g. the physical loss of habitat. Indirect ecological impacts are attributable to an action, but which affect ecological resources through effects on an intermediary ecosystem, process, or feature, e.g., the creation of roads which cause hydrological changes, which, in the absence of mitigation, could lead to an adverse effect of a sensitive habitat.

3.6.3 Assessment of Cumulative Impacts and Effects

Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location. Cumulative effects can occur where a Proposed Development results in individually insignificant impacts that, when considered in combination with impacts of other proposed or permitted plans and projects, can result in significant effects.

Relevant plans and policies (see section 1.2) were reviewed to identify any potential for negative cumulative impacts with the Proposed Development. Additionally, existing planning permissions from the past five years (from 2018 onwards) within the ZOI of the Proposed Development were reviewed, with particular focus on potential cumulative impacts on the identified KERs. Long-term developments were also considered where applicable.

3.6.4 Avoidance, Mitigation, Compensation and Enhancement Measures

Where potentially significant effects have been identified, the mitigation hierarchy has been applied, as recommended in the CIEEM Guidelines. The mitigation hierarchy sets out a sequential approach beginning with the avoidance of impacts where possible, the application of mitigation measures to minimise unavoidable impacts and then compensation for any remaining impacts. Once avoidance and mitigation measures have been applied residual effects are then identified along with any necessary compensation measures, and incorporation of opportunities for enhancement. When seeking mitigation or compensation solutions, efforts should be consistent with the geographical scale at which an effect is significant. For example, mitigation and compensation for effects on a species population significant at a county scale should ensure no net loss of the population at a county scale. The relative geographical scale at which the effect is significant will have a bearing on the required outcome which must be achieved.

It is important for the EclA to clearly differentiate between avoidance, mitigation, compensation and enhancement and these terms are defined here as follows:

- Avoidance is used where an impact has been avoided, e.g., through changes in scheme design. In practice, avoidance measures are typically implemented during the design stage via discussions and re-design (e.g., avoiding a sensitive habitat by relocating a building). Avoidance measures are therefore rarely reported within an EclA, which focuses on assessing the final design.
- Mitigation is used to refer to measures to reduce or remedy a specific negative impact in situ.
- Compensation describes measures taken to offset residual effects, i.e. where mitigation in situ is not possible.

- Enhancement is the provision of new benefits for biodiversity that are additional to those provided as part of mitigation or compensation measures, although they can be complementary.

3.7 Limitations

Every effort has been made to provide a comprehensive description of the site; however, the following specific limitations apply to this assessment:

- An extensive search of available datasets for records of rare and protected species within proximity of the Proposed Development has been undertaken as part of this assessment. However, the records from these datasets do not constitute a complete species list. The absence of species from these datasets does not necessarily confirm an absence of species in the area.
- Bat activity surveys have not been carried out on Site, as such the utilisation of the Site by local bats has not been determined. The mitigation measures outlined in section 6.2.2 below are precautionarily applied and designed to protect any bats which may be roosting adjacent the Site, along with enhancing the Proposed Development for local bats commuting or foraging within the vicinity of the Site.
- The bird scoping surveys were carried out outside the optimal breeding bird survey season, however habitats on Site were assessed to determine the bird species likely to utilise the Site.

It is not anticipated that the above will pose any significant limitations in assessing the ecological value of the Site and potential for impacts on key ecological receptors.

4 ECOLOGICAL BASELINE CONDITIONS

This section sets out the baseline conditions for the ecological features within the Site using the findings of the desk study and field surveys.

4.1 Geology, Hydrogeology and Hydrology

The Site of the Proposed Development is within the *Nanny-Delvin* catchment (Catchment ID: 08) and within the *Ballough[Stream]_SC_010* (Sub-Catchment ID: 08_6) sub-catchment (EPA 2024). The closest mapped watercourse is a 1st order stream known as the Ballalease Stream (IE_EA_08T020700), approximately 1.1km southeast of the Site. Furthermore, a drainage ditch is located along the western boundary of the Site and originates internally at the southwest corner of the Site running northwards to connect to the northern boundary ditch. The ditch to the north of the Site is internalised to the redline boundary of the adjacent Balmastone development to the north which is currently under construction under Reg Ref: LRD0008/S3. As part of the construction of this site, the ditch has been partially infilled in locations, and been replaced with a land drain. Subsequently, the connection from the western boundary ditch to the north has been cut off, and this western boundary ditch is now a static ditch with no outfall to the east where it previously flowed.

There is a ditch to the northeast of the site which is the natural outfall ditch for the Site. This ditch connects to the ditch that flows eastwards along the northern boundary of the adjacent Lanestown View development before being culverted under the new Donabate Distributor Road via twin 450mm diameter culverts. From there it flows eastwards through a series of ditches before discharging to the Donabate Golf course ditch system and ultimately the Irish Sea (Waterman Moylan, 2024a).

The Ballalease Stream discharges to Malahide Estuary (IE_EA_060_0100) 1.5km southeast of the Site. The Water Framework Directive (WFD) status (2016-2021) for this watercourse is *Poor*, while Malahide Estuary was assigned a *'Moderate'* ecological status, and both are *'At Risk'* of not meeting their WFD objectives. There are no EPA water monitoring stations located along Ballalease Stream (EPA, 2024).

The Site is situated within the Swords groundwater body (IE_EA_G_011), which is classified as having *'Good'* status (WFD Status 2016-2021) and is currently assessed as *'Not at Risk'*. The aquifer type in the area is a *Locally Important Aquifer – Bedrock which is Generally Moderately Productive (Lm)*. The groundwater rock units underlying the Site are classified as *'Dinantian Sandstones'* (GSI, 2024).

The level of vulnerability of the Site to groundwater contamination via human activities is *'High'*. The soils on Site are classified as Elton, and the subsoil is Limestone till (Carboniferous) (*TLs*) (EPA, 2024).

The Waterbody Status for river, transitional and groundwater water bodies relevant to the Site as recorded by the EPA (2024) in accordance with European Communities (Water Policy) Regulations 2003 (SI no. 722/2003) are provided in Table 1.

TABLE 1. WFD RISK AND WATER BODY STATUS

Waterbody Name	Water body; EU code	Location from Site	Distance from Site (km)	WFD water body status (2016-2021)	WFD 3 rd cycle Risk Status	Hydraulic Connection to the Site
Surface Water Bodies						
Ballalease Stream	IE_EA_08 T020700	Southeast	1.1	Poor	At Risk	None identified.
Transitional Water Bodies						
Malahide Estuary	IE_EA_060_0100	Southeast	1.5	Moderate	At Risk	None identified.
Groundwater Bodies						
Swords	IE_EA_G_011	N/A	N/A	Good	Not at Risk	Underlying groundwater-body

4.2 Designated Sites

All European sites potentially linked to the Proposed Amendments have been identified and fully assessed in the AA Screening Report (Stage 1 AA) and subsequent Natura Impact Statement (NIS) (Stage 2 AA) accompanying this submission under separate cover. A summary of the AA conclusions is given below.

Other nationally or internationally designated sites potentially linked to the Proposed Development are identified in section 4.2.2.

4.2.1 European sites – Appropriate Assessment

The following conclusion is extracted from the AA accompanying this application under separate cover:

“The Proposed Development at New Road, Donabate, Co. Dublin has been assessed taking into account:

- *The nature, size and location of the proposed works and possible impacts arising from the construction works.*
- *The QIs and conservation objectives of the European sites.*
- *The potential for in-combination effects arising from other plans and projects.*

In conclusion, upon the examination, analysis and evaluation of the relevant information and applying the precautionary principle, it is concluded by the authors of this report that the possibility may be excluded that the Proposed Development will have a significant effect on any of the European sites listed below:

- *Malahide Estuary SAC (000205).*
- *Malahide Estuary SPA (004025).*
- *Rogerstown Estuary SPA (004015).*
- *North-West Irish Sea SPA (004236).*

In carrying out this AA screening, targeted ecological mitigation measures have not been taken into account. Standard best practice construction measures which could have the effect of mitigating any effects on any European Sites have similarly not been taken into account.

On the basis of the screening exercise carried out above, it can be concluded, on the basis of the best scientific knowledge available and objective information, that the possibility of any significant effects on the above listed European sites and there QIs, whether arising from the project itself or in combination with other plans and projects, can be excluded in light of the above listed European sites' conservation objectives. Thus, there is no requirement to proceed to Stage 2 of the Appropriate Assessment process; and the preparation of a NIS is not required".

As such, European sites are not considered further in this Report.

4.2.2 Other Designated sites

4.2.2.1 S-P-R links to Designated Sites

Potential impact pathways are discussed in the following sections in the context of the Proposed Development as described in Section 2.

4.2.2.1.1 Direct Pathways

4.2.2.1.1.1 Hydrological pathways

The surface water from the Site of the Proposed Development will discharge to the local surface water drainage network. Therefore, there is a potential weak hydrological link between the Site and the Portrairie Shore pNHA (001215) during the Construction and Operational Phases.

The potential for surface water generated at the Site of the Proposed Development to reach the Portrairie Shore pNHA (001215) and cause significant effects, during both the Construction and Operational Phases, has been assessed by proxy in the AA Screening (Enviroguide, 2024a) accompanying this application under separate cover. The best practice surface water protection measures outlined in the CEMP (Waterman Moylan, 2024b) accompanying this application, along with the inclusion of the SuDS measures into the project design, will further reduce potential for pollutants to enter the local surface water network surrounding the Site, and as such the indirect hydrological pathway from the Site to Portrairie Shore pNHA (001215) via surface water run-off during both the Construction and Operational Phases of the Proposed Development is considered insignificant and will not result in significant impacts to this downstream designated site.

4.2.2.1.1.2 Hydrogeological pathways

During groundworks and other Construction Phase activities, the ground will be exposed and any potential accidental discharges to ground could potentially migrate vertically downward to the underlying bedrock aquifer and laterally within the aquifer to Malahide Estuary, and therefore reach Malahide Estuary pNHA (000205). However, due to best practice surface water protection measures outlined in the CEMP (Waterman Moylan, 2024b) accompanying this application, which will also protect local ground waterbodies, this potential hydrogeological pathway to the designated sites within Malahide Estuary is considered insignificant and will not result in significant impacts to designated sites.

4.2.2.1.1.3 Air and land pathways

Air and land pathways are considered to be limited to surrounding areas within approx. 200-300m from the Site boundary for any noise and dust sources, depending on prevailing weather conditions. Additionally, increase in human activity at the Site and light spill is considered to be limited to areas within the Site and habitats immediately adjacent to the boundaries.

No air or land pathways from the Proposed Development to any European sites were identified, as the distance between the Site and the nearest European site (Malahide Estuary pNHA (000205) approx. 1.0km southwest) is deemed sufficient to exclude any potential for impacts from increases in noise, increased human activity, lighting and/or dust or other airborne pollutants.

4.2.2.1.2 Indirect Pathways

4.2.2.1.2.1 Hydrological pathways

The Site of the Proposed Development will be connected to the existing public foul sewer. Therefore, there is a weak hydrological link between the Site and Portraine Shore pNHA (001215) via discharges from Portrane, Donabate, Rush, Lusk WwTP during the Operational Phase. Designated sites beyond Portraine Shore pNHA have been disregarded due to distance and dilution factors within the estuary and the downstream marine habitats.

The potential for foul waters generated at the Site of the Proposed Development to reach Portraine Shore pNHA (001215) and cause significant effects, during the Operational Phase, is negligible due to:

- The Portrane, Donabate, Rush, Lusk WwTP is compliant with the Emission Limit Values (ELV's) set in the wastewater discharge licence (Irish Water, 2022).
- The discharge from the WwTP does not have an observable impact on the coastal/transitional water quality (Irish Water, 2022).
- The discharges from the wastewater treatment plant does not have an observable negative impact on the WFD status of the receiving waterbody (Irish Water, 2022).

4.2.2.1.2.2 Air and land pathways

The Site does not offer significant *ex-situ* habitat for the bird species of Special Conservation Interest (SCI) associated with the Malahide Estuary pNHA (000205) or other nearby pNHAs, including Rogerstown Estuary pNHA (000208) and Portraine Shore pNHA (001215) due to the relatively small size of the Site, dense areas of scrub on Site, and the abundance of similar habitats within the landscape surrounding the Site of the Proposed Development.

4.2.2.2 Relevant Designated Sites

A designated site will only be at risk from likely significant effects where an S-P-R link of note exists between the Proposed Development and the designated site. All designated sites considered as part of the S-P-R method (excl. European sites) are listed in Table 2 and Figure 5. Those sites with notable S-P-R links to the Proposed Development are assessed further in this report as KERs of 'National Importance' (pNHAs and NHAs) or 'International Importance' (SACs/SPAs, UNESCO sites, Ramsar sites, etc.).

TABLE 2. DESIGNATED SITES CONSIDERED WITH THE SOURCE-PATHWAY-RECEPTOR (S-P-R) METHOD TO ESTABLISH NOTABLE LINKS BETWEEN THE SOURCES OF EFFECTS ARISING FROM THE PROPOSED AMENDMENTS, AND ANY RELEVANT DESIGNATED SITES. THOSE SITES WITH NOTABLE S-P-R LINKS THAT ARE FURTHER ASSESSED IN THIS REPORT ARE HIGHLIGHTED IN GREEN (IF ANY).

Site Name & Code (Receptor)	Distance to Site of Proposed Development	Designation Rationale / Site Description	Potential Pathway to receptors
Proposed Natural Heritage Areas			
Malahide Estuary pNHA (000205)	1.1km SW	<p>The Conservation Objectives for this pNHA are not specified, and as such the QIs for Malahide Estuary SAC (000205) and Malahide Estuary SPA (004025) are referred to:</p> <p>As per NPWS (2013a) Habitats 1140 Mudflats and sandflats not covered by seawater at low tide 1310 <i>Salicornia</i> and other annuals colonising mud and sand 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>) 2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)*</p> <p>As per NPWS (2013b) SCI Birds A005 Great Crested Grebe (<i>Podiceps cristatus</i>) A046 Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) A048 Shelduck (<i>Tadorna tadorna</i>) A054 Pintail (<i>Anas acuta</i>) A067 Goldeneye (<i>Bucephala clangula</i>) A069 Red-breasted Merganser (<i>Mergus serrator</i>) A130 Oystercatcher (<i>Haematopus ostralegus</i>) A140 Golden Plover (<i>Pluvialis apricaria</i>) A141 Grey Plover (<i>Pluvialis squatarola</i>) A143 Knot (<i>Calidris canutus</i>) A149 Dunlin (<i>Calidris alpina</i>) A156 Black-tailed Godwit (<i>Limosa limosa</i>) A157 Bar-tailed Godwit (<i>Limosa lapponica</i>) A162 Redshank (<i>Tringa totanus</i>) A999 Wetland and Waterbirds</p>	None – Hydrological pathway assessed by proxy in AA Screening and deemed insignificant due to distance

Site Name & Code (Receptor)	Distance to Site of Proposed Development	Designation Rationale / Site Description	Potential Pathway to receptors
		<p>Additional species as per SDF update (2020a) A017 Cormorant (<i>Phalacrocorax carbo</i>) A052 Teal (<i>Anas crecca</i>) A053 Mallard (<i>Anas platyrhynchos</i>) A059 Pochard (<i>Aythya ferina</i>) A137 Ringed Plover (<i>Charadrius hiaticula</i>) A142 Lapwing (<i>Vanellus vanellus</i>) A144 Sanderling (<i>Calidris alba</i>) A145 Little Stint (<i>Calidris minuta</i>) A147 Curlew Sandpiper (<i>Calidris ferruginea</i>) A151 Ruff (<i>Philomachus pugnax</i>) A160 Curlew (<i>Numenius arquata</i>) A164 Greenshank (<i>Tringa nebularia</i>) A165 Green Sandpiper (<i>Tringa ochropus</i>) A169 Ruddy Turnstone (<i>Arenaria interpres</i>) A179 Black-Headed Gull (<i>Larus ridibundus</i>) A182 Common Gull (<i>Larus canus</i>)</p>	
Rogerstown Estuary pNHA (000208)	1.6km NW	<p>The Conservation Objectives for this pNHA are not specified, and as such the QIs for Rogerstown Estuary SAC (000208) and Rogerstown Estuary SPA (004015) are referred to:</p> <p>As per NPWS (2013c) Habitats 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1310 <i>Salicornia</i> and other annuals colonising mud and sand 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>) 2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)*</p> <p>As per NPWS (2013d) SCI Birds A043 Greylag Goose (<i>Anser anser</i>) A046 Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) A048 Shelduck (<i>Tadorna tadorna</i>)</p>	<p>No significant <i>ex-situ</i> habitat for SCI bird on Site.</p> <p>No potential pathways identified.</p>

Site Name & Code (Receptor)	Distance to Site of Proposed Development	Designation Rationale / Site Description	Potential Pathway to receptors
		A056 Shoveler (<i>Anas clypeata</i>) A130 Oystercatcher (<i>Haematopus ostralegus</i>) A137 Ringed Plover (<i>Charadrius hiaticula</i>) A141 Grey Plover (<i>Pluvialis squatarola</i>) A143 Knot (<i>Calidris canutus</i>) A149 Dunlin (<i>Calidris alpina</i>) A156 Black-tailed Godwit (<i>Limosa limosa</i>) A162 Redshank (<i>Tringa totanus</i>) A999 Wetland and Waterbirds	
Portraine Shore pNHA (001215)	1.6km SE	<p>This site is located about 3km east of Donabate. The site is mostly a stretch of rocky shore, with some intertidal sands at the south end. A narrow strip of coastal vegetation above the rocky shore is included.</p> <p>The flora and fauna of the rocky shore is typical of such a habitat, with brown, green and red algae, and marine invertebrates. Turnstones, Oystercatchers and Curlew feed along the shore.</p> <p>Above the rocky shore the following plant species were recorded: thrift (<i>Armeria maritima</i>), sea campion (<i>Silene uniflora</i>), sea beet (<i>Beta vulgaris subsp. maritima</i>), kidney vetch (<i>Anthyllis vulneraria</i>), sea mayweed (<i>Tripleurospermum maritimum</i>), spurge (<i>Euphorbia</i> spp.), scurvygrass (<i>Cochlearia</i> spp.), hoary cress (<i>Cardaria draba</i>) and tree-mallow (<i>Lavatera arborea</i>). Spring squill (<i>Scilla verna</i>) was recorded along the cliff path. The narrow cliff path is used regularly by walkers.</p> <p>This site is a good example of a rocky bedrock shore with a typical flora and fauna.</p> <p>The grassy vegetation above the shore adds habitat diversity. The site is also an important geological site.</p>	<p>No significant <i>ex-situ</i> habitat for SCI bird on Site.</p> <p>Hydrological pathway assessed by proxy in AA Screening and deemed insignificant..</p> <p>Weak, indirect hydrological pathway, deemed insignificant due to dilution and treatment at Portrane, Donabate, Rush, Lusk WwTP.</p>

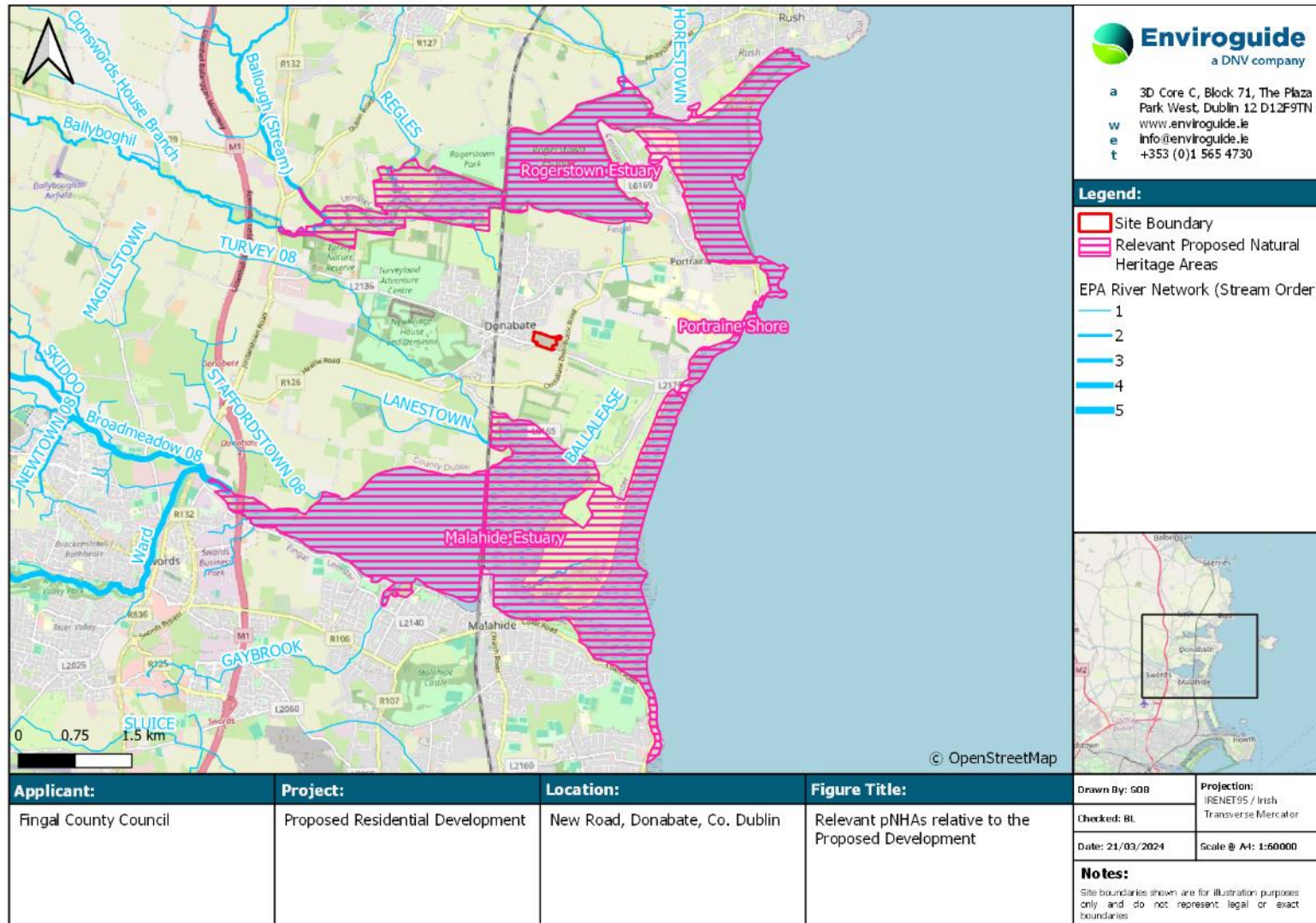


FIGURE 5. LOCATION OF DESIGNATED SITES CONSIDERED WITH THE SOURCE-PATHWAY-RECEPTOR (S-P-R) METHOD IN RELATION TO THE PROPOSED DEVELOPMENT.

4.3 Habitats

The habitats present within the Site, as recorded in the survey area during the field survey, are described in this section and summarised below. Site photographs of these habitats are included in Appendix IV and a map of the habitats is presented in Figure 6.

The Site of the Proposed Development is comprised of predominantly Scrub (WS1) and Dry Meadows and Grassy Verges (GS1), with this rank grassland being of varying sward height. The linear scrub habitat bounding the south of the Site, along with the pockets of scrub habitat throughout the Site, is mainly comprised of bramble (*Rubus fruticosus agg.*), with low diversity grassland covering most of the remainder of the Site. Common grassland species, such as dock (*Rumex sp.*), nettle (*Cirsium sp.*), buttercup (*Ranunculus sp.*), red-dead nettle (*Lamium purpureum*), lesser celandine (*Ficaria verna ssp verna*), cleavers (*Gallium aparine*), and dandelion (*Taraxacum officinale agg.*), were observed throughout the Site, with soft shield-fern (*Polystichum setiferum*) and wavy bitter-cress (*Cardamine flexuosa*) also recorded along the southern drainage ditch.

Areas of Spoil and Bare Ground (ED2) were observed along the west and east of the Site. The bare soil in the west of the Site borders the Drainage Ditch (FW4) forming the western boundary of the Site. Another drainage ditch was recorded along the southern boundary of the Site, however this ditch was dry within the southeast of the Site. It is likely this ditch, during periods of heavy rainfall, also enters the local surface drainage network. This bare ground was due to machinery disturbance. The drainage ditch along the west of the Site appeared to flow from south to north, however the initial trickle of water within the northwest of the Site became stagnant almost immediately.

A mosaic of Hedgerow (WL1)/Treeline (WL2) habitat was observed along sections of the Site boundary, primarily along the west, south and north of the Site margins, however, apart from the western hedgerow, this habitat is becoming dominated by scrub. The trees on Site comprising this linear habitat on Site ranged from early mature to semi-mature and included species such as hawthorn (*Crataegus monogyna*), ash (*Fraxinus excelsior*), goat willow (*Salix caprea*), elder (*Sambucus nigra*), and sycamore (*Acer pseudoplatanus*). Sycamore is listed as a 'Medium Impact' invasive species.

No rare or protected habitats or flora were encountered on Site.

No 'High Impact' invasive floral species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011) were recorded at the Site.

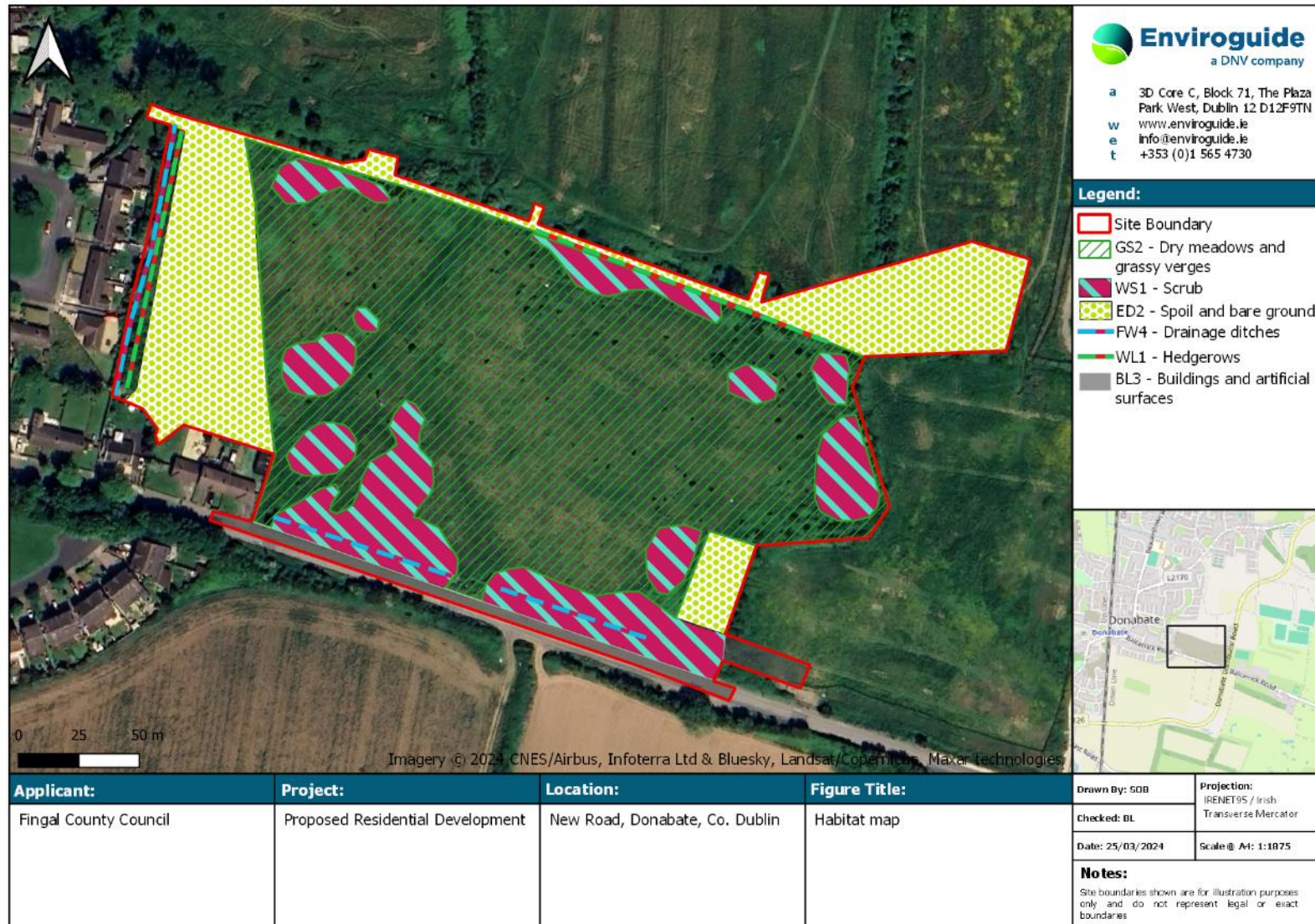


FIGURE 6. MAP OF HABITATS PRESENT AT THE PROPOSED DEVELOPMENT SITE.

4.4 Species and Species Groups

4.4.1 Flora

4.4.1.1 Rare and Protected Flora

The Site of the Proposed Development is located within the Ordnance Survey 10km grid (O24), the 2km grid square (O24J) and the 1km grid square (O2349). Species records from the NBDC online database show these grid squares were studied for the presence of rare and/or protected species within the last 20 years. This database contained no records of protected flora within the last 20 years, however, one vulnerable plant species occurred within the 10km Grid Square (O24) (Table 3). The FPO Bryophytes database was also checked for rare and protected flora records within the vicinity of the Proposed Development. No rare and/or protected bryophyte records exist within the immediate vicinity of the Proposed Development.

TABLE 3. RECORDS OF RARE OR PROTECTED FLORA FOR THE SURROUNDING 10KM (O24) GRID SQUARE ASSOCIATED WITH THE SITE FROM THE NBDC.

Name	Grid Square	Date of last record	Database	Designation
Prickly Poppy (<i>Papaver argemone</i>)	O24	03/06/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	IUCN Red List 2016: Vulnerable

4.4.1.2 Invasive Species

There are records for 23 species of flora considered to be invasive within the 10km grid square which encompass the Site of the Proposed Development, four of which are also recorded in the O24J 2km grid square. Details of these records are listed in Table 4.

The only invasive species noted on site was the 'Medium Invasive' sycamore.

TABLE 4. RECORDS OF INVASIVE SPECIES OF FLOWERING PLANT FOR THE SURROUNDING 10KM (O24) AND 2KM (O24J) GRID SQUARES ASSOCIATED WITH THE SITE FROM THE NBDC

Species	Grid square	Date of last record	Source	Designations
Black Currant (<i>Ribes nigrum</i>)	O24	22/05/2010	Ireland's BioBlitz	Medium Impact Invasive Species
Butterfly-bush (<i>Buddleja davidii</i>)	O24	21/04/2020	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species
Canadian Fleabane (<i>Conyza canadensis</i>)	O24	23/08/2017	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species
Cherry Laurel (<i>Prunus laurocerasus</i>)	O24	30/05/2016	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	High Impact Invasive Species

Common Broomrape (<i>Orobanche minor</i>)	O24	22/06/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species
Common Cord-grass (<i>Spartina anglica</i>)	O24	20/08/2020	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	High Impact Invasive Species Regulation S.I. 477/2011 (Ireland)
Evergreen Oak (<i>Quercus ilex</i>)	O24	22/05/2010	Ireland's BioBlitz	Medium Impact Invasive Species
Field Penny-cress (<i>Thlaspi arvense</i>)	O24 O24J	22/06/2020	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species
Giant Hogweed (<i>Heracleum mantegazzianum</i>)	O24	28/05/2019	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	High Impact Invasive Species Regulation S.I. 477/2011 (Ireland)
Himalayan Honeysuckle (<i>Leycesteria formosa</i>)	O24	13/07/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species
Indian Balsam (<i>Impatiens glandulifera</i>)	O24	11/07/2018	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	High Impact Invasive Species Regulation S.I. 477/2011 (Ireland)
Japanese Honeysuckle (<i>Lonicera japonica</i>)	O24	04/08/2020	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species
Japanese Knotweed (<i>Fallopia japonica</i>)	O24	09/06/2017	National Invasive Species Database	High Impact Invasive Species Regulation S.I. 477/2011 (Ireland)
Japanese Rose (<i>Rosa rugosa</i>)	O24 O24J	06/08/2023	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species
Red Oak (<i>Quercus rubra</i>)	O24	22/05/2010	Ireland's BioBlitz	Medium Impact Invasive Species
<i>Rhododendron ponticum</i>	O24 O24J	22/05/2010	Ireland's BioBlitz	High Impact Invasive Species Regulation S.I. 477/2011 (Ireland)
Sea-buckthorn (<i>Hippophae rhamnoides</i>)	O24	25/06/2022	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species Regulation S.I. 477/2011 (Ireland)

Spanish Bluebell (<i>Hyacinthoides hispanica</i>)	O24	22/05/2010	Ireland's BioBlitz	Regulation S.I. 477/2011 (Ireland)
Sycamore (<i>Acer pseudoplatanus</i>)	O24 O24J	21/04/2020	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species
Three-cornered Garlic (<i>Allium triquetrum</i>)	O24	01/05/2023	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species Regulation S.I. 477/2011 (Ireland)
Traveller's-joy (<i>Clematis vitalba</i>)	O24	04/08/2020	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species
Turkey Oak (<i>Quercus cerris</i>)	O24	20/08/2020	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species
Wall Cotoneaster (<i>Cotoneaster horizontalis</i>)	O24	23/08/2017	Vascular plants: Online Atlas of Vascular Plants 2012 Onwards	Medium Impact Invasive Species

4.4.2 Bats

4.4.2.1 Desk Study Results

A total of four bat species have been recorded within the 10km (O24) grid square which encompasses the Site (Table 5).

TABLE 5. RECORDS OF BATS FOR THE SURROUNDING 10KM GRID SQUARES (O24) ASSOCIATED WITH THE SITE FROM THE NBDC.

Species	Date of last record	Database	Designation
Brown Long-eared Bat (<i>Plecotus auritus</i>)	19/05/2009	National Bat Database of Ireland	EU Habitats Directive - Annex IV Wildlife Act 1976 (as amended)
Lesser Noctule (<i>Nyctalus leisleri</i>)	21/05/2010	Ireland's BioBlitz	EU Habitats Directive - Annex IV Wildlife Act 1976 (as amended)
Common Pipistrelle (<i>Pipistrellus pipistrellus</i>)	19/05/2009	National Bat Database of Ireland	EU Habitats Directive - Annex IV Wildlife Act 1976 (as amended)
Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	09/08/2012	National Bat Database of Ireland	EU Habitats Directive - Annex IV Wildlife Act 1976 (as amended)

The Proposed Development Site (indicated in the black box in Figure 7) is located in an area with an overall Medium-High (34.56) suitability for bats in general. The suitability index for specific bat species is presented in Table 6. The landscape suitability index is high across the entire Site for four species of bats: soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*) and the lesser noctule (*Nyctalus leisleri*).

TABLE 6. LANDSCAPE SUITABILITY INDEX FOR INDIVIDUAL BAT SPECIES WITHIN THE 2KM GRID SQUARE (SOURCE: NBDC). THOSE SPECIES THAT HAVE BEEN RECORDED IN THE NBDC DATABASE WITHIN THE O24 10KM GRID SQUARE ARE HIGHLIGHTED IN GREEN.

Bat Species	Medium Suitability Index (2km Grid Square)
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	52 (High)
Brown Long-eared bat (<i>Plecotus auritus</i>)	47 (High)
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	49 (High)
Lesser horseshoe bat (<i>Rhinolophus hipposideros</i>)	0 (Low)
Lesser Noctule (<i>Nyctalus leisleri</i>)	49 (High)
Whiskered bat (<i>Myotis mystacinus</i>)	33 (Medium-High)
Daubenton's bat (<i>Myotis daubentonii</i>)	28 (Medium)
Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>)	17 (Low-Medium)
Natterer's bat (<i>Myotis nattereri</i>)	36 (Medium-High)

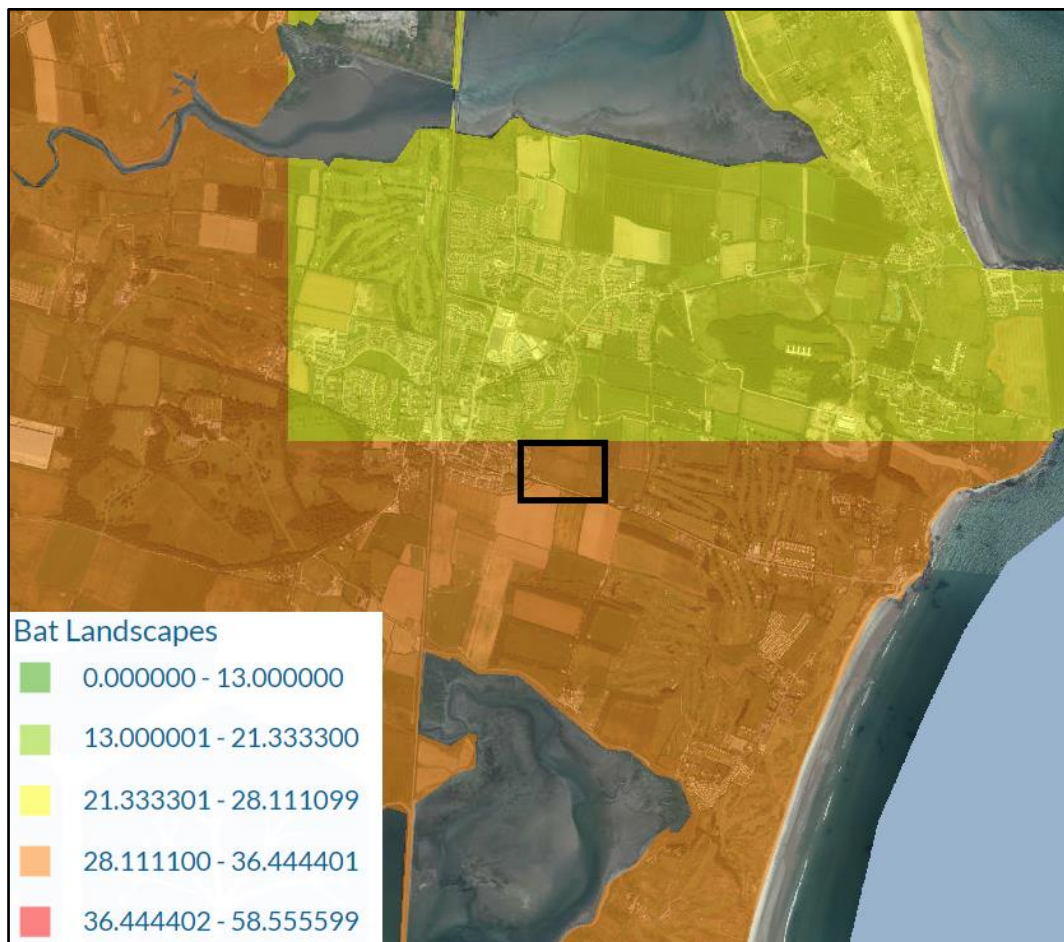


FIGURE 7. BAT LANDSCAPE SUITABILITY MODEL (ALL BATS) SURROUNDING THE PROPOSED DEVELOPMENT SITE (ADAPTED FROM NBDC).

4.4.2.2 Field Survey Results

4.4.2.2.1 Bat Roost Assessment and Habitat Suitability

The ground-based preliminary bat roost assessment did not find any suitable PRFs within the Site as the Site does not contain any buildings and the trees on Site were not observed to have any notable cracks, crevices or holes suitable for bat roosting.

While there is linear vegetation, mainly in the form of scrub and some smaller trees, along the west, northeast, and south boundaries of the Site, these habitats are not connected to the wider landscape. This pocket of habitat may offer limited habitat for commuting and/or foraging bats.

4.4.2.3 Evaluation

Due to lack of suitable habitats and roosting features at the Site, the bat population within the Site is considered to be limited with negligible roosting potential on Site and low activity potential. Due to the historical records within the vicinity of the Site for several species, and lack of bat activity/emergence surveys, a precautionary approach is applied. As such it is considered likely that the Site and the habitats outside the boundary may support regularly occurring populations of the more common Irish bat species.

4.4.3 Birds

4.4.3.1 Desk study Results

A total of 151 bird species have been recorded within the O24 10km grid square. Of these, 29 are red listed and 56 are amber listed birds as identified on the Birds of Conservation Concern in Ireland (BoCCI) (Gilbert et al. 2021). Two bird species recorded within this grid square are considered a high-impact invasive species, while 4 have not been classified due to their rare presence in Ireland. Pheasant (*Phasianus colchicus*) and red-legged partridge (*Alectoris rufa*), both game birds, have also been recorded. Details of amber and red listed species are detailed in Table 7. The remaining 59 species are all green listed.

TABLE 7. DETAILS OF AMBER AND RED LISTED BIRD SPECIES WITHIN THE 10KM GRID SQUARE (O24)

Species	Date of record	BoCCI Status
Barn Owl (<i>Tyto alba</i>)	31/12/2011	Red
Bar-tailed Godwit (<i>Limosa lapponica</i>)	10/03/2022	Red
Black-legged Kittiwake (<i>Rissa tridactyla</i>)	10/07/2021	Red
Black-necked Grebe (<i>Podiceps nigricollis</i>)	31/12/2011	Red
Black-tailed Godwit (<i>Limosa limosa</i>)	27/02/2021	Red
Common Goldeneye (<i>Bucephala clangula</i>)	31/12/2011	Red

Common Kestrel (<i>Falco tinnunculus</i>)	06/11/2022	Red
Common Pochard (<i>Aythya ferina</i>)	31/12/2011	Red
Common Redshank (<i>Tringa totanus</i>)	11/12/2022	Red
Common Scoter (<i>Melanitta nigra</i>)	12/03/2021	Red
Common Snipe (<i>Gallinago gallinago</i>)	16/12/2022	Red
Common Swift (<i>Apus apus</i>)	27/07/2023	Red
Dunlin (<i>Calidris alpina</i>)	11/12/2022	Red
Eurasian Curlew (<i>Numenius arquata</i>)	13/12/2022	Red
Eurasian Oystercatcher (<i>Haematopus ostralegus</i>)	11/12/2022	Red
Eurasian Woodcock (<i>Scolopax rusticola</i>)	16/12/2022	Red
European Golden Plover (<i>Pluvialis apricaria</i>)	31/12/2011	Red
Grey Plover (<i>Pluvialis squatarola</i>)	31/12/2011	Red
Grey Wagtail (<i>Motacilla cinerea</i>)	27/02/2021	Red
Long-tailed Duck (<i>Clangula hyemalis</i>)	31/12/2011	Red
Meadow Pipit (<i>Anthus pratensis</i>)	24/11/2022	Red
Lapwing (<i>Vanellus vanellus</i>)	13/12/2022	Red
Shoveler (<i>Anas clypeata</i>)	31/12/2011	Red
Purple Sandpiper (<i>Calidris maritima</i>)	31/12/2011	Red
Razorbill (<i>Alca torda</i>)	23/05/2014	Red
Red Knot (<i>Calidris canutus</i>)	31/12/2011	Red
Redwing (<i>Turdus iliacus</i>)	16/12/2022	Red
Stock Pigeon (<i>Columba oenas</i>)	01/03/2021	Red
Yellowhammer (<i>Emberiza citrinella</i>)	19/01/2023	Red
Arctic Tern (<i>Sterna paradisaea</i>)	18/06/2022	Amber
Atlantic Puffin (<i>Fratercula arctica</i>)	10/07/2021	Amber
Barn Swallow (<i>Hirundo rustica</i>)	23/04/2021	Amber
Black Guillemot (<i>Cephus grylle</i>)	10/07/2021	Amber
Black-headed Gull (<i>Larus ridibundus</i>)	11/12/2022	Amber
Black-throated Diver (<i>Gavia arctica</i>)	31/12/2011	Amber

<i>Branta bernicla subsp. hrota</i>	31/12/2011	Amber
Brent Goose (<i>Branta bernicla</i>)	11/12/2022	Amber
Common Coot (<i>Fulica atra</i>)	31/12/2011	Amber
Common Guillemot (<i>Uria aalge</i>)	10/07/2021	Amber
Common Kingfisher (<i>Alcedo atthis</i>)	07/08/2018	Amber
Common Linnet (<i>Carduelis cannabina</i>)	24/11/2022	Amber
Common Sandpiper (<i>Actitis hypoleucos</i>)	04/05/2020	Amber
Common Shelduck (<i>Tadorna tadorna</i>)	11/12/2022	Amber
Common Starling (<i>Sturnus vulgaris</i>)	27/02/2021	Amber
Common Tern (<i>Sterna hirundo</i>)	29/03/2023	Amber
Eurasian Teal (<i>Anas crecca</i>)	11/12/2022	Amber
Eurasian Tree Sparrow (<i>Passer montanus</i>)	31/12/2011	Amber
Eurasian Wigeon (<i>Anas penelope</i>)	11/12/2022	Amber
European Greenfinch (<i>Carduelis chloris</i>)	24/11/2022	Amber
European Shag (<i>Phalacrocorax aristotelis</i>)	10/06/2017	Amber
Gadwall (<i>Anas strepera</i>)	31/12/2011	Amber
Goldcrest (<i>Regulus regulus</i>)	28/02/2021	Amber
Great Cormorant (<i>Phalacrocorax carbo</i>)	11/12/2022	Amber
Great Crested Grebe (<i>Podiceps cristatus</i>)	12/03/2021	Amber
Great Northern Diver (<i>Gavia immer</i>)	12/03/2021	Amber
Greater Scaup (<i>Aythya marila</i>)	31/12/2011	Amber
Greylag Goose (<i>Anser anser</i>)	28/12/2001	Amber
Herring Gull (<i>Larus argentatus</i>)	11/12/2022	Amber
House Martin (<i>Delichon urbicum</i>)	30/06/2022	Amber
House Sparrow (<i>Passer domesticus</i>)	04/05/2021	Amber
Lesser Black-backed Gull (<i>Larus fuscus</i>)	08/03/2021	Amber
Little Gull (<i>Larus minutus</i>)	19/01/2017	Amber
Mallard (<i>Anas platyrhynchos</i>)	11/12/2022	Amber
Manx Shearwater (<i>Puffinus puffinus</i>)	04/05/2021	Amber

Mediterranean Gull (<i>Larus melanocephalus</i>)	31/12/2011	Amber
Merlin (<i>Falco columbarius</i>)	31/12/2011	Amber
Mew Gull (<i>Larus canus</i>)	24/11/2022	Amber
Mute Swan (<i>Cygnus olor</i>)	11/12/2022	Amber
Fulmar (<i>Fulmarus glacialis</i>)	10/07/2021	Amber
Gannet (<i>Morus bassanus</i>)	29/03/2023	Amber
Pintail (<i>Anas acuta</i>)	31/12/2011	Amber
Northern Wheatear (<i>Oenanthe oenanthe</i>)	14/05/2021	Amber
Red-breasted Merganser (<i>Mergus serrator</i>)	31/12/2011	Amber
Red-throated Diver (<i>Gavia stellata</i>)	04/05/2021	Amber
Ringed Plover (<i>Charadrius hiaticula</i>)	04/05/2021	Amber
Ruddy Turnstone (<i>Arenaria interpres</i>)	24/11/2022	Amber
Ruff (<i>Philomachus pugnax</i>)	31/12/2011	Amber
Sand Martin (<i>Riparia riparia</i>)	29/03/2023	Amber
Sandwich Tern (<i>Sterna sandvicensis</i>)	18/06/2022	Amber
Short-eared Owl (<i>Asio flammeus</i>)	31/12/2011	Amber
Sky Lark (<i>Alauda arvensis</i>)	14/03/2023	Amber
Spotted Flycatcher (<i>Muscicapa striata</i>)	31/12/2011	Amber
Tufted Duck (<i>Aythya fuligula</i>)	31/12/2011	Amber
Whooper Swan (<i>Cygnus cygnus</i>)	10/12/2018	Amber
Willow Warbler (<i>Phylloscopus trochilus</i>)	22/05/2021	Amber
Bonaparte's Gull (<i>Larus philadelphia</i>)	10/04/2009	n/a
Caspian Tern (<i>Hydroprogne caspia</i>)	22/08/2009	n/a
Eurasian Spoonbill (<i>Platalea leucorodia</i>)	17/06/2007	n/a
Glossy Ibis (<i>Plegadis falcinellus</i>)	29/08/2010	n/a
Ruddy Duck (<i>Oxyura jamaicensis</i>)	02/01/2011	High Impact Invasive Species EU Regulation No. 1143/2014 Regulation S.I. 477/2011 (Ireland)
Rose-ringed Parakeet (<i>Psittacula krameri</i>)	28/02/2020	High Impact Invasive Species
Common Pheasant (<i>Phasianus colchicus</i>)	31/12/2011	n/a

Red-legged Partridge (<i>Alectoris rufa</i>)	02/01/2011	n/a
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4.4.3.2 Field Survey Results

4.4.3.2.1 Bird Scoping Survey

During the Site walkovers in January 2024 and March 2024, eleven species of birds were recorded (Table 8). Of these, snipe (*Gallinago gallinago*) is red listed, linnet (*Carduelis cannabina*) and starling (*Sturnus vulgaris*) are amber listed, and the remaining species are green listed (Gilbert et al. 2021).

TABLE 8. BIRD SPECIES RECORDED DURING WALKOVER SURVEYS IN JANUARY 2024 AND MARCH 2024.

Species	BoCCI Status	Notes/Observations
Snipe (<i>Gallinago gallinago</i>)	Red	One individual flushed from the bare soil habitat along the west of the Site
Linnet (<i>Carduelis cannabina</i>)	Amber	Recorded foraging and commuting throughout the Site
Starling (<i>Sturnus vulgaris</i>)	Amber	Recorded foraging and commuting throughout the Site
Blue tit (<i>Cyanistes caeruleus</i>)	Green	Recorded primarily along the west boundary of the Site, likely foraging on the bird feeders in the adjacent residential gardens
Great tit (<i>Parus major</i>)	Green	Recorded primarily along the west boundary of the Site, likely foraging on the bird feeders in the adjacent residential gardens
Stonechat (<i>Saxicola torquatus</i>)	Green	Recorded foraging and commuting throughout the Site
Chaffinch (<i>Fringilla coelebs</i>)	Green	Recorded foraging and commuting throughout the Site
Wren (<i>Troglodytes troglodytes</i>)	Green	Recorded primarily along the west boundary of the Site, likely foraging on the bird feeders in the adjacent residential gardens
Grey heron (<i>Ardea cinerea</i>)	Green	One individual recorded adjacent to the west drainage ditch on Site
Blackbird (<i>Turdus merula</i>)	Green	Recorded primarily along the west boundary of the Site, likely foraging on the bird feeders in the adjacent residential gardens
Robin (<i>Erithacus rubecula</i>)	Green	Recorded primarily along the west boundary of the Site, likely foraging on the bird feeders in the adjacent residential gardens

4.4.3.3 Evaluation

Considering the variety of bird species recorded both in the historical records and during the field survey, it is considered that the Site contains resident and regularly occurring, locally important populations of breeding bird species protected under the Wildlife Act.

4.4.4 Mammals (excl. bats)

4.4.4.1 Desk Study Results

Records for terrestrial mammals were obtained from the NBDC online database. Table 9 lists these species, their date of last record and summarises their protected status/designation. In

total, 12 mammal species (nine native and three non-native or invasive) were recorded within the grid squares which encompass the Proposed Development Site.

TABLE 9. RECORDS OF TERRESTRIAL MAMMALS (NATIVE AND NON-NATIVE) FOR THE SURROUNDING 10KM (O24) GRID SQUARE ASSOCIATED WITH THE SITE FROM THE NBDC.

Species	Date of last record	Source	Designation
NATIVE SPECIES			
Eurasian Badger (<i>Meles meles</i>)	09/08/2015	Atlas of Mammals in Ireland 2010-2015	<ul style="list-style-type: none"> Wildlife Act 1976 (as amended)
Eurasian Pygmy Shrew (<i>Sorex minutus</i>)	18/07/2013	Atlas of Mammals in Ireland 2010-2015	<ul style="list-style-type: none"> Wildlife Act 1976 (as amended)
European Otter (<i>Lutra lutra</i>)	10/12/2022	Mammals of Ireland 2016-2025	<ul style="list-style-type: none"> Wildlife Act 1976 (as amended) EU Habitats Directive – Annex II & IV
Irish Hare (<i>Lepus timidus subsp. hibernicus</i>)	12/06/2023	Mammals of Ireland 2016-2025	<ul style="list-style-type: none"> Wildlife Act 1976 (as amended) EU Habitats Directive – Annex V
Irish Stoat (<i>Mustela erminea subsp. hibernica</i>)	15/09/2015	Atlas of Mammals in Ireland 2010-2015	<ul style="list-style-type: none"> Wildlife Act 1976 (as amended) EU Habitats Directive – Annex V
Mountain Hare (<i>Lepus timidus</i>)	21/05/2010	Ireland's BioBlitz	<ul style="list-style-type: none"> Wildlife Act 1976 (as amended) EU Habitats Directive – Annex V
Pine Marten (<i>Martes martes</i>)	05/07/2021	Mammals of Ireland 2016-2025	<ul style="list-style-type: none"> Wildlife Act 1976 (as amended) EU Habitats Directive – Annex V
Red Fox (<i>Vulpes vulpes</i>)	24/04/2023	Mammals of Ireland 2016-2025	<ul style="list-style-type: none"> Not legally protected
West European Hedgehog (<i>Erinaceus europaeus</i>)	05/09/2022	Hedgehogs of Ireland	<ul style="list-style-type: none"> Wildlife Act 1976 (as amended)
NON-NATIVE AND INVASIVE SPECIES			
Brown Rat (<i>Rattus norvegicus</i>)	21/05/2010	Ireland's BioBlitz	<ul style="list-style-type: none"> High Impact Invasive Species Regulation S.I. 477/2011 (Ireland) – Offshore Islands Only
Eastern Grey Squirrel (<i>Sciurus carolinensis</i>)	05/12/2022	Mammals of Ireland 2016-2025	<ul style="list-style-type: none"> High Impact Invasive Species Regulation S.I. 477/2011 (Ireland)
European Rabbit (<i>Oryctolagus cuniculus</i>)	05/08/2018	Mammals of Ireland 2016-2025	<ul style="list-style-type: none"> Medium Impact Invasive Species

4.4.4.2 Field Survey Results

No evidence of rare or protected mammal activity was recorded on Site during field surveys.

Evidence of rabbit (*Oryctolagus cuniculus*) was recorded throughout the Site, with droppings and small mammal trails observed throughout the grassland and scrub habitat. It is likely that

rabbit is a resident on Site. It is also likely fox (*Vulpes vulpes*) utilises the Site, as tracks were observed within the bare soil habitat along the west of the Site.

The habitats available at the Site offer suitable habitat for the small mammal species recorded within the relevant grid square, with species such as pygmy shrew (*Sorex minutus*), Irish stoat (*Mustela erminea subsp. hibernica*) and hedgehog (*Erinaceus europaeus*) likely foraging and commuting within the Site.

The records of invasive species may however also limit the potential for some of the native mammals listed in Table 9. For instance, rabbit (*Oryctolagus cuniculus*) and Irish hare (*Lepus timidus subsp. hibernicus*) share similar resources, and typically a high abundance of rabbits can negatively impact on hare populations (Reid et al. 2007).

4.4.4.3 Evaluation

The Site could potentially support resident and regularly occurring and locally important populations of some of the smaller native mammals, such as hedgehog, Irish stoat and pygmy shrew. These species are less likely to be recorded during walkover surveys due to their timid behaviours and small size.

None of the other larger historically recorded mammals are likely to occur within the Site or in its immediate vicinity.

4.4.5 Amphibians

Both common frog (*Rana temporaria*) and smooth newt (*Lissotriton vulgaris*) have been recorded in the 10km (O24) grid squares encompassing the Site of the Proposed Development. Frog has been recorded throughout the landscape, while the closest record of smooth newt was recorded as roadkill on Donabate Main Street approximately 500m west of the Site.

While no amphibians, or evidence of such if the form of frogspawn/eggs, were recorded on Site at the time of the survey, it is likely that the drainage ditches on Site may provide suitable habitat for breeding frog. Under the precautionary principle, it is assumed that locally important populations of frog may be present at the Site.

4.4.6 Other Fauna

4.4.6.1 Common Lizard

There are two records of common lizard (*Zootoca vivipara*) for the relevant 10km grid square, however the closest record is located in Portrane, 2.5km northeast of the Site. There is suitable habitat for this species within the Site of the Proposed Development, particularly throughout the grassland and scrub habitat on Site. As no targeted surveys for common lizard were carried out, it is assumed under the precautionary principle that a locally important population of this species may be present at the Site.

4.4.6.2 Fish

There are records of European eel (*Anguilla anguilla*) within the relevant 10km grid square, the closest of which is located in Newbridge Demesne. There are no waterbodies within the Site of the Proposed Development that could support notable fish species such as salmonids or lampreys. The Site is weakly hydrologically linked to the Irish Sea via the on Site drainage

ditches and off site waterways. As such, the fish assemblage of this transitional waterbody is unlikely to be adversely affected by the Proposed Development.

4.4.7 Protected and/or Notable Species Unlikely to Occur at the Site

Other notable and/or rare species and species listed on Annex IV of the Habitats Directive that were considered but that are unlikely to occur at the Site include:

- **Flora**
 - Marsh Saxifrage (*Saxifraga hirculus*) – Known populations only in Co. Mayo.
 - Killarney Fern (*Vandenboschia speciosa*) – Nearest known populations in Co. Wicklow, not recorded at the Site, no suitably sheltered and moist habitats available.
 - Slender Naiad (*Najas flexilis*) – A clear water, lowland lake species. No suitable habitat available at the Site.
- **Fauna**
 - White-clawed Crayfish (*Austropotamobius pallipes*) – No record of this species within the local watercourses, adjacent ditches and streams not considered suitable for this species due to low quality
 - Freshwater Pearl Mussel (*Margaritifera margaritifera*) – Nearest known records from the Barrow catchment to the southwest of the Site, no hydrological connection to this catchment. Ward River is not listed as a *M. margaritifera* sensitive area .
 - Natterjack Toad (*Epidalea calamita*) – Distribution restricted to few coastal sites.
 - Kerry Slug (*Geomalacus maculosus*) – Distribution restricted to south and west of Ireland.

4.5 Evaluation of Ecological Features

Habitats have been evaluated for their conservation importance, based on the NRA evaluation scheme (NRA, 2009b). Those selected as KERs are those which are evaluated to be of at least local importance (higher value).

Fauna that has the potential to utilise the Site and immediate area of the Proposed Development, or for which records exist in the wider area, have been evaluated for their conservation importance. This evaluation follows the Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009b).

The impacts of the Proposed Development on the identified KERs are assessed in section 0. Table 10 below summarises the evaluation rating assigned to each ecological feature and the rationale behind these evaluations is also provided.

TABLE 10. EVALUATION OF DESIGNATED SITES, HABITATS, FLORA AND FAUNA RECORDED WITHIN THE SITE AND THE SURROUNDING AREA. THOSE IDENTIFIED AS KEY ECOLOGICAL RECEPTORS (KERs) ARE HIGHLIGHTED IN GREEN.

Species / Species Group	Evaluation	Rationale	Key Ecological Receptor (KER)
HABITATS			

Species / Species Group	Evaluation	Rationale	Key Ecological Receptor (KER)
Hedgerows (WL1)	Local Importance (Higher Value)	Linear habitat which acts as an ecological corridor to the wider landscape and offers foraging, commuting, and nesting habitat for local wildlife.	Yes
Dry Meadows and Grassy Verges (GS2)	Local Importance (Higher Value)	Low diversity grassland, however, this offers commuting, foraging, and nesting habitat for birds and small mammals	Yes
Buildings and Artificial Surfaces BL3	Local Importance (Lower Value)	Man-made habitat of negligible biodiversity value.	No
Spoil and Bare Ground ED2	Local Importance (Lower Value)	Man-made habitat of negligible biodiversity value.	No
Scrub (WS1)	Local Importance (Higher Value)	Low diversity habitat which acts as an ecological corridor and offers foraging, commuting, and nesting habitat for local wildlife.	Yes
Drainage Ditches (FW4)	Local Importance (Higher Value)	Hydrologically linked to the Site via potential surface water run-off and acts as an ecological corridor for aquatic species.	Yes
FLORA			
Rare & Protected Flora	Local Importance (Lower Value)	No rare or protected flora were recorded during the field surveys. Unlikely to be present in notable numbers/densities.	No
Invasive Species	Negligible value	One Medium Impact invasive species recorded on Site.	No
NATIVE FAUNA			
Bat Assemblage	Local Importance (Higher Value)	Potential foraging and commuting habitat recorded along the boundaries of the Site of the Proposed Development.	Yes
Wintering Bird Assemblage	Local Importance (Higher Value)	While one snipe was recorded at the Site, due to the small size of the Site and the abundance of suitable habitats throughout the surrounding landscape (agricultural, sports pitches, golf courses), the Site is not considered to contain significant <i>ex-situ</i> habitat for SCI birds.	No
Breeding Bird Assemblage	Local Importance (Higher Value)	Variety of red and amber listed species recorded at the Site during the surveys, with suitable breeding habitat for a few notable species.	Yes
Badger	Local Importance (Lower Value)	Very limited suitable habitat within the Site for these mammals. Unlikely to be regularly present.	No
Pine Marten			

Species / Species Group	Evaluation	Rationale	Key Ecological Receptor (KER)
Fox		Not legally protected in Ireland. No evidence of dens on Site.	
Irish Hare		An abundance of rabbits on Site limits the likelihood of this species on Site due to potential competition.	
Hedgehog	Local Importance (Higher Value)	Suitable habitats present for these small native mammals at the Site. Therefore, Site has potential to support locally important populations of any of these species.	Yes
Pygmy Shrew			
Irish Stoat			
Amphibians	Local Importance (Higher Value)	Suitable habitats in the drainage ditches on Site. Therefore, Site has potential to support locally important populations of any of these species.	Yes
Common Lizard	Local Importance (Higher Value)	Suitable habitats present particularly the Site. Considered likely to occur regularly at the Site.	Yes
Fish assemblage	Local Importance (Higher Value)	No suitable habitat present within the Site, and a weak hydrological connection to the Irish Sea.	No
Invasive Species (Rabbit)	Negligible value	One Medium Impact invasive species recorded on Site. Increased range and distribution of invasive species, with potential for outcompeting native species.	No

5 ECOLOGICAL IMPACT ASSESSMENT

5.1 Avoidance and Mitigation Embedded in Project Design

The Proposed Development includes several embedded design features that may act to avoid or mitigate negative impacts that would likely occur in the absence of these features. However, as opposed to typical mitigation measures, the implementation of these features is integral to the design and completion of the Proposed Development, and as such the impact assessments are performed with consideration of these features as integrated parts of the Proposed Development. All considered embedded design features that may act to mitigate negative impacts on local ecology and environment are listed in Table 11.

TABLE 11. EMBEDDED DESIGN FEATURES AND THEIR POTENTIAL TO ACT TO AVOID OR MITIGATE NEGATIVE IMPACTS ON THE LOCAL ECOLOGY AND ENVIRONMENT.

Embedded Design Feature	Avoidance / Mitigation Potential
SUDS: <ul style="list-style-type: none"> • permeable paving, • green/sedum roofing, • swales, • detention basins, • interception storage, and • fuel interceptors. 	The SUDS features included in the Project Design will ensure the surface water discharge from the Proposed Development is reduced to greenfield runoff rates. These features will be implemented as part of the surface water drainage design.

5.2 Construction Phase

5.2.1 Impacts on Habitats and Flora

Trees T8, T10, T11, and T12, along with tree groups G39 and G40, will be retained on Site along the northeast boundary as part of the Proposed Development. As outlined in the Arboricultural Report (Charles McCorkell Arboricultural Consultancy, 2024), this vegetation will be protected during the Construction Phase of the Proposed Development, as detailed in the Arboricultural Report, along with G37, which is a hedgerow located to the east of the Site, just outside the project boundary. The remaining hedgerow, scrub, and grassland habitat will be removed to facilitate the Proposed Development. The drainage ditches along the west and south of the Site will also be removed via infilling to facilitate the Proposed Development. The removal of these habitats is considered to have *negative, permanent, significant* impacts on the local ecology during the Construction Phase of the Proposed Development.

During the Construction Phase, there is the potential for introduction of invasive floral species to the Site via movement of materials and staff. In the absence of appropriate mitigation, this could have a *negative, local, long-term, significant* impact to habitats at the Site.

Surface water discharges associated with the Construction Phase of the Proposed Development may have the potential to cause *negative, short-term, significant* impacts to the local drainage ditch network in the absence of suitable mitigation. The standard best practise measures included as part of the CEMP to protect local surface water networks are outlined in section 6.2.1 below.

5.2.2 Impacts on Native Fauna

5.2.2.1 Bats

Construction works will typically be confined to daylight hours and night-time lighting will therefore not be required during the Construction Phase of the Proposed Development. However, where portable lighting is required, there is potential for a *negative, short-term, slight* impacts to local bats due to potential increased lighting associated with the Construction Phase of the Proposed Development. Therefore, increased levels of lighting during the Construction Phase may deter bats from foraging and commuting within the vicinity of the Site.

5.2.2.2 Birds

There will be some loss of foraging and nesting habitat for birds at the Site of the Proposed Development through the removal of the trees, scrub, and grassland on Site. This could have a *negative, permanent, moderate* impact on birds in the locality due to the loss of this habitat. Mitigation measures are outlined in section 6.2.2.3 below.

The increased noise and dust levels associated with the Construction Phase of the Proposed Development may have the potential to disturb birds within the vicinity of the Site and cause *negative, short-term, slight* impacts to local bird populations.

5.2.2.3 Small Mammals

The Proposed Development could have a potential *negative, permanent, moderate* impact at a local level on mammals utilising the Site, such as hedgehog, in the absence of mitigation measures, through the habitat loss of scrub and grassland habitat within the Site of the Proposed Development.

Disturbance of species due to lighting, noise and dust generated during the Construction Phase, although unlikely, is possible and, as such, a precautionary approach is adopted with these disturbances representing potential *negative, short-term, slight* impacts at a *local* scale.

Small mammal species, particularly hedgehog, have the potential to become trapped in trenches and entangled in construction materials such as netting and plastic sheeting, as well as other waste materials, causing entrapment and injury or death. This constitutes a *negative, short-term, moderate* impact at a *local* level. Mitigation measures are outlined in section 6.2.2.3 below.

5.2.2.4 Amphibians

There will be some loss of potential foraging and breeding habitat for amphibians at the Site of the Proposed Development through the removal of the drainage ditches along the west and south of the Site. This could have a *negative, permanent, moderate* impact on amphibians in the locality due to the loss of this foraging and potential breeding habitat. Mitigation measures are outlined in section 6.2.2.3 below.

Surface water discharges associated with the Construction Phase of the Proposed Development may have the potential to cause *negative, short-term, moderate* impacts to amphibians which may be present within the drainage ditches on Site in the absence of suitable mitigation. The standard best practise measures included as part of the CEMP to protect local surface water networks are outlined in section 6.2.1 below.

5.2.2.5 Common Lizard

There will be some loss of potential foraging habitat for lizards at the Site of the Proposed Development through the removal of the hedgerow, scrub, and grassland habitat on Site, and disturbance of species during the Construction Phase due to increase in noise and dust is also possible. This could have a *negative, permanent, moderate* impact on this species in the locality. Mitigation measures are outlined in section 6.2.2 below.

Lizards may become entangled in construction materials such as netting and plastic sheeting, as well as other waste materials, causing entrapment and injury or death. This species may also be present within the grassland and scrub habitat on Site and could be killed or injured during vegetation clearance. This constitutes a *negative, short-term, moderate* impact at a *local* level. Mitigation measures are outlined in section 6.2.2.3 below.

5.3 Operational Phase

5.3.1 Impacts on Habitats and Flora

No negative significant impacts on KER habitats are anticipated during the Operational Phase of the Proposed Development.

The proposed tree, hedgerow and wildflower/perennial ground flora planting, particularly along the north of the Proposed Development which will connect to the green spaces to the north and east, will provide potential foraging and commuting habitat for birds, bats, and small mammals, as well as act as an ecological corridor to the surrounding landscape. The planting will also provide nesting habitat for bird species.

As a number of the tree, shrub, and ground flora species are classed as pollinator-friendly, this will also provide foraging habitat for local pollinators, such as bees and butterflies, which in turn will provide forage to birds, bats, and small mammals.

This has the potential to result in a *positive, permanent, slight* impact after a period of establishment. This positive impact will act to offset some of the negative impacts from habitat loss.

5.3.2 Impacts on Native Fauna

5.3.2.1 Bats

Given the current greenfield context of the Site, which has no artificial lighting, the increase in lighting could have an impact on local bat populations through the loss of dark foraging and commuting corridors. However, the Site Lighting Report (J.V. Tierney & Co., 2024) accompanying this application includes bat-friendly lighting measures in line with the Bat Conservation Trust guidelines on artificial lighting and bats (BCT, 2023):

- All luminaires used will lack UV/IR elements to reduce impact.
- LED luminaires will be used due to the fact that they are highly directional, lower intensity, good colour rendition and dimming capability.
- A warm white light source (3000 Kelvin) will be adopted to reduce blue light component.
- Luminaires will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.

- Glare shields will be utilized in order to minimise any unnecessary light spill to potential bat foraging and commuting routes along the Site boundary. This will be assessed once fittings are installed.
- Column heights have been carefully considered to minimise light spill and glare visibility and as such, luminaires will be mounted on poles 6m in height.
- Only luminaires with an upward light ratio of 0% and with good optical control will be used. As such, the highway diamond luminaire, which is mounted horizontally, will be used on Site.
- Luminaires will be mounted on the horizontal, i.e. no upward tilt.

As such, the potential impact to bats within the vicinity of the Proposed Development as a result of the increase in lighting on Site is considered to be *negative, permanent, moderate* at a local level.

5.3.2.2 Birds

No significant impacts on birds are anticipated during the Operational Phase. The proposed planting included as part of the landscaping to take place on Site will offer potential commuting, foraging, and nesting habitat for local birds. As such, the likely impact is considered *positive, permanent, slight* at a *local* level.

5.3.2.3 Small Mammals

Noise, increase in light, and potential physical disturbance due to increased human presence associated with the Operational Phase has the potential to cause a *negative, permanent, moderate* impact to small mammals in the absence of suitable mitigation.

5.3.2.4 Amphibians

No significant effects on amphibians within local drainage ditches are anticipated during the Operational Phase. SuDS measures, including permeable paving, green/sedum roofing, swales, detention basins, interception storage, and fuel interceptors, have been incorporated into the design to treat and minimise surface water run-off from the Site. Therefore, the potential impact on local amphibians within local drainage ditches during the Operational Phase of the Development via water quality deterioration is considered to be *imperceptible*.

5.3.2.5 Common Lizard

No significant impacts on lizards are anticipated during the Operational Phase. The proposed planting included as part of the landscaping to take place along the north and east boundaries of the Site will offer potential commuting, foraging, and breeding habitat for local reptiles. As such, the likely impact is considered *positive, permanent, slight* at a *local* level due to habitat creation.

5.4 Do Nothing Impact

Under the do-nothing scenario, the scrub habitat on Site would likely continue to colonise to grassland on Site, and will continue to provide commuting, cover, and nesting habitat for birds and small mammals. The hedgerows, linear sections of scrub, and the drainage ditch habitats would continue to serve as biodiversity corridors, providing habitat connectivity throughout the Site, along with nesting and foraging habitat for birds and mammals. The grassland and scrub would also continue to provide foraging and commuting habitat for pollinators.

5.5 Potential for In-Combination Effects

5.5.1 Relevant Plans and Policies

The following plans and policies were reviewed and considered for possible in-combination effects with the Proposed Development.

- Fingal County Development Plan 2023-2029.
- Fingal Biodiversity Action Plan (BAP) 2023-2030.

No specific projects or plans within the Fingal County Development Plan (CDP) 2023-2029 were identified that could act in-combination with the Proposed Development and cause adverse effects on the KERs identified in this report. Additionally, the CDP has directly addressed the protection, enhancement and incorporation of biodiversity through specific Policies and Objectives, as well as through its Development Management Standards (see Appendix I for details). The Fingal Biodiversity Action Plan 2023-2030 is set out to protect and improve biodiversity in the Fingal area, and as such will not result in negative in-combination effects with the Proposed Development.

Therefore, on examination of the above it is considered that there are no means for the Proposed Development to act in-combination with any plans or projects that would cause any likely significant effects to nearby ecological sensitivities.

5.5.2 Existing Planning Permissions

There are several existing planning permissions on record in the area ranging from small-scale extensions and alterations to existing residential properties to some larger-scale developments. The larger existing developments identified within 500m of the Site and along the same impact pathways (e.g., via the local surface drainage network) as the Proposed Development are identified below in Table 12 and the potential for possible in-combination effects with the Proposed Development are assessed.

TABLE 12. ASSESSMENT OF POTENTIAL IN-COMBINATION EFFECTS OF THE PROPOSED DEVELOPMENT AND OTHER DEVELOPMENTS PENDING OR GRANTED PERMISSION IN THE LAST 5 YEARS (2019-2024). DEVELOPMENTS ALONG THE SAME IMPACT PATHWAYS AS PROPOSED DEVELOPMENT WERE CONSIDERED WITHIN A 500M RADIUS.

Planning Reference	Planning Authority	Status	Location
ABP-311447-21	An Bord Pleanála	Grant Permission	Adjacent to Site
Development Description			
<p>The development will comprise:</p> <p>(i) Construction of 36 No. houses, comprising of 10 No. four-bedroom, 2-storey, semi-detached houses; 18 No. three-bedroom, 2-storey, semi-detached houses; and 8 No. two-bedroom, 2-storey, terrace houses. Each dwelling will feature a private rear garden and roof mounted solar panel or photovoltaic panels;</p> <p>(ii) Construction of 28 No. apartment/duplex units, comprising of 14 No. two-bedroom apartments and 14 No. three-bedroom duplex units, in 3 No. 3-storey blocks. Each apartment/duplex unit is provided with a private balcony or terrace. The 3 No. blocks proposed are served by 430sqm of communal amenity space and roof mounted solar panel or photovoltaic panels. The proposed development includes 111 No. car parking spaces, inclusive of 64 No. on-curtilage car parking spaces serving the houses (2 No. spaces per 3 and 4 bedroom house and 1 No. space per 2 bedroom house), 41 No. car parking spaces serving the apartments/duplex units and 6 No. visitor car parking</p>			

spaces, and 72 No. bicycle parking spaces (36 No. provided in 3 No. secure bicycle storage areas and 36 No. provided throughout the development);

(iii) Construction of a 1,800sqm public open space area, featuring a playground, in the north-western corner of the site;

(iv) Creation of new vehicular entrance from New Road along the site's southern boundary;

(v) Alterations to existing site levels through the importation of clean, uncontaminated soil and stones to the site; and

(vi) All associated site, landscaping and infrastructural works, including tree planting, boundary treatments; street lighting; ESB substations; internal roadways, footpaths and shared surfaces; and foul/SuDS drainage, necessary to facilitate the development. Temporary permission (5 years) is also sought for;

(i) the erection of 3 No. advertising signs (totaling 42sqm), for the purposes of marketing, on the sites eastern and southern boundaries.

F22A/0686	Fingal County Council	Grant Permission	Adjacent to Site
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Development Description

Alterations to development approved under Reg. Ref. F20A/0510 ABP Ref. No. 311447-21) comprising: (i) relocation of ESB substation; (ii) rearrangement of 3 no. vehicular parking bays with no resultant change in quantum of vehicular parking spaces; (iii) revision to roof level of apartment block including an increase in parapet height from 20.93m to 21.085m (0.155m increase) and the provision of a lift shaft overrun; (iv) revision to ground floor level of apartment block comprising the replacement of balconies with private paved patios; (v) minor revisions to the eastern and southern elevations of the apartment block comprising changes to fenestration details and revised finishing materials; (vi) minor revisions to the roof pitch and roof level of all House Types (A/A1/B1/B2/B3/F); (vii) minor changes to elevation finishing materials (brick to be replaced with render) to House Types B1/B3; (viii) minor changes to fenestration details to House Types A/B1/B2; and, (ix) all ancillary works necessary to facilitate the development. The proposed works have been necessitated by construction stage design assessment and are substantially compliant with the development approved under Reg. Ref. F20A/0510 (ABP Ref. No. 311447-21).

ABP-315288-22	An Bord Pleanála	Grant Permission	Adjacent to Site
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Development Description

A ten-year permission for a Large Scale Residential Development (LRD) at this site at Ballymastone, Donabate, County Dublin. The application site, of 15.02ha, comprises a land parcel dissected by the Donabate Distributor Road (DDR). The site is bounded by existing residential development of The Links and St. Patrick's Park to the west, the wider undeveloped Ballymastone lands and The Priors to the north, greenfield residential development lands (as permitted under F17A/0373 and F20A/0510) and New Road to the South, and St. Patrick's GAA Club and Donabate Golf Club to the east.

The proposed development will consist of the construction of a residential development, which represents Phase 1 of the wider development of the Ballymastone Lands (as identified in the Donabate Local Area Plan 2016 (as extended)), ranging in height from 2 to 6 storeys to accommodate 432 no. residential dwellings (including a mix of apartments, duplexes and houses), a crèche and public open space. The site will accommodate 554 no. car parking spaces, 831 total no. bicycle parking spaces, new pedestrian/cycle links, road improvements, storage, services and plant areas. Landscaping will include communal amenity areas, and a significant public open space provision. The development is set out as follows:

1. The Construction of 432 no. new residential dwellings consists of 93 no. Apartment units, 126 no. Duplexes and 213 no. Houses set out as follows:

- Construction of 2 no. Apartment blocks, ranging in height from 3 to 6 storeys, with balconies on all elevations, green roofs, and external amenity courtyards, providing a total of 93 no. units (42 no. 1-beds, 41 no. 2-beds & 10 no. 3 beds).
- Construction of 213 no. 2-storey houses (75 no. 2-beds, 130 no. 3-beds & 8 no. 4-beds).
- Construction of 126 no. 2 to 3 storey duplex units, with balconies on all elevations (10 no. 1-beds, 55 no. 2-beds & 61 no. 3-beds).

2. The scheme provides 15.6% public open space of the net site area comprising of two small parks and two pocket parks which total c. 15,417 sq.m. The two small parks, referred to as Baile Uisce Park and Ballisk Park are located centrally within the scheme, either side of the DDR, and are organized around existing archaeological features.

3. Provision of 1 no. crèche, located to the south of the site of c. 909 sq.m and will cater for c.182 no. child places with an external play space of c.430 sq.m.

4. A total of 544 no. car parking spaces are provided (in-curtilage for the houses and in a mix of both on-street and communal courtyard parking areas for apartments/duplexes and visitor parking) and a total of 10 no. spaces for the crèche. A total of 791 no. cycle parking spaces are provided for the residential units (comprising 717 no. long stay/resident spaces in secure locations and 74 no. short stay/visitor spaces at surface level) and 40 no. spaces for the crèche.

5. The development provides vehicular access from New Road via the Donabate Distributor Road, Portrane Road via The Links Road and directly from the Donabate Distributor Road as well as pedestrian links to all surrounding access points. Upgrade of the existing junction at the Portrane Road/The Links Rd is included for. An east-west pedestrian cycle route is proposed, with associated landscaping, connecting the DDR to the Links Road to the north of the site. The site also connects, via the DDR, to the proposed Ballymastone Recreation Hub. The development includes for the proposed alterations of the permitted routing of the connection from New Road to the Links Road, within the site boundary, as permitted under F17A/0373 (PL06F.249206).

6. The proposed application includes all site enabling and development works, landscaping works, PV panels, bin stores, plant, boundary treatments, ESB substations, lighting, servicing, signage, surface water attenuation facilities and associated and ancillary works, including site development works above and below ground.

An Environmental Impact Assessment Report and a Natura Impact Statement have been prepared in respect of the proposed development.

ABP-308446-20	An Bord Pleanála	Grant Permission	425m SW
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Development Description

Development will consist of 55 no residential units, 3 no. retail units, public open spaces, upgrades to the public road, reconstruction of the existing car park serving Smyths Bridge House (a Protected Structure), upgrade of the existing entrance onto Main Street, internal access roads, water services including a pumping station, surface water attenuation tank and detention basin, public lighting, 1 no. ESB substation and utilities.

The residential element of the proposed development of 55 no. units comprises the following:

- 1 no. House Type B1: 3 Bedroom Two Storey Mid-Terrace House (110 sqm)
- 1 no. House Type C: 3 Bedroom Two Storey Mid-Terrace House (102 sqm)
- 1 no. House Type E: 3 Bedroom Two Storey Semi-Detached House (116.5 sqm)

- 2 no. House Type F: 3 Bedroom Two Storey Semi-Detached House (116.4 sqm)
- 2 no. House Type L: 4 Bedroom Three Storey Under parked Terraced House (182 sqm)
- 1 no. House Type L1: 4 Bedroom Three Storey Underparked Semi-Detached House (182 sqm)
- 1 no. House Type L2: 4 Bedroom Three Storey Underparked Semi-Detached House (182 sqm)
- 2 no. House Type M: 4 Bedroom Two Storey Terraced House (144.4 sqm)
- 1 no. House Type M1: 4 Bedroom Two Storey Semi-Detached House (144.4 sqm)
- 2 no. House Type N: 4 Bedroom Two Storey Semi-Detached (125.4 sqm)
- 4 no. 2 Bedroom Duplexes (98.4 sqm) (Block 1)
- 1 no. 2 Bedroom Apartment (110.9 sqm) (Block 2)
- 1 no. 1 Bedroom Apartment (57 sqm) (Block 3)
- 1 no. 2 Bedroom Apartment (83 sqm) (Block 3)
- 6 no. 1 Bedroom Apartment (50.7 sqm) (Block 4)
- 4 no. 1 Bedroom Apartment (54.5 sqm) (Block 4)
- 1 no. 1 Bedroom apartment (63.2 sqm) (Block 4),
- 2 no. 1 Bedroom apartment (64 sqm) (Block 4),
- 6 no. 2 Bedroom apartment (82.2 sqm) (Block 4),
- 2 no 2 Bedroom apartments (86 sqm) (Block 4),
- 6 no 2 Bedroom apartment (87.3 sqm) (Block 4),
- 6 no 2 Bedroom apartment (89 sqm) (Block 4) and
- 1 no. 3 Bedroom apartment (110 sqm) (Block 4).

Proposed Block 1 is three storeys in height, Block 2 is two storeys, Block 3 is two storeys and Block 4 is four storeys.

It is proposed to provide 1,600 sqm of public open space including a central playground and a pathway linking to the approved bridge over the railway line. The commercial element of the scheme comprises 2 no. retail units of 108 sqm each and 1 no retail unit of 45 sqm. It is proposed to reconfigure the existing permitted car park serving Smyths Bridge House to accommodate pedestrian , cyclist and limited vehicular access, 44 no. replacement car parking spaces. Works include the upgrade of 140 metres of Main Street including the Balcarrick Road Junction. It is proposed to provide 98 bike parking spaces to serve the proposed development and 112 no. car parking spaces in total to serve the proposed development and Smyths Pub. Proposed potable, surface and foul water services and utilities will be provided predominantly under the proposed roadways, with pumping station, attenuation tank and detention basin provided in the south of the subject site.

The application is accompanied by a Natura Impact Statement (NIS).

F23A/0192	Fingal County Council	Grant Permission	415m SW
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Development Description

The development will consist of the provision of construction access and haul road (total length approx. 494m), to facilitate the construction of development permitted under Reg. Ref. F20A/0204 (ABP PL06F.308446), on a site of approx. 1.1ha. The haul road extends from the existing access onto the Donabate Distributor Road (R126), northwards towards Main Street, Donabate, to connect with the site associated with Reg. Ref. F20A/0204 (ABP PL06.308446). The haul road infrastructure

works include: Temporary road surface finish with a width of approx. 5.5m and length of approx. 494m; Incorporation of swales along the proposed haul road edge which will discharge to a temporary drainage basin; and All ancillary and associated site development, drainage, landscape and boundary treatment works. It is intended that this additional haul route will assist in reducing the level of construction traffic accessing the site via the permitted construction and development access from Main Street, Donabate. On completion of development permitted under Reg. Ref. F20A/0204 (ABP PL06F.308446), the extent of the haul route will be reinstated to its current agricultural use or incorporated into future development of zoned lands at Corballis East. This application will be accompanied by a Natura Impact Assessment (NIS).

F22A/0527	Fingal County Council	Grant Permission	310m S
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Development Description

A 7 No. year permission for development at this 3.50 Ha landholding in Corballis East, Donabate, Co. Dublin, which comprises 2 No. separate sites divided by the Donabate Distributor Road. The western site (3.34 Ha) is generally bounded to the north by greenfield lands, to the south and east by the Donabate Distributor Road and to the west by greenfield lands (subject to a live Planning Application for a mixed-use development as per An Bord Pleanála Case Reference TA06F.311059). The eastern site (0.16 Ha), which is subject to drainage infrastructure works only, is generally bounded to the north by greenfield lands, to the south by a wastewater pumping station and attenuation storage, to the east by greenfield lands and the Balcarrick Golf Course and to the west by greenfield lands and the Donabate Distributor Road.

The development, which will have a total Gross Floor Area of 10,891sq m, will consist of: the construction of 96 No. residential units including 61 No. two storey houses (6 No. 2 bed units and 55 No. 3 bed units ranging in size from 78 sq. m to 117 sq. m) and 7 No. three storey 4 bed houses (150 sq. m), with associated private open space in the form of gardens and/or terraces facing all aspects, and 2 No. three storey duplex buildings comprising a total of 28 No. duplex units (14 No. 2 bed units and 14 No. 3 bed units ranging in size from 78 sq. m to 134 sq. m) with associated balconies/terraces predominantly facing north, south, east and west; and 1 No. two storey creche with associated rooflight to atrium (595 sq. m).

The development will also comprise of the following on the western site: a vehicular access from the Donabate Distributor Road; internal roads, footpaths and a shared pedestrian and cyclist link; pedestrian connections to the Donabate Distributor Road; pedestrian and vehicular connections to the adjoining site to the west (subject to a live Planning Application for a mixed use development as per An Bord Pleanála Case Reference TA06F.311059); 166 No. car parking spaces; set down areas; bicycle and bin stores; hard and soft landscaping; boundary treatments; green roof; solar panels; plant; 2 No. ESB substations; lighting; signage; drainage works; and all other associated site and development works above and below ground.

A Natura Impact Statement has been prepared in respect of the proposed development.

F21A/0056	Fingal County Council	Grant Permission & Grant Retention	530m SW
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Development Description

The proposed development consists of amendments to the northern portion (0.9 ha) of the permitted residential development under Fingal County Council Ref. F17A/0113, including the following:

Replacement of the permitted Apartment Block 2 and 3 no. three bed houses to the west thereof with a new part three, part four storey Apartment Block containing 29 units (14 no. 1 bed apartments and 15 no. 2 bed apartments) and a bicycle storage area at

ground floor level; Internal and external amendments to the eastern section of the permitted Apartment Block 1, including the replacement of 8 no. 2 bed apartments with 8 no. 1 bed apartments and 4 no. 2 bed apartments from ground to third floor, with associated revisions to building elevations to provide additional balconies and windows, together with a revised roof design. These proposed amendments will result in a minor increase in the building footprint to the north and east, and an increase of the overall building height to 14.7m (approx. 670mm increase); Internal and external amendments to the western section of the permitted Apartment Block 1, including the rationalisation of building levels for construction efficiencies, revisions to the third-floor level fenestration pattern and access onto terraces, revisions to the roof design, an increase in the size of 3 no. windows on the southern elevation, revisions to the design of 3 no. balconies on the western elevation, revisions to a circulation core riser and associated alterations to the internal layout of immediately adjoining units at ground, first, second and third floors (4 no. units), and the reorganisation of a bathroom and storage area in 3 no. units at ground, first and second floor levels; Revision of the layout of the vehicular parking areas to the north and south of Apartment Blocks 1 and 2. A total of 90 no. car parking spaces are provided, with 80 no. spaces allocated to serve the future residents of Apartment Blocks 1, 2 and 3, 8 no. spaces serving visitors, and 2 no. spaces serving the permitted childcare facility at the ground floor level of Block 3; Retention and completion of 2 no. ESB substations located along the north-western and eastern boundary; The provision of 4 no. bicycle and bin storage structures, a revised landscaping and public lighting design, and all associated and ancillary site development works. The proposed amendments will provide 12 no. additional apartment units, increasing the number of units on the overall development site from 251 units to 263.

F20A/0157	Fingal County Council	Grant Permission	440m NW
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Development Description

The provision of a temporary primary school by way of construction of 2 No. prefabricated buildings (c.180sq. m & 392sq. m) on a defined site area (c.0.789 Ha) to be enclosed within a 2m high welded mesh fencing and access gates with associated site works including the provision of new site entrance, car parking, drop off area and hard surface play area.

Temporary Permission for a period no longer than 3 years is being sought.

The above listed planning applications were all accompanied by the relevant environmental assessments that detail the potential impacts and the mitigation measures required to ensure the developments do not have a significant effect on local biodiversity, alone or in-combination with other developments. In addition, the Fingal County Council granted permission for the above planning applications following evaluations of the potential ecological and environmental impacts of each application.

It is considered that there is no potential for the Proposed Development to act in-combination with other permitted developments in the vicinity that could cause likely significant effects on any nearby KERs.

6 AVOIDANCE, MITIGATION, COMPENSATION AND ENHANCEMENT MEASURES

6.1 Avoidance By Design

The Proposed Development design does not implement any specific avoidance measures.

6.2 Construction Phase

Table 13 gives a summary of the best practice development standards and mitigation measures to be implemented during the Construction Phase of the Proposed Development. The measures listed are outlined in more detail in the CEMP (Waterman Moylan, 2024b) accompanying this application under separate cover.

TABLE 13. SUMMARY OF BEST PRACTICE STANDARDS AND MITIGATION OUTLINED IN THE OUTLINE CONSTRUCTION AND ENVIRONMENTAL MANAGEMENT PLAN. WHERE SPECIFIC DETAILS RELATING TO PROTECTION OF KEY ECOLOGICAL RECEPTORS IS REQUIRED UNDER THESE MEASURES, REFERENCE IS MADE TO THE APPROPRIATE SECTION IN THIS REPORT.

Theme	Best Practice Standards and Mitigation	Ecology Specific Mitigation
Soils and Geology	<p>Appropriate measures to store and handle stripped topsoil and subsoil; consideration of weather conditions to minimise silt/sediment entering surface water network and dust control; and appropriate fill material import, storage and handling away from surface water features.</p> <p>Surface water discharge points for rain and groundwater pumped from excavations and directed to settlement ponds during Construction to be agreed with FCC prior to works.</p> <p>Appropriate storage of fuels, oils and other chemicals, designated refueling and maintenance area, and preparation of emergency response procedure.</p>	No.
Water - Hydrogeology	<p>Measures for erosion and sediment control (i.e., settlement ponds), prevention and control of accidental spills and leaks, concrete handling.</p>	Yes – See section 6.2.1
Water - Water Supply, Drainage & Utilities	<p>Appropriate use of settlement ponds, foul water to be tankered off site for treatment until connection to foul network made, and all connections (waste water, water supply, electrical, gas and telecommunications) to be made by authorized and qualified people.</p>	No.
Site Compound Facilities and Parking	<p>Location to be agreed with KCC prior to works.</p> <p>Appropriate measures to handle foul water generated, protect potable water supply, health and safety, separate areas for (i) machinery and plant; (ii) concrete batching; and (iii) staff parking.</p>	No.
Construction Waste Management	<p>Managed according to the Department of the Environment, Heritage and Local Government's 2006 Publication – '<i>Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects</i>'.</p>	Yes – See section 6.2.2.4

Landscape and Visual Impact	Appointment of an Arborist to oversee works relating to trees, establishment on Tree Protection Zones in accordance with BS 5837:2012 ' <i>Trees in Relation to Design, Demolition and Construction – Recommendations</i> '; and post-construction tree assessment.	No.
Noise and Vibration	To comply with the requirements of BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014 (Code of Practice for Noise and Vibration Control on Construction and Open Sites) as well as Safety, Health and Welfare at Work (General Application) Regulations 2007, Part 5 Noise and Vibration.	No.
Air Quality	Dust Management Plan to include suppression via watering of areas identified as potential dust source; road sweeping to remove aggregate materials; appropriate cover of transported materials; wheel washing; maintenance of public roads in relation to dust; and appropriate monitoring.	No.

In addition, to ensure the CEMP remains 'fit for purpose' for the duration of the project it should be reviewed and updated by the Project Manager in consultation with the Contractor's Ecologist during the life of the project to ensure that it remains suitable to facilitate efficient and effective delivery of the project's environmental commitments. The Contractor shall also designate a Site Engineer/Manager/Assistant Manager as the Construction Waste Manager and who will have overall responsibility for the implementation of the Resource and Waste Management Plan (RWMP) (AWN Consulting, 2024).

Additional mitigation measures required for sufficient protection of the KERs identified in this report, and/or details for the specific implementation of the mitigation measures as per the above table are given in the below sections.

6.2.1 Protection of Habitats

6.2.1.1 Mitigation 1: Standard Surface Water Protection Measures

These surface water mitigation measures will treat the source (e.g., refuelling of plant to be carried out at designated refuelling station locations on Site) or remove the pathway (e.g., no release of wastewater generated on-site into nearby drains or drainage ditches during the Construction Phase).

The following mitigation measures will protect surface waters during the Construction Phase of the Proposed Development.

All works carried out as part of the Proposed Development will comply with all Statutory Legislation including the Local Government (Water Pollution) Acts, 1977 and 1990 and the contractor will cooperate fully with the Environment Section of Fingal County Council in this regard.

Personnel working on the Site will be trained in the implementation of environmental control and emergency procedures. Procedures and relevant documents produced will be formulated in consideration of standard best international practice.

The following standard measures will be implemented by the appointed Contractor (unless otherwise stated) to protect surface water during the Construction Phase of the Proposed Development:

- Run-off from machine service and concrete mixing areas will under no circumstances be allowed to enter the local nearby drainage network or the section of open drainage ditch to the north of the Site.
- Discharge water generated during the placement of concrete will be stored and removed off-site for treatment and disposal.
- There will be no washing out of any concrete trucks on Site.
- Leachate generation from stockpiles or waste receptacles will be prevented by using waterproof covers.
- If contaminated soils are encountered during construction works or if material becomes contaminated by, for example, a fuel spill or hydraulic fluid leak, the contaminated materials will be segregated, placed on an impermeable membrane so as to prevent contamination of the underlying ground, and covered to prevent contaminants being mobilised by rainwater run-off. The materials will remain covered until such time as they can be compliantly removed from the site by appropriately authorised waste management contractors.
- A regular review of weather forecasts for heavy rainfall will be conducted, and a contingency plan will be prepared before and after such events to minimise any potential run-off containing silt, sediment, or other pollutants.
- Refuelling of plant during the Construction Phase will only be carried out at designated refuelling station locations on Site. Each station will be fully equipped for spill response and a specially trained and dedicated Environmental and Emergency Spill Response team will be appointed before the commencement of works on Site.
- Robust and appropriate Spill Response Plan and Environmental Emergency Plans will be implemented for the duration of the works.
- A register will be kept of all hazardous substances either used on-site or expected to be present. The register shall be available at all times and shall include as a minimum: valid safety sheets; Health & Safety, environmental controls to be implemented when storing, handling, using and in the event of spillage of materials; emergency response procedures/precautions for each material; the Personal Protective Equipment (PPE) required when using the material.

Fuel and Chemical Storage

Appropriate storage facilities will be provided on Site. Areas of high risk include:

- Fuel and chemical storage.
- Refuelling Areas.
- Site Compound.
- Waste storage areas.

If required, fuel, oils and chemicals will be stored on an impervious base within a bund, however, it is recommended that all fuel, oil and chemical storage will be off Site.

All tank, container and drum storage areas shall be rendered impervious to the materials stored therein. Bunds shall be designed having regard to Environmental Protection Agency guidelines 'Storage and Transfer of Materials for Scheduled Activities' (2904). All tank and drum storage areas shall, as a minimum, be bunded to a volume not less than the greater of the following:

- 110% of the capacity of the largest tank or drum within the bunded area; or
- 25% of the total volume of substance that could be stored within the bunded area.

Concrete mixer trucks will not be permitted to wash out on Site with the exception of cleaning the chute into a container which will be removed off Site to an authorised facility.

6.2.1.2 Mitigation 2: Silt and Sediment Control

During the Construction Phase, machinery such as diggers have the potential to stir up sediment, especially during rainy periods. This sedimentation has the potential to be transferred to the nearby watercourse in the absence of mitigation measures.

The following mitigation measures will prevent silt and sediment originating at the Site from entering the local drainage ditch system.

- Silt fences will also be installed around any soil mounds / bunds.
- An Ecological Clerk of Works (ECoW) will be appointed to ensure best practices are carried out during any works carried out near the drainage ditch to the north of the Site.
- Prior to the commencement of operations, install silt traps within the existing drains and streams that connect with aquatic zones, either directly or indirectly through other relevant watercourses.
- Silt traps will be staggered along the length of the drainage ditch, and not only at the lower reaches towards its outflow.
- Silt trap design can vary, from depressions added to the watercourse bed, to log sections laid lengthways into the drain, to the use of geotextile barriers.
- Once silt traps and silt fences become functional, they will be checked regularly and maintained as necessary, in order to ensure continued effectiveness throughout operations.

6.2.1.3 Mitigation 3: Reduction of noise related impacts

Noise generated during the Construction Phase of the Proposed Development could cause temporary disturbance to a number of faunal species associated with the hedgerow, treeline, and agricultural environments to the south of the Site. To mitigate this disturbance, the following measures will be implemented:

- Selection of plant with low inherent potential for generating noise.
- Siting of plant as far away from sensitive receptors as permitted by Site constraints.
- Avoidance of unnecessary revving of engines and switch off plant items when not required.
- Keep plant machinery and vehicles adequately maintained and serviced.
- Proper balancing of plant items with rotating parts.

- Keep internal routes well maintained and avoid steep gradients.
- Minimise drop heights for materials or ensure a resilient material underlies.
- Where noise originates from resonating body panels and cover plates, additional stiffening ribs or materials should be safely applied where appropriate.
- Limiting the hours during which Site activities likely to create high levels of noise are permitted.
- Appointing a Site representative responsible for matters relating to noise.
- Monitoring typical levels of noise during critical periods and at sensitive locations.

6.2.1.4 Mitigation 4: Reduction of dust related impacts

The following general dust control measures will be followed for the duration of the Construction Phase of the Proposed Development and will ensure no significant dust related impacts occur to nearby sensitive receptors including local faunal species.

- Haulage vehicles transporting gravel and other similar materials to Site will be covered by a tarpaulin or similar.
- Access and exit of vehicles will be restricted to certain access/exit points.
- Vehicle speed restrictions of 20km/hr will be in place.
- Bowsers will be available during periods of dry weather throughout the Construction period.
- During dry and windy periods, and when there is a likelihood of dust nuisance, a bower will operate to ensure moisture content is high enough to increase the stability of the soil thereby reducing the amount of dust.
- Stockpiling of imported materials will be avoided where possible with imported materials ideally placed on Site in their proposed location upon receipt with double handling avoided.
- Stockpiles will be stored in sheltered areas of the Site, covered, and watered regularly or as needed if exposed during dry weather.
- Gravel should be used at Site exit points to remove caked-on dirt from tyre tracks.
- Hard surfaced roads will be wet swept to remove any deposited materials.
- Unsurfaced roads will be restricted to essential traffic only.
- If required to control dust nuisance wheel-washing facilities will be located at the exit from the construction area.
- Dust production as a result of Site activity will be minimised by regular cleaning of the access roads using vacuum road sweepers and washers. Access roads should be cleaned at least 0.5km on either side of the approach roads to the access points.
- Public roads outside the Site shall be regularly inspected for cleanliness, as a minimum daily, and cleaned as necessary. A road sweeper will be made available to ensure that public roads are kept free of debris.
- The frequency of cleaning will be determined by the Site agent and is weather and activity dependent.
- The height of stockpiles will be kept to a minimum and slopes should be gentle to avoid windblown soil dust.
- The following will be dampened during dry weather:
 - Unpaved areas subject to traffic and wind.
 - Stockpiles.
 - Areas where there will be loading and unloading of dust-generating materials.

- Under no circumstances will wastewater from equipment, wheel or surface cleaning enter the local drainage network.

6.2.1.5 Mitigation 5: Tree Protection

Protective tree fencing in compliance with BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations' will be erected prior to any Construction works being undertaken to prevent damage to the canopy and root protection areas of existing trees to be retained at the Site. The fencing should be signed off by a qualified arborist prior to Construction to ensure it has been properly erected. No ground clearance, earthworks, stock-piling or machinery movement will be undertaken within these areas.

6.2.1.6 Mitigation 6: Biosecurity

The following best practice Site hygiene and biosecurity measures will be in place to avoid the potential introduction of invasive floral species at the Site and offsite via movement of materials/staff:

- All soils/materials being introduced to the Site will be sourced from a certified invasive flora-free source site, to ensure no introduction of invasive plant materials to the Site occurs.
- Personnel working on or between sites will ensure their clothing and footwear are cleaned, ensuring they are visually free from soil and organic debris, in order to prevent inadvertent spread of invasive plant material.
- All vehicles entering or leaving the Site will have been suitably checked and pressure-washed to ensure no introduction of invasive flora to and from the Site. Measures such as a drive through hygiene bath or footbaths will be considered where appropriate.
- Designated wash-down area to be located away from sensitive receptors such as watercourses, ditches, drains etc.
- Material/water left after vehicles have been pressure-washed must be contained, collected and disposed of appropriately (these waters must not under any circumstances be discharged to drains or nearby ditches).

6.2.2 Protection of Fauna

6.2.2.1 Mitigation 7: Construction Phase Lighting

Where overnight lighting cannot be avoided due to health and safety concerns, the lighting within the Proposed Development will be designed and installed to minimise the impact on local wildlife and in accordance with the Bat Conservation Trust guidelines on artificial lighting and bats (BCT, 2023):

- All luminaires used will lack UV/IR elements to reduce impact.
- LED luminaires will be used due to the fact that they are highly directional, lower intensity, good colour rendition and dimming capability.
- A warm white light source (3000 Kelvin) will be adopted to reduce blue light component.
- Luminaires will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Column heights have been carefully considered to minimise light spill and glare visibility and as such, luminaires will be mounted on poles 6m in height.

- Only luminaires with an upward light ratio of 0% and with good optical control will be used. As such, the highway diamond luminaire, which is mounted horizontally, will be used on Site.
- Luminaires will be mounted on the horizontal, i.e. no upward tilt.

6.2.2.2 Mitigation 8: Protection of Bats

To minimise potential disturbance to local bats due to lighting during the Construction Phase, construction works will be carried out during normal daylight working hours as follows:

- 7.00am to 7.00pm Monday to Friday
- 8.00am to 4.00pm Saturday.
- No Sunday work will generally be permitted.

6.2.2.3 Mitigation 9: Vegetation Clearance

Vegetation clearance of the hedgerow, scrub and grassland habitat will need to be cognisant of any potentially present fauna. Table 14 provides guidance for when vegetation clearance is permissible in relation to wintering, hibernating and breeding fauna. Information sources include British Hedgehog Preservation Society's *Hedgehogs and Development* and *The Wildlife (Amendment) Act, 2000*. The preferred period for vegetation clearance is within the months of September and October to avoid the main breeding bird season, as well as mammal hibernation.

Where this seasonal restriction cannot be observed, a check for active nests will be carried out immediately prior to any Site clearance by an ECoW and repeated as required to ensure compliance with legislative requirements. Where a breeding bird and an active nest is found, the nest will be protected, and no further works will take place in the vicinity of the nest until the young have fledged. Where continuance of works is critical, the NPWS will be consulted, and a derogation license obtained prior to continuing works.

TABLE 14. SEASONAL RESTRICTIONS ON VEGETATION REMOVAL. RED BOXES INDICATE PERIODS WHEN CLEARANCE/WORKS ARE NOT ADVISED

Ecological Feature	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Breeding Birds	Vegetation clearance permissible	<u>Nesting bird season</u> No clearance of vegetation or works to relevant structures permitted unless confirmed to be devoid of nesting birds by an ecologist.							Vegetation clearance permissible			
Hibernating mammals (namely Hedgehog)	<u>Mammal hibernation season</u> No clearance of vegetation or works to relevant structures permitted unless confirmed to be devoid of hibernating mammals by an ecologist.		Vegetation clearance permissible							<u>Mammal hibernation season</u> No clearance of vegetation or works to relevant structures permitted unless		

			confirmed to be devoid of hibernating mammals by an ecologist.
Amphibians	<u>Amphibian Hibernation Season</u> No habitat clearance permissible	<u>Amphibian breeding season</u>	Vegetation / Site clearance permissible
Common Lizard	<u>Lizard Hibernation Season</u> No habitat clearance permissible	<u>Active period</u> Habitat (scrub, tall sward grass) clearance permissible	<u>Lizard Hibernation Season</u> No habitat clearance permissible

Additionally, all vegetation clearance will be carried out in sections working in a consistent direction to prevent entrapment of protected fauna potentially present (e.g., hedgehog, pygmy shrew). Logs and branches from this vegetation will be utilised for the creation of hibernacula on Site, see section 6.3.2.4 below. A phased cutting approach under the supervision of a suitably qualified ECoW will be used to allow wildlife (small mammals, reptiles and amphibians) to move away from any suitable habitat that will be removed:

- Phase 1 – Cutting vegetation to 150-200 mm and removing the arisings;
- Phase 2 – After a minimum of one hour, hand-searching the cut areas (conducted by an ECoW) and removing any sheltering habitat (e.g. logs or debris) then cutting vegetation to ground level and removing the arisings; and
- Phase 3 – Soil scrape.

Should any suitable refugia or day nesting habitats need to be removed, this will be carried out outside the most vulnerable breeding periods for hedgehogs wherever practicable (main hedgehog birthing months June and July) and will be supervised by the ECoW.

6.2.2.4 Mitigation 10: Invasive Fauna Species Management

As evidence of the Medium Impact invasive rabbit was recorded on Site in the form of droppings, small trails, and burrows, should these active burrows be found during the Construction Phase of the Proposed Development and they are required to be dug out, a licensed pest controller will be appointed to humanely remove any rabbits present on Site.

6.2.2.5 Mitigation 11: Waste Management

As best-practice, all construction-related rubbish on-site e.g., plastic sheeting, netting etc. should be kept in a designated area on-site and kept off ground level so as to protect small fauna (such as small mammals, amphibians and reptiles) from entrapment and death.

6.3 Operational Phase

6.3.1 Protection of Habitats

6.3.1.1 Mitigation 12: Invasive Flora Species Management

Certain plant species and their hybrids are listed as Invasive Alien Plant Species in Part 1 of the Third Schedule of the *European Communities (Birds and Natural Habitats) Regulations 2011* (SI 477 of 2011, as amended). In addition, soils and other material containing such invasive plant material, are classified in Part 3 of the Third Schedule as vector materials and are subject to the same strict legal controls.

As such, it is recommended that any newly landscaped areas, particularly where infill materials and soils have been imported for soft landscaping, are assessed during the Operational Phase within the next botanical season for the presence of any inadvertently introduced invasive species, with particular focus on those listed on Schedule III of SI 477 of 2011. If invasive species are detected, an Invasive Species Management Plan will be prepared, agreed with the Local Authority and implemented at the earliest possibility to limit the potential for further spread by ongoing operations at the Site.

No specific mitigation measures are required for the protection of fauna during the Operational Phase of the Proposed Development.

6.3.2 Biodiversity Enhancement Plan

A Biodiversity Enhancement Plan (BEP) will be prepared to support the Landscape Plan for the Proposed Development to ensure the Enhancements outlined below are put in place appropriately to maximise potential usage by local wildlife and managed suitably.

6.3.2.1 Enhancement 1: Pollinator Habitat

Pollinator/insect habitat, as seen in Figure 8, will be created on Site by:

- Creating an earth bank.
- Scraping back some bare earth.
- Leaving some areas to grow wild, and/or
- By drilling holes 10cm deep in unvarnished wood for solitary bees.



FIGURE 8. EXAMPLES OF SOLITARY BEE HABITAT. EXTRACTED FROM HOW-TO-GUIDE: CREATING WILD POLLINATOR NESTING HABITAT (NBDC, 2016).

Large bee or insect hotels will not be installed. Guidance from the All-Ireland Pollinator Plan states “Don’t install a large bee or insect hotel. Large bee hotels are attractive to humans, but not great for pollinators. They can encourage the spread of disease and attract predators. Avoid anything bigger than an average-sized bird box. There are many other ways to provide nesting habitats for pollinators, such as providing wild areas of undisturbed long grass, and scraping back some bare earth. If you want to make a bee hotel, make sure it is small, and position it away from bird feeders so the insects aren’t easy targets.” A link to a “How-to-guide Creating wild pollinator nesting habitat” is provided for the development management company to put these habitats in place: How-to-guide-Nesting-2018-WEB.pdf (pollinators.ie). An appointed ecologist will oversee the creation of these habitats.

6.3.2.2 Enhancement 2: Bat Boxes

Two summer bat boxes (e.g., Schwegler Woodcrete 1FF design or similar) will be erected on Site as part of the Proposed Development. These bat boxes will be mounted on suitable trees within the trees along the north of the Site. Alternatively, a permanent fixture such as a pole will be erected to support the bat boxes. The boxes will be installed as part of the landscaping works, so as to not delay their deployment and potential positive impacts.

Bat boxes will be sited carefully, and this will be undertaken by a bat specialist. The bat ecologist will erect the bat boxes with assistance from the contractor. Some general points that will be followed include:

- Bat boxes will be erected on trees (or telegraph poles) with no crowding branches or other obstructions for at least 1 metre above and below the bat box.
- Diameter of tree should be wide and strong enough to hold the required number of boxes.
- Locate bat boxes in areas where bats are known to forage or adjacent to suitable foraging areas. Locations will be sheltered from prevailing winds.
- Bat boxes will be erected at a minimum height of 4 metres to reduce the potential for vandalism and predation of roosting bats.
- The recommended Woodcrete 1FF design is open at the bottom, allowing the droppings to fall out, and so does not need cleaning.

6.3.2.3 Enhancement 3: Swift Boxes

It is proposed to include a minimum of 3 no. swift boxes or swift bricks within the building facade, as swifts are a social nesting species, on the apartment building within the Proposed Development. These nest bricks will be installed at least 5m above the ground, in safe areas where they will not be disturbed. As the bricks tend not to overheat, they can be placed facing any direction. Care will be taken to ensure no obstacles or plate glass windows are located below the bricks.

Guidelines for the bird box scheme should also follow guidelines published by Swift Conservation Ireland, and those published by Birdwatch Ireland entitled "Saving Swifts" (2009/2010). The incorporation of swift bricks will help recover the declining swift population, which are now Red Listed in Ireland (Gilbert et al., 2021).

Swifts are a "clean" bird species which remove their own wastes from their nests periodically. As such, swift bricks do not require any cleaning by the Management Company.

It is advised to install a **swift calling system** to attract swifts and encourage them to take up residence at a new site. A swift calling system is a small speaker set-up that plays swift calls during the summer. It should be located close to the brick entrances and has been seen to greatly increase the chances of swifts using the swift boxes/bricks. Solar powered options are also possible.

An ecologist will be instructed to set up the swift calling system once the construction of the Proposed Development is complete. This can be with the help of active local swift groups as required (e.g., Dublin Swift Conservation Group), who can advise on set-up etc.

6.3.2.4 Enhancement 4: Hibernacula

It is recommended to enhance the proposed landscaping for amphibian and reptile use by providing suitable refuge and hibernacula adjacent to the native hedgerow and green spaces bounding the north of the Site, along with providing log and brush piles for smaller mammals, such as hedgehog, adjacent to these habitats. It is recommended that three areas of hibernacula are provided at areas furthest removed from likely human activity.

Hibernacula for hedgehogs, amphibians and reptiles is relatively easy to create from logs and soil, all of which will be sourced from the Site during works. Wood in various sizes should be piled either in a shallow depression in a disorganised way to create nooks and crevices. Larger tree trunks or rocks should be placed so that they will protrude through the final mound to provide open entrances to the mound. This pile should then be covered in soil to allow the inner crevices to maintain a stable temperature through the winter and allow for hibernation. The top can be planted with for example grass and native wildflowers. See Figure 9 for examples of finished hibernacula.



FIGURE 9. EXAMPLES OF SUITABLE AMPHIBIAN AND REPTILE HIBERNACULA AND REFUGIA.

7 MONITORING

Table 15 below provides a summary of the required monitoring and pre-works inspections during the Construction Phase, as well as any surveys that should be completed during the Operational Phase. The monitoring, inspections and surveys will ensure that the identified mitigation measures are implemented and maintained efficiently and have the desired effect of protecting the local ecology from adverse impacts.

The monitoring/surveys outlined below will be included in a Biodiversity Management Plan (BMP) for the Proposed Development, along with the detailed mitigation measures for the Construction and Operational Phases (sections 6.2 and 6.3) and Biodiversity Enhancement Measures (section 6.3.2).

In addition to the items listed below, this document should detail the landscape management operations for the Proposed Development, including cutting/trimming regimes and maintenance of bird and bat boxes (if applicable). This document will also be updated to reflect any follow-up survey results as they are carried out. The BMP will be prepared and agreed in consultation with a suitably qualified ecologist and Fingal County Council.

TABLE 15. MONITORING AND PRE-WORKS INSPECTIONS FOR THE IDENTIFIED MITIGATION MEASURES DURING CONSTRUCTION PHASE OF THE PROPOSED DEVELOPMENT. TO BE CARRIED OUT BY A SUITABLY QUALIFIED ECOLOGIST OR ECOLOGICAL CLERK OF WORKS (HIGHLIGHTED IN GREEN) OR BY THE DEVELOPMENT CONTRACTOR (NO HIGHLIGHT).

Measure	Monitoring
Construction Phase	
Mitigation 1: Standard Surface Water Protection Measures	Ongoing monitoring by contractor.
Mitigation 2: Silt and Sediment Control	Ongoing monitoring by contractor.
Mitigation 3: Reduction of noise related impacts	Ongoing monitoring by contractor.
Mitigation 4: Reduction of dust related impacts	Ongoing monitoring by contractor.
Mitigation 5: Tree protection	Ongoing monitoring by contractor or arborist.

Mitigation 6: Biosecurity	No monitoring required.
Mitigation 7: Construction Phase Lighting	Monitoring by contractor during removal.
Mitigation 8: Protection of Bats	Ongoing monitoring by contractor, Ecologist to be contacted should evidence of bats on Site be encountered.
Mitigation 9: Vegetation Clearance	ECoW will carry out pre-clearance surveys should works occur during nesting/hibernation season.
Mitigation 10: Invasive Fauna Species Management	Monitoring by licensed pest controller.
Mitigation 11: Waste Management	Ongoing monitoring by contractor.
Enhancement 1: Pollinator Habitat	The placement and construction of these structures should be carried out under supervision of an Ecologist to ensure they are fit for purpose.
Enhancement 2: Bat Boxes	The placement and construction of these structures should be carried out under supervision of an Ecologist to ensure they are fit for purpose.
Enhancement 3: Swift Boxes	The placement and construction of these structures should be carried out under supervision of an Ecologist to ensure they are fit for purpose.
Enhancement 4: Hibernacula	The placement and construction of these structures should be carried out under supervision of an Ecologist to ensure they are fit for purpose.
Operational Phase	
Mitigation 12: Invasive Species Management	An Invasive Species Survey will be carried out by a qualified Ecologist during the next botanical season after soft landscaping has been completed.

8 RESIDUAL IMPACTS

Residual impacts are impacts that remain once mitigation has been implemented or impacts that cannot be mitigated. Table 16 below provides a summary of the impact assessment for the identified KERs and details the nature of the impacts identified, the mitigation measures proposed, and the classification of any residual impacts.

Both standard Construction Phase control measures, and specific mitigation measures, have been outlined to ensure that the Proposed Development does not impact on any species, habitats or designated sites of conservation importance. It is essential that these measures are complied with, in order to ensure that the Proposed Development complies with National conservation legislation.

Provided all recommended measures are implemented in full and remain effective throughout the lifetime of the Proposed Development, no significant negative residual impacts on the local ecology, or on any designated nature conservation sites, will occur as a result of the Proposed Development.

TABLE 16. SUMMARY OF POTENTIAL IMPACTS ON KER(S), MITIGATION PROPOSED AND RESIDUAL IMPACTS.

Key Ecological Resource	Evaluation	Potential Impact	Impact Without Mitigation				Proposed Mitigation / Mitigating Factors	Proposed Enhancements	Residual Impact
			Quality	Magnitude / Extent	Duration	Significance			
DESIGNATED SITES									
No impacts to any designated sites will occur as a result of the Proposed Development and therefore no mitigation measures are recommended.									
HABITATS									
Hedgerow (WL1) Scrub (WS1) Dry Meadows and Grassy Verges (GS2)	Local Importance (Higher Value)	Construction Phase: Loss of habitat	Negative	Local	Permanent	Significant	Mitigation 5: Tree Protection	None	Negative, Local, Permanent, Slight
		Operational Phase: Habitat creation.	Positive	Local	Permanent	Slight	Landscape Masterplan		
Drainage Ditch (FW4)	Local Importance (Higher Value)	Construction Phase: Deterioration of water quality from construction-related pollutants.	Negative	Local	Short-term	Significant	Mitigation 1: Surface Water Protection	None	Negative, Local, Permanent, Slight
		Loss of habitat Operational Phase: None identified.	Negative	Local	Permanent	Significant	Mitigation 2: Silt and Sediment Control Best practice development standards as outlined in the CEMP.		

							SUDS measures.		
All habitats	Local Importance (Higher Value)	Operational Phase: Spread of Invasive Flora. Creation of habitats.	<i>Negative</i> <i>Positive</i>	<i>Local</i> <i>Local</i>	<i>Long-term</i> <i>Permanent</i>	<i>Significant</i> <i>Slight</i>	Mitigation 6: Biosecurity Mitigation 12: Invasive Species Management	Enhancement 1: Pollinator Habitat	Negative, Local, Permanent, Slight
FAUNA									
Bat Assemblage	Local Importance (Higher Value)	Construction Phase: Loss of habitat due to lighting. Operational Phase: Loss of habitat due to lighting.	<i>Negative</i> <i>Negative</i>	<i>Local</i> <i>Local</i>	<i>Short-term</i> <i>Permanent</i>	<i>Slight</i> <i>Moderate</i>	Mitigation 7: Construction Phase Lighting Mitigation 8: Protection of Bats Landscape Masterplan	Enhancement 2: Bat Boxes	Positive, Local, Permanent, Slight , due to creation of potential roost habitat
Breeding Bird Assemblage	Local Importance (Higher Value)	Construction Phase: Loss of habitat. Disturbance from Construction activity. Operational Phase: Creation of habitats.	<i>Negative</i> <i>Negative</i> <i>Positive</i>	<i>Local</i> <i>Local</i> <i>Local</i>	<i>Permanent</i> <i>Short-term</i> <i>Permanent</i>	<i>Moderate</i> <i>Slight</i> <i>Slight</i>	Mitigation 3: Reduction of noise related impacts Mitigation 4: Reduction of dust related impacts Mitigation 9: Vegetation Clearance	Enhancement 3: Swift Boxes	Imperceptible , after a period of establishment of the proposed planting

							Landscape Masterplan		
Small Mammals (Hedgehog, Pygmy Shrew, Irish Stoat)	Local Importance (Higher value)	<p>Construction Phase: Loss of habitat.</p> <p>Risk of injury or death during vegetation clearance and / or entrapment in construction-related rubbish.</p> <p>Disturbance from Construction activity.</p> <p>Operational Phase: Increase in human presence.</p>	<p>Negative</p> <p>Negative</p> <p>Negative</p> <p>Negative</p>	<p>Local</p> <p>Local</p> <p>Local</p> <p>Local</p>	<p>Permanent</p> <p>Short-term</p> <p>Short-term</p> <p>Permanent</p>	<p>Moderate</p> <p>Moderate</p> <p>Slight</p> <p>Moderate</p>	<p>Mitigation 3: Reduction of noise related impacts</p> <p>Mitigation 4: Reduction of dust related impacts</p> <p>Mitigation 9: Vegetation Clearance</p> <p>Mitigation 10: Invasive Fauna Species Management</p> <p>Mitigation 11: Waste Management</p> <p>Landscape Masterplan</p>	Enhancement 4: Hibernacula	Imperceptible
Amphibians	Local Importance (Higher Value)	<p>Construction Phase: Loss of habitat through the infilling of drainage ditches.</p> <p>Habitat loss due to deterioration of water quality from</p>	<p>Negative</p> <p>Negative</p>	<p>Local</p> <p>Local</p>	<p>Permanent</p> <p>Short-term</p>	<p>Moderate</p> <p>Moderate</p>	<p>Mitigation 1: Surface Water Protection</p> <p>Mitigation 2: Silt and Sediment Control</p>	Enhancement 4: Hibernacula	Imperceptible

		<p>construction-related pollutants.</p> <p>Operational Phase: None identified.</p>					<p>Mitigation 9: Vegetation Clearance</p> <p>Best practice development standards as outlined in the CEMP.</p> <p>SUDS measures.</p> <p>Landscape Masterplan</p>		
Common Lizard	Local Importance (Higher Value)	<p>Construction Phase: Loss of habitat.</p> <p>Risk of injury or death during vegetation clearance and / or entrapment in construction-related rubbish.</p> <p>Disturbance from Construction activity.</p> <p>Operational Phase: Creation of habitats.</p>	<p><i>Negative</i></p> <p><i>Negative</i></p> <p><i>Negative</i></p> <p><i>Positive</i></p>	<p><i>Local</i></p> <p><i>Local</i></p> <p><i>Local</i></p> <p><i>Local</i></p>	<p><i>Permanent</i></p> <p><i>Short-term</i></p> <p><i>Short-term</i></p> <p><i>Permanent</i></p>	<p><i>Moderate</i></p> <p><i>Moderate</i></p> <p><i>Slight</i></p> <p><i>Slight</i></p>	<p>Mitigation 9: Vegetation Clearance</p> <p>Mitigation 11: Waste Management</p> <p>Landscape Masterplan</p>	<p>Enhancement 4: Hibernacula</p>	<p>Imperceptible</p>

9 CONCLUSION

It is considered that, provided the mitigation measures proposed within this report together with all best practice development standards as outlined in the CEMP are carried out in full, there will be no significant negative impact to any KER habitat, species group or biodiversity as a result of the Proposed Development.

Residual impacts are considered to be generally imperceptible on a local scale, with, the habitats and species recorded on Site common and widespread throughout the surrounding landscape. It is considered that, provided the mitigation and enhancement measures proposed within this report together with all best practice development standards as outlined in the Schedule of Mitigation Measures are carried out in full, there will be no significant negative impact to any KER habitat, species group or biodiversity as a result of the Proposed Development.

Additionally, the landscaping plan for the Proposed Development was designed to offset some of the habitat loss that will result from the Proposed Development. Furthermore, there a range of proposed habitat enhancements for birds and small fauna such as hedgehogs, reptiles and amphibians that may already be present at the Site, to further offset the loss of habitats.

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APPENDIX I – LEGISLATION AND POLICY

International Legislation

EU Birds Directive

The Birds Directive constitutes a level of general protection for all wild birds throughout the European Union. Annex I of the Birds Directive includes a total of 194 bird species that are considered rare, vulnerable to habitat changes or in danger of extinction within the European Union. Article 4 establishes that there should be a sustainable management of hunting of listed species, and that any large scale non-selective killing of birds must be outlawed. The Directive requires the designation of Special Protection Areas (SPAs) for: listed and rare species, regularly occurring migratory species and for wetlands which attract large numbers of birds. There are 25 Annex I species that regularly occur in Ireland.

EU Habitats Directive

The Habitats Directive aims to protect some 220 habitats and approx. 1000 species throughout Europe. The habitats and species are listed in the Directives annexes where Annex I covers habitats and Annex II, IV and V cover species. There are 59 Annex I habitats in Ireland and 33 Annex IV species which require strict protection wherever they occur. The Directive requires the designation of Special Areas of Conservation (SACs) for areas of habitat deemed to be of European interest. The SACs together with the SPAs from the Birds Directive form a network of protected sites called Natura 2000.

Bern and Bonn Convention

The Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention 1982) was enacted to conserve all species and their habitats. The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention 1979, enacted 1983) was introduced in order to give protection to migratory species across borders in Europe.

Ramsar Convention

The Ramsar Convention on Wetlands is an intergovernmental treaty signed in Ramsar, Iran, in 1971. The treaty is a commitment for national action and international cooperation for the conservation of wetlands and their resources. In Ireland there are currently 45 Ramsar sites which cover a total area of 66,994ha.

Water Framework Directive

The EU Water Framework Directive (WFD) 2000/60/EC is an important piece of environmental legislation which aims to protect and improve water quality. It applies to rivers, lakes, groundwater, estuaries, and coastal waters. The Water Framework Directive was agreed by all individual EU member states in 2000, and its first cycle ran from 2009 – 2015. The Directive runs in 6-year cycles; the second cycle ran from 2016 – 2021, and the current (third) cycle runs from 2022-2027. The aim of the WFD is to prevent any deterioration in the existing status of water quality, including the protection of good and high-water quality status where it exists. The WFD requires member states to manage their water resources on an integrated basis to achieve at least 'good' ecological status, through River Basin Management Plans (RBMP), by 2027.

National Legislation

Wildlife Act 1976 and amendments

The Wildlife Act 1976 was enacted to provide protection to birds, animals, and plants in Ireland and to control activities which may have an adverse impact on the conservation of wildlife. With regard to the listed species, it is an offence to disturb, injure or damage their breeding or resting place wherever these occur without an appropriate licence from the National Parks and Wildlife Service (NPWS). This list includes all wild birds along with their nests and eggs. Intentional destruction of an active nest from the building stage up until the chicks have fledged is an offence. This includes the cutting of hedgerows from the 1st of March to the 31st of August. The act also provides a mechanism to give statutory protection to Natural Heritage Areas (NHAs). The Wildlife Amendment Act 2000 widened the scope of the Act to include most species, including the majority of fish and aquatic invertebrate species which were excluded from the 1976 Act.

The current list of plant species protected by Section 21 of the Wildlife Act, 1976 (and amendments) is set out in the Flora (Protection) Order, 2015 (S.I. No. 356/2015). The Flora (Protection) Order affords protection to several species of plant in Ireland, including 68 vascular plants, 40 mosses, 25 liverworts, 1 stonewort and 1 lichen. This Act makes it illegal for anyone to uproot, cut or damage any of the listed plant species and it also forbids anyone from altering, interfering, or damaging their habitats. This protection is not confined to within designated conservation sites and applies wherever the plants are found.

EU Habitats Directive 1992 and EC (Birds and Natural Habitats) Regulations 2011

The EU Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive 1992) provides protection to particular species and habitats throughout Europe. The Habitats Directive has been transposed into Irish law through the EC (Birds and Natural Habitats) Regulations 2011.

Annex IV of the EU Habitats Directive provides protection to a number of listed species, wherever they occur. Under Regulation 23 of the Habitats Directive, any person who, in regard to the listed species, “Deliberately captures or kills any specimen of these species in the wild, deliberately disturbs these species particularly during the period of breeding, rearing, hibernation and migration, deliberately takes or destroys eggs from the wild or damages or destroys a breeding site or resting place of such an animal shall be guilty of an offence.”

Invasive Species Legislation

Certain plant species and their hybrids are listed as Invasive Alien Plant Species in Part 1 of the Third Schedule of the *European Communities (Birds and Natural Habitats) Regulations 2011* (SI 477 of 2011, as amended). In addition, soils and other material containing such invasive plant material, are classified in Part 3 of the Third Schedule as vector materials and are subject to the same strict legal controls.

Failure to comply with the legal requirements set down in this legislation can result in either civil or criminal prosecution, or both, with very severe penalties accruing. Convicted parties under the Act can be fined up to €500,000.00, jailed for up to 3 years, or both.

Extracts from the relevant sections of the regulations are reproduced below.

“49(2) Save in accordance with a licence granted [by the Department of Arts, Heritage and the Gaeltacht], any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in anyplace [a restricted non-native plant], shall be guilty of an offence.

49(3) ... it shall be a defence to a charge of committing an offence under paragraph (1) or (2) to prove that the accused took all reasonable steps and exercised all due diligence to avoid committing the offence.

50(1) Save in accordance with a licence, a person shall be guilty of an offence if he or she [...] offers or exposes for sale, transportation, distribution, introduction, or release—

(a) an animal or plant listed in Part 1 or Part 2 of the Third Schedule,

(b) anything from which an animal or plant referred to in subparagraph (a) can be reproduced or propagated, or

(c) a vector material listed in the Third Schedule, in any place in the State specified in the third column of the Third Schedule in relation to such an animal, plant or vector material.”

National Biodiversity Action Plan 2017-2021

The National Biodiversity Plan (NBAP) 2017-2021, the third such plan for Ireland, captures the objectives, targets and actions for biodiversity that will be undertaken by a wide range of government, civil society and private sectors to achieve Ireland’s Vision for Biodiversity. The NBAP provides a framework to track and assess progress towards Ireland’s Vision for Biodiversity over a five-year timeframe from 2017 to 2021. To achieve the Vision, seven strategic objectives were identified in the second NBAP “Actions for Biodiversity 2011-2016”. The continued implementation of the objectives from the second NBAP has been retained for the new NBAP of 2017-2021. Actions required to achieve the strategic objectives as well as the lead and key partners responsible for their implementation are set out for each of the objectives and their targets (Table A1).

TABLE A1.1: OBJECTIVES AND TARGETS OF THE NATIONAL BIODIVERSITY ACTION PLAN 2017-2021.

Objective	Target
1: Mainstream biodiversity into decision-making across all sectors	1.1: Shared responsibility for the conservation of biodiversity and the sustainable use of its components is fully recognised, and acted upon, by all sectors.
	1.2: Strengthened legislation in support of tackling biodiversity loss in Ireland.
2: Strengthen the knowledge base for conservation, management and sustainable use of biodiversity	2.1: Knowledge of biodiversity and ecosystem services has substantially advanced our ability to ensure conservation, effective management, and sustainable use by 2021.
3: Increase awareness and appreciation of biodiversity and ecosystems services	3.1: Enhanced appreciation of the value of biodiversity and ecosystem services amongst policy makers, businesses, stakeholders, local communities, and the general public.
4: Conserve and restore biodiversity and ecosystem services in the wider countryside	4.1: Optimised opportunities under agriculture and rural development, forestry and other relevant policies to benefit biodiversity.
	4.2: Principal pollutant pressures on terrestrial and freshwater biodiversity substantially reduced by 2020.
	4.3: Optimised benefits for biodiversity in Flood Risk Management Planning and drainage schemes.
	4.4: Harmful invasive alien species are controlled and there is reduced risk of introduction and/or spread of new species

	4.5: Improved enforcement of wildlife law
5: Conserve and restore biodiversity and ecosystem services in the marine environment	5.1: Progress made towards good ecological and environmental status of marine waters over the lifetime of this Plan.
	5.2: Fish stock levels maintained or restored to levels that can produce maximum sustainable yield, where possible, no later than 2020.
6: Expand and improve management of protected areas and species	6.1: Natura 2000 network designated and under effective conservation management by 2020.
	6.2: Sufficiency, coherence, connectivity, and resilience of the protected areas network substantially enhanced by 2020.
	6.3: No protected species in worsening status by 2020; majority of species in, or moving towards, favourable status by 2021.
7: Strengthen international governance for biodiversity and ecosystem services	7.1: Strengthened support for biodiversity and ecosystem services in external assistance.
	7.2: Enhanced contribution to international governance for biodiversity and ecosystem services.
	7.3: Enhanced cooperation with Northern Ireland on common issues.
	7.4: Reduction in the impact of Irish trade on global biodiversity and ecosystem services.

National Biodiversity Action Plan 2023-2030

The National Biodiversity Plan (NBAP) 2023-2030, the fourth such plan for Ireland, captures the objectives, targets and actions for biodiversity that will be undertaken by a wide range of government, civil society and private sectors. Actions required to achieve the strategic objectives as well as the lead and key partners responsible for their implementation are set out for each of the objectives and their outcomes (Table A1).

TABLE A1: OBJECTIVES AND OUTCOMES OF THE NATIONAL BIODIVERSITY ACTION PLAN 2023-2030.

Objective	Outcome
1: Adopt a Whole-of-Government, Whole-of-Society Approach to Biodiversity	1A: Governance structures and reporting outputs have improved.
	1B: Organisational capacity and resources for biodiversity have increased at all levels of Government.
	1C: Responsibility for biodiversity is shared across the whole of government.
	1D: Biodiversity initiatives are supported across the whole of society.
	1E: The legislative framework for biodiversity conservation is robust, clear and enforceable.
2: Meet Urgent Conservation and Restoration Needs	2A: The protection of existing designated areas and protected species is strengthened and conservation and restoration within the existing protected area network are enhanced.
	2B: Biodiversity and ecosystem services in the wider countryside are conserved and restored – agriculture & forestry.
	2C: Biodiversity and ecosystem services in the wider countryside are conserved and restored – peatlands & climate action.
	2D: Biodiversity and ecosystem services in the marine and freshwater environment are conserved and restored.
	2E: Genetic diversity of wild and domesticated species is safeguarded.
	2F: A National Restoration Plan is in place to contribute to the ambition of the EU Biodiversity Strategy 2030 and global restoration targets.
	2H: Invasive alien species (IAS) are controlled and managed on an all-island basis to reduce the harmful impact they have on biodiversity

	and measures are undertaken to tackle the introduction and spread of new IAS to the environment.
3. Secure Nature's Contribution to People	3A: Ireland's natural heritage and biocultural diversity is recognised, valued, enhanced and promoted in policy and practice.
	3B: The role of biodiversity in supporting wellbeing, livelihoods, enterprise and employment is recognised and enhanced.
	3C: Planning and development will facilitate and secure biodiversity's contributions to people.
4. Enhance the Evidence Base for Action on Biodiversity	4A: Research funding bodies will have an improved understanding of the research and skills required to address biodiversity research gaps.
	4B: Data relevant to biodiversity and ecosystems, including conservation needs, is widely accessible and standardised.
	4C: Long-term monitoring programmes are in place to guide conservation and restoration goals.
	4D: Ireland has prepared national assessments of ecosystem services.
5. Strengthen Ireland's Contribution to International Biodiversity Initiatives	5A: Science, policy and action on biodiversity conservation and restoration is effectively coordinated in an all-island approach.
	5B: Ireland takes action internationally to cooperate with other countries, sectors, disciplines and communities to address the biodiversity crisis.
	5C: Ireland enhances its contributions to the international biodiversity data drive.

Fingal County Development Plan 2023-2029

Policies and objectives of the Fingal County Development Plan (CDP) 2023-2029 that are of relevance to this Screening Report are outlined below:

- **Policy GINHP5:** *“Develop the green infrastructure network to ensure the conservation and enhancement of biodiversity, including the protection of European Sites, the provision of accessible parks, open spaces and recreational facilities (including allotments and community gardens), the sustainable management of water, the maintenance of landscape character including historic landscape character and the protection and enhancement of archaeological and heritage landscapes.”*
- **Objective GINHO2:** *“Reduce fragmentation and enhance the resilience of Fingal's green infrastructure network by strengthening ecological links between urban areas, Natura 2000 sites, proposed Natural Heritage Areas, parks and open spaces and the wider regional network by connecting all new developments into the wider green infrastructure network.”*
- **Policy GINHP12:** *“Protect areas designated or proposed to be designated as Natura 2000 sites (i.e., Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, and Refuges for Fauna.”*
- **Objective GINHO27:** *“Support the National Parks and Wildlife Service, in the maintenance and achievement of favourable conservation status for the habitats and species in Fingal by taking full account of the requirements of the Habitats and Birds Directives, in the performance of its functions.”*
- **Objective GINHO28:** *“Ensure that development does not have a significant adverse impact on proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs),*

Statutory Nature Reserves, Refuges for Fauna, Habitat Directive Annex I sites and Annex II species contained therein, and on rare and threatened species including those protected by law and their habitats.”

- **Policy GINHP17:** *“Strictly protect areas designated or proposed to be designated as Natura 2000 sites (i.e., Special Areas of Conservation (SACs) and Special Protection Areas (SPAs); also known as European sites) including any areas that may be proposed for designation or designated during the lifetime of this Plan.”*
- **Objective GINHO35:** *“In accordance with Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities 2010, any plans or projects that are likely to have a significant effect on a Natura 2000 site, either individually or in combination with other plans or projects, are subject to a screening for Appropriate Assessment unless they are directly connected with or necessary to the management of a Natura 2000 site.*
- **Objective GINHO79:** *“Ensure that there is appropriate public access to the coast including the provision of coastal walkways and cycleways, while taking full account of the need to conserve and enhance the natural and cultural heritage of the coast and the need to avoid significant adverse impacts on European Sites and species protected by law, through Screening for Appropriate Assessment, and examine the designation of traditional walking routes thereto as public rights of way.”*

Fingal Biodiversity Action Plan 2023-2030

Fingal Biodiversity Action Plan (BAP) 2023-2030 is set out to protect and improve biodiversity through six topics:

- Delivery of the Ecological Network across Fingal;
- Building for Biodiversity and Managing Open Space for Biodiversity;
- Climate Change Adaptation and Mitigation;
- Agri Environment Schemes and Rewilding;
- Research and Monitoring; and
- Raising Awareness.

APPENDIX II – VALUE OF ECOLOGICAL RESOURCES

The criteria outlined in the table below, taken from the *Guidelines for Assessment of Ecological Impacts of National Road Schemes* published by the NRA, were used for assigning value to designated sites, habitats and species within the Site of the Proposed Development and surrounding area.

TABLE A2.1. DESCRIPTION OF VALUES FOR ECOLOGICAL RESOURCES BASED ON GEOGRAPHIC HIERARCHY OF IMPORTANCE (NRA, 2009B).

Importance	Criteria
International Importance	<ul style="list-style-type: none"> - 'European Site' including Special Area of Conservation (SAC), Site of Community Importance (SCI), Special Protection Area (SPA) or proposed Special Area of Conservation. - Proposed Special Protection Area (pSPA). - Site that fulfils the criteria for designation as a 'European Site' (see Annex III of the Habitats Directive, as amended). - Features essential to maintaining the coherence of the Natura 2000 Network - Site containing 'best examples' of the habitat types listed in Annex I of the Habitats Directive. - Resident or regularly occurring populations (assessed to be important at the national level) of the following: <ul style="list-style-type: none"> o Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; and/or o Species of animal and plants listed in Annex II and/or IV of the Habitats Directive - Ramsar Site (Convention on Wetlands of International Importance Especially Waterfowl Habitat 1971). - World Heritage Site (Convention for the Protection of World Cultural & Natural Heritage, 1972). - Biosphere Reserve (UNESCO Man & The Biosphere Programme) - Site hosting significant species populations under the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals, 1979). - Site hosting significant populations under the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats, 1979). - Biogenetic Reserve under the Council of Europe. - European Diploma Site under the Council of Europe. - Salmonid water designated pursuant to the European Communities (Quality of Salmonid Waters) Regulations, 1988, (S.I. No. 293 of 1988).
National Importance	<ul style="list-style-type: none"> - Site designated or proposed as a Natural Heritage Area (NHA). - Statutory Nature Reserve. - Refuge for Fauna and Flora protected under the Wildlife Acts. - National Park. - Undesignated site fulfilling the criteria for designation as a Natural Heritage Area (NHA); Statutory Nature Reserve; Refuge for Fauna and Flora protected under the Wildlife Act; and/or a National Park. - Resident or regularly occurring populations (assessed to be important at the national level) of the following: <ul style="list-style-type: none"> o Species protected under the Wildlife Acts; and/or o Species listed on the relevant Red Data list. o Site containing 'viable areas' of the habitat types listed in Annex I of the Habitats Directive
County Importance	<ul style="list-style-type: none"> - Area of Special Amenity. - Area subject to a Tree Preservation Order. - Area of High Amenity, or equivalent, designated under the County Development Plan. - Resident or regularly occurring populations (assessed to be important at the County level) of the following:

	<ul style="list-style-type: none"> ○ Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; ○ Species of animal and plants listed in Annex II and/or IV of the Habitats Directive; ○ Species protected under the Wildlife Acts; and/or ○ Species listed on the relevant Red Data list. ○ Site containing area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfil the criteria for valuation as of International or National importance. <ul style="list-style-type: none"> - County important populations of species; or viable areas of semi-natural habitats; or natural heritage features identified in the National or Local BAP; if this has been prepared. - Sites containing semi-natural habitat types with high biodiversity in a county context and a high degree of naturalness, or populations of species that are uncommon within the county. - Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.
<p>Local Importance (higher value)</p>	<ul style="list-style-type: none"> - Locally important populations of priority species or habitats or natural heritage features identified in the Local BAP, if this has been prepared; - Resident or regularly occurring populations (assessed to be important at the Local level) of the following: <ul style="list-style-type: none"> ○ Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; ○ Species of animal and plants listed in Annex II and/or IV of the Habitats Directive; ○ Species protected under the Wildlife Acts; and/or o ○ Species listed on the relevant Red Data list. ○ Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or populations of species that are uncommon in the locality; - Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value.
<p>Local Importance (lower value)</p>	<ul style="list-style-type: none"> - Sites containing small areas of semi-natural habitat that are of some local importance for wildlife; - Sites or features containing non-native species that is of some importance in maintaining habitat links.

APPENDIX III – EPA IMPACT ASSESSMENT CRITERIA

In line with the draft EPA Guidelines (EPA 2022), the following terms are defined when evaluating and quantifying the quality, significance, extent/context, probability and duration/frequency of effects.

TABLE A3.1. DEFINITION OF QUALITY, SIGNIFICANCE, EXTENT/CONTEXT, PROBABILITY AND DURATION/FREQUENCY OF EFFECTS.

Term	Definition
Quality of Effects	
Positive	A change which improves the quality of the environment (for example, by increasing species diversity, or improving the reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
Neutral	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Negative/Adverse	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property or by causing nuisance).
Significance of Effects	
Imperceptible	An effect capable of measurement but without significant consequences.
Not Significant	An effect which causes noticeable changes in the character of the environment but without significant consequences.
Slight	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
Moderate	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
Significant	An effect which, by its character, magnitude, duration or intensity, alters a sensitive aspect of the environment.
Very Significant	An effect which, by its character, magnitude, duration or intensity, significantly alters most of a sensitive aspect of the environment.
Profound	An effect which obliterates sensitive characteristics. No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error
Extent and Context of Effects	
Extent	Describe the size of the area, the number of sites and the proportion of a population affected by an effect.
Context	Describe whether the extent, duration or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)
Probability of Effects	
Likely	The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.

Unlikely	The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
Duration and Frequency of Effects	
Momentary	Effects lasting from seconds to minutes.
Brief	Effects lasting less than a day
Temporary	Effects lasting less than a year.
Short-term	Effects lasting one to seven years.
Medium-term Effects	Effects lasting seven to fifteen years.
Long-term	Effects lasting fifteen to sixty years.
Permanent	Effects lasting over sixty years.
Reversible	Effects that can be undone, for example through remediation or restoration.
Frequency	Describe how often the effect will occur (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually).

APPENDIX IV – SITE PHOTOGRAPHS



Photograph 1. Drainage ditch habitat recorded along the west boundary of the Site.



Photograph 2. Hedgerow habitat recorded along the west boundary of the Site adjacent to the existing drainage ditch.



Photograph 3. An example of the scrub habitat recorded on Site, with dry meadow and grassy verges habitat in the foreground.



Photograph 4. Bare soil habitat due to disturbance observed along the west area of the Site.



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